

**Supplementary Table 1.** Compilation of prevalence data of Haemosporidian infections on populations of the Common Waxbill (*Estrilda astrild*) and the other species of the Genus Estrilda.

Continent	Region	Species	Common name	N	Positives	Prevalence	Plasmodium	Haemoproteus	Leucocytozoon	Method	Screening	Source
Europe	Portugal	<i>astrild</i>	Common waxbill	104	1	1	1	0	-	PCR	P+H	Ventim et al. 2012
Europe	Portugal	<i>astrild</i>	Common waxbill	617	10	2	3	1	6	PCR	P+H+L	This study
Oceania	Australia	<i>astrild</i>	Common waxbill	10	0	0	0	0	0	PCR	P+H+L	Beadell et al. 2007
Africa	Malawi	<i>astrild</i>	Common waxbill	4	2	50	1	0	1	PCR	P+H+L	Lutz et al. 2015
Africa	Sout Africa**	<i>astrild</i>	Common waxbill	31	1	3	3	0	-	PCR	P+H	Okanga et al. 2014
Africa	Mascarenes islands*	<i>astrild</i>	Common waxbill	2	0	0	0	0	0	PCR	P+H+L	Cornualt et al. 2013
Africa	São Tomé Island*	<i>astrild</i>	Common waxbill	99	1	1	0	0	1	PCR	P+H+L	Loiseau et al. 2017
	Gabon	<i>atricapilla</i>	Black-headed waxbill	2	0	0	0	0	0			
		<i>melpoda</i>	Orange-cheeked waxbill	14	3	21	0	2	0			
	Bioko island*	<i>nonnula</i>	Black-crowned waxbill	4	0	0	0	0	0			
Africa	South Africa	<i>astrild</i>	Common waxbill	1	0	0	0	0	0	Microscopy	P+H+L	Earlé et al. 1991
		<i>erythronotus</i>	Black-faced waxbill	3	1	33	0	1	0			
Africa	Cameroon	<i>astrild</i>	Common waxbill	12	1	8	1	0	0	Microscopy	P+H+L	Kirkpatrick et al. 1988
		<i>atricapilla</i>	Black-headed waxbill	5	2	40	2	0	0			
		<i>melpoda</i>	Orange-cheeked waxbill	3	0	0	0	0	0			
Africa	Tanzania	<i>astrild</i>	Common waxbill	1	0	0	0	0	0	Microscopy	P+H+L	Bennett et al. 1976
Africa	Zaire	<i>paludicola</i>	Fawn-breasted waxbill	2	1	50	0	1	0			
Africa	Sub-Sahara	<i>astrild</i>	Common waxbill	26	14	54	6	8	0	Microscopy	P+H+L	Bennett et al. 1992
		<i>atricapilla</i>	Black-headed waxbill	1	1	100	0	1	0	Microscopy	P+H+L	
		<i>caerulescens</i>	Lavender waxbill	1	1	100	0	1	0	Microscopy	P+H+L	
		<i>erythronotos</i>	Black-faced waxbill	3	1	33	1	0	0	Microscopy	P+H+L	
		<i>melpoda</i>	Orange-cheeked waxbill	6	3	50	2	1	0	Microscopy	P+H+L	
		<i>paludicola</i>	Fawn-breasted waxbill	54	18	33	1	17	0	Microscopy	P+H+L	
		<i>rhodopyga</i>	Crimson-rumped waxbill	28	1	4	0	1	0	Microscopy	P+H+L	
		<i>trogodytes</i>	Black-rumped waxbill	17	2	12	0	2	0	Microscopy	P+H+L	
Africa	Ethiopia	<i>astrild</i>	Common waxbill	15	14	93	6	8	0	Microscopy	P+H+L	Ashford et al. 1976
		<i>paludicola</i>	Fawn-breasted waxbill	19	17	89	1	16	0			
		<i>rhodopyga</i>	Crimson-rumped waxbill	28	1	4	0	1	0			
Africa	Cameroon	<i>nonnula</i>	Black-crowned waxbill	52	12	23	8 (P & H)		4	Microscopy	P+H+L	Taku et al. 2014
Africa	Cameroon, Equatorial Guinea and the Ivory Coast	<i>atricapilla</i>	Black-headed waxbill	4	2	50	0	2	0	Microscopy	P+H+L	Sehgal et al. 2005
		<i>melpoda</i>	Orange-cheeked waxbill	4	0	0	0	0	0			

\* Not used in prevalence calculations because it is an island population in the native range

\*\* Not used in prevalence calculations due to lack of *Leucocytozoon* surveys

Ashford RW, Palmer TT, Ash JS, Bray RS (1976) Blood parasites of Ethiopian birds 1. General Survey. *Journal of Wildlife Diseases* 12: 409-426

Taku A II, Payne VK, Tamungang SA, Dzoyem M (2014) Effects of seasonal and site variations on the prevalence of parasites on Black-crowned waxbill (*Estrilda nonnula*) in Dschang and its environs, Cameroon. *Journal of Applied Biology & Biotechnology* 2(3): 12-16

Beadell JS, Atkins C, Cashion E, Jonker M, Fleischer RC (2007) Immunological Change in a Parasite-Impoverished Environment: Divergent Signals from Four Island Taxa. *PLOS ONE* 2(9): e896

Bennett GF, Herman CM (1976) Blood Parasites of some Birds from Kenya, Tanzania and Zaire. *Journal of Wildlife Diseases* 12: 59-65

Bennett GF, Earlé RA, du Toit H, Huchzermeyer FW (1992) A host-parasite catalogue of the haematzoa of the sub-Saharan birds. *Onderstepoort Journal of Veterinary Research* 59: 1-73

Cornualt J, Warren BH, Bertrand JÁ, Milá B, Thebaud C, Heeb P (2013) Timing and Number of Colonizations but Not Diversification Rates Affect Diversity Patterns in Hemosporean Lineages on a Remote Oceanic Archipelago. *The American Naturalist* 182(6) 820-833

Earlé RA, Bennett GF, du Toit H, de Swardt DH, Herholdt JJ (1991) Regional and seasonal distribution of avian blood parasites from northern South Africa. *South African Journal of Wildlife Research* 21(2): 47-53

Kirkpatrick CE, Smith TB (1988) Blood Parasites of Birds in Cameroon. *Journal of Parasitology* 74(6): 1009-1013

Loiseau C, Melo M, Lobato E, Beadell JS, Fleischer RC, Reis S, Doutrelant C, Covas R (2017) Insularity effects on the assemblage of the blood parasite community of the birds from the Gulf of Guinea. *Journal of Biogeography* 44(11): 2607-2617

Lutz HL, Hochachka WM, Engel JI, Bell JA, Tkach VV, et al. (2015) Parasite Prevalence Corresponds to Host Life History in a Diverse Assemblage of Afrotropical Birds and Haemosporidian Parasites. *PLOS ONE* 10(4): e0121254

Okanga S, Cumming GS, Hockey PAR, Nupen L, Peters JL (2014) Host Specificity and Co-Speciation in Avian Haemosporidia in the Western Cape, South Africa. *PLOS ONE* 9(2): e86382

Sehgal RNM, Jones HI, Smith TB (2005) Blood Parasites of Some West African Rainforest Birds. *Journal of Veterinary Medical Science* 67(3): 295-301

Ventim R, Mendes L, Ramos JA, Cardoso H, Pérez-Tris J (2012) Local haemoparasites in introduced wetland passerines. *Journal of Ornithology* 153: 1253-1259

**Supplementary Table 2.** Sample size, number of infections and number and name of the parasite lineages found per population, in West Iberian Peninsula.

<b>Population</b>	<b>N</b>	<b>Negatives</b>	<b>Positives</b>	<b>Lineage names</b>
Abicada	40	40		
Alcácer do Sal	34	31	3 (8.8%)	L_PARUS37, L_PARUS36, L_HIRUS07
Alcochete	34	34		
Almeirim	19	19		
Apulia	38	38		
Arzila	68	65	3 (4.4%)	H_LULU1, L_PARUS16, L_PARUS4
Caminha	22	22		
Celorico Beira	19	19		
Colares	40	40		
Elvas	30	27	3 (10%)	P_SYAT24 (2), P_KYS3
Évora	3	3		
Junqueira	35	35		
Lagoa dos Patos	31	31		
Óbidos	20	20		
Odemira	17	17		
Paramos	26	26		
Paul	12	12		
Quarteira	18	17	1 (5.6%)	L_RECOB3
Rio Seco	31	31		
Salreu	21	21		
Santo André	23	23		
Toulica	6	6		
Tua	30	30		
<b>Total</b>	<b>617</b>	<b>607</b>	<b>10</b>	

**Supplementary Table 3.** Pooled prevalences and 95% confidence intervals (in parenthesis) and statistical comparisons between (1) common waxbills in exotic and native ranges and between (2) common waxbills and the whole genus *Estrilda* in the native range. The total number of individuals for each category differ since only studies where all genera (Haemosporidians) or a single genus were screened are used. Significance levels are symbolized by: \* P < 0.05; \*\* P < 0.01; \*\*\* P < 0.001.

		<b>Common waxbill (Exotic populations)</b>	<b>Common waxbill (Native populations)</b>	<b><i>Estrilda</i> genus</b>
<b>Haemosporidians</b>	Total	627	59	305
	Positives	10	31	97
	Prevalence	1.6 (0.7 - 2.9)	52.5 (39.1 - 65.7)	31.8 (26.6 - 37.4)
			(1) $\chi^2 = 240.1, p < 0.001$ ***	(2) $\chi^2 = 8.4, p < 0.01$ **
<b><i>Plasmodium</i></b>	Total	731	90	284
	Positives	4	17	24
	Prevalence	0.5 (0.1 - 1.4)	18.9 (11.4 - 28.5)	8.5 (5.5 - 12.3)
			(1) $\chi^2 = 100.9, p < 0.001$ ***	(2) $\chi^2 = 6.6, p < 0.05$ *
<b><i>Haemoproteus</i></b>	Total	731	90	284
	Positives	1	16	62
	Prevalence	0.1 (0.03 - 0.8)	17.8 (10.5 - 27.2)	21.8 (517.1 - 27.1)
			(1) $\chi^2 = 114.4, p < 0.001$ ***	(2) $\chi^2 = 0.5, p = 0.499$
<b><i>Leucocytozoon</i></b>	Total	627	59	305
	Positives	6	1	5
	Prevalence	1.0 (0.4 - 2.1)	1.7 (0.4 - 9.1)	1.6 (0.5 - 3.8)
			(1) $\chi^2 = 1.0^{-30}, p = 1$	(2) $\chi^2 = 7.3^{-32}, p = 1$