

**Table S1.** List of the haemosporidian parasites detected by *cyt b* molecular analysis in the blood samples of the birds from urbanized and natural habitats (us - unusable sequences, dp - double peaks). Numbers in parentheses refer to the number of positive birds of a given lineage (evaluation included only species exceeding 10 individuals). Birds with long-distance migration are marked with the asterisk symbol (\*).

Haemosporidian species	Bird species	Infected/Studied (prevalence)	Haemosporidian Lineage in MALAVI	Haemosporidian Lineage in GenBank
<b>Urbanized habitat</b>				
<i>H. parabelopolskyi</i>	<i>Sylvia</i>	11/28 (39.29%)	SYAT02 (7)	JN164719
	<i>atricapilla*</i>		SYAT10 (1)	AY831757
			SYAT01 (2)	AY831750
			SYAT07 (1)	AY831754
<i>Haemoproteus</i> sp.	<i>Sylvia</i>	1/1	CWT4	KJ488675
	<i>communis*</i>			
	<i>Fringilla coelebs</i>	4/6	CCF2 (3)	AF495551
			CCF1 (1)	AF495550
	<i>Emberiza</i>	1/1	EMCIR01	GU085190
	<i>citrinella</i>			
	<i>Sylvia</i>	3/28 (10.71%)	us (3)	
	<i>atricapilla*</i>			
	<i>Turdus merula</i>	1/9	us	
Subtotal of <i>Haemoproteus</i>		21/45 (46.67%)		
<i>P. relictum</i>	<i>Parus major</i>	5/37 (13.51%)	SGS1 (8)	MK652232
	<i>Poecile montanus</i>	1/6		
	<i>Cyanistes</i>	1/9		
	<i>caeruleus</i>			
	<i>Sylvia</i>	1/28 (3.52%)		
	<i>atricapilla*</i>			
<i>P. vauhani</i>	<i>Turdus merula</i>	6/9	SYAT05 (6)	DQ847271
<i>P. matutinum</i>	<i>Turdus merula</i>	1/9	LINN1 (3)	DQ847270
	<i>Erithacus</i>	1/10 (10%)		
	<i>rubecula</i>			

	<i>Emberiza</i>	1/15 (6.67%)		
	<i>schoeniculus</i>			
<i>P. circumflexum</i>	<i>Emberiza</i>	2/15 (13.33%)	SYBOR02 (2)	DQ368392
	<i>schoeniculus</i>			
	<i>Turdus</i>	2/2	BT7	MK062195
	<i>philomelos</i>		TURDUS1	KM361492
	<i>Prunella</i>	1/6	TURDUS1	KM361492
	<i>modularis</i>			
Subtotal of		22/122 (18.03%)		
<i>Plasmodium</i>				
<i>Leucocytozoon</i> sp.	<i>Parus major</i>	12/37 (32.43%)	PARUS19 (4)	HM234027
			PARUS28 (1)	JX855047
			PARUS4 (4)	AY393795
			PARUS18 (1)	HM234026
			STUR1/TURPEL01	DQ847246/
			(1)	KT376971
			us (1)	
	<i>Cyanistes</i>	3/9	PARUS19	HM234027
	<i>caeruleus</i>		PARUS4	AY393795
			PARUS50	JX855065
	<i>Turdus merula</i>	1/9	STAL1	MK652258
	<i>Turdus</i>	1/2	dp	
	<i>philomelos</i>			
	<i>Sylvia</i>	1/28 (3.57%)	PARUS4	AY393795
	<i>atricapilla*</i>			
	<i>Prunella</i>	1/6	PRUMOD01	KJ488638
	<i>modularis</i>			
	<b>Natural habitat</b>			
<i>H. parabelopolskyi</i>	<i>Sylvia</i>	13/32 (40.63%)	SYAT01 (9)	JN164718
	<i>atricapilla*</i>		SYAT02 (4)	JN164719
<i>H. attenuatus</i>	<i>Erithacus</i>	10/42 (23.8%)	ROBIN1/LULU1	AY393807
	<i>rubecula</i>			
	<i>Carduelis</i>	1/11 (9.09%)		
	<i>carduelis</i>			

	<i>Emberiza</i>	1/2		
	<i>schoeniculus</i>			
	<i>Sylvia</i>	1/32 (3.13%)		
	<i>atricapilla*</i>			
	<i>T. philomelos</i>	1/1		
<i>H. concavocentralis</i>	<i>Coccothraustes</i>	1/3	HAWF2	GQ396708
	<i>coccothraustes</i>			
<i>H. minutus</i>	<i>Turdus merula</i>	1/4	TURDUS2	KM361485
<i>H. pallidus</i>	<i>Erithacus</i>	1/42 (2.38%)	SYAT03	JN164720
	<i>rubecula</i>			
	<i>Carduelis</i>	1/11 (9.09%)		
	<i>carduelis</i>			
<i>H. noctue</i>	<i>Erithacus</i>	1/42 (2.38%)	CIRCUM01	KC994896
	<i>rubecula</i>			
<i>H. tartakovskyi</i>	<i>Coccothraustes</i>	1/3	HAWF1	DQ368348
	<i>coccothraustes</i>			
<i>Haemoproteus</i> sp.	<i>Erithacus</i>	4/42 (9.52%)	us (4)	
	<i>rubecula</i>			
	<i>Carduelis</i>	1/11 (9.09%)	us	
	<i>carduelis</i>			
	<i>Emberiza</i>	1/4	CCF6	DQ368341
	<i>citrinella</i>			
	<i>Scolopax</i>	1/1	us	
	<i>rusticola*</i>			
	<i>Sylvia</i>	1/32 (3.13%)	us	
	<i>atricapilla*</i>			
	<i>Sylvia curruca*</i>	1/4	LWT1	AF495563
Subtotal of		42/104 (40.38%)		
<i>Haemoproteus</i>				
<i>P. circumflexum</i>	<i>Erithacus</i>	2/42 (4.76%)	TURDUS1	KM361492
	<i>rubecula</i>			
	<i>Emberiza</i>	1/4		
	<i>citrinella</i>			

<i>P. relictum</i>	<i>Emberiza cia</i>	1/2	SGS1	JX196866
	<i>Erithacus</i>	1/42 (2.38%)	dp	
	<i>rubecula</i>			
	<i>Passer montanus</i>	1/2	SGS1	MK652232
	<i>Fringilla coelebs</i>	1/3	COLL1	AY831747
<i>P. vaughani</i>	<i>Turdus merula</i>	2/4	SYAT05 (2)	OP546094
<i>P. matutinum</i>	<i>Turdus merula</i>	1/4	LINN1	DQ847270
<i>Plasmodium</i> sp.	<i>Cyanistes</i>	1/4	us	
	<i>caeruleus</i>			
Subtotal of		11/61 (18.03%)		
<i>Plasmodium</i>				
<i>Leucocytozoon</i> sp.	<i>Erithacus</i>	5/42 (11.9%)	BT2	AY393802
	<i>rubecula</i>		BT5	AY393798
			SFC8	DQ847234
			SYCON06	KP688305
			PARUS19	HM234027
	<i>Coccothraustes</i>	3/3	us (3)	
	<i>coccothraustes</i>			
	<i>Scolopax</i>	1/1	SCORUS01	LC230149
	<i>rusticola*</i>			
	<i>Cyanistes</i>	1/4	PARUS4	AY393795
	<i>caeruleus</i>			

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**Table S2.** Parasite intensity in chosen juveniles by qPCR and microscopy

Bird species	Microscopy		nPCR	
	Intensity of infection	Species	Intensity of infection (qPCR)	Sequence
<i>Turdus merula</i>	high	<i>Plasmodium</i> <i>vaughani</i>	high	SYAT05
<i>Sylvia atricapilla</i>	low	<i>Haemoproteus</i> sp.	low	STAL02
<i>Sylvia atricapilla</i>	low	<i>Haemoproteus</i> sp.	low	STAL02
<i>Sylvia atricapilla</i>	medium	<i>H. parabelopolskyi</i>	medium	STAL02
<i>Erithacus rubecula</i>	high	<i>P. matutinum</i>	high	LINN1
<i>Sylvia atricapilla</i>	medium	<i>H. parabelopolskyi</i>	medium	SYAT02
<i>Sylvia atricapilla</i>	low	<i>H. parabelopolskyi</i>	medium	dp
<i>Sylvia atricapilla</i>	low	<i>H. parabelopolskyi</i>	low	SYAT01