

Supplementary Table 1. MalAvi parasite lineages, Parasite, genus (H *Haemoproteus*, P *Plasmodium*, L *Leucocytozoon*), GenBank accession numbers, recorded host in this study (Host), and alternative hosts and alternative location in which parasite lineages were previously recorded. Asterisk (*) in parasite lineage indicates new haemosporidian lineages not recorded in previous studies, where symbol \$ represents new host record for this haemosporidian lineage and where symbol # represents new geographical record for this haemosporidian lineage (according to MalAvi database, Version 2.5.8, October 2023, [13]).

MalAvi lineage	Parasite	Genus	GenBank #	Host	Alternative host	Alternative location
Not defined #	<i>Leucocytozoon</i> sp.	L	OL897562	<i>Bubo bubo</i> \$		
Not defined #	<i>Haemoproteus</i> sp.	H	ON950078	<i>Larus fuscus</i> \$; <i>Larus michahellis</i> \$		
ARCIN01* #	<i>Leucocytozoon</i> sp.	L	PP457803	<i>Ardea cinerea</i> \$		
ATNO1	<i>Leucocytozoon</i> sp.	L	KJ488699	<i>Streptopelia decaocto</i> \$	<i>Athene noctua</i>	Europe (Portugal), Africa (Morocco)
BUBO01 #	<i>Leucocytozoon danilewskyi</i>	L	MK330142	<i>Bubo bubo</i>	<i>Bubo bubo</i>	Europe (Spain)
CIAE02	<i>Leucocytozoon</i> sp.	L	MK330160	<i>Buteo buteo</i>	Falconiformes, Gruiformes, Charadriiformes, Piciformes, Strigiformes, Ciconiiformes, Cuculiformes, Coraciiformes, Phoenicopteriformes	Europe (Spain, Germany, Poland, Portugal, Sweden, Austria), Asia (Philippines, Turkey, Russia, Mongolia, Japan, China, Thailand), Africa (South Africa)
COCOR02 #	<i>Leucocytozoon</i> sp.	L	JX867111	<i>Garrulus glandarius</i>	<i>Garrulus glandarius</i> , <i>Corvus corax</i>	Europe (Bulgaria, Slovakia, Germany)
GAGLA05	<i>Haemoproteus</i> sp.	H	KJ488735	<i>Garrulus glandarius</i>	<i>Garrulus glandarius</i> , <i>Corvus corax</i>	Europe (Bulgaria, Portugal), Africa (Morocco)
LARFUS01* #	<i>Haemoproteus</i> sp.	H	PP547804	<i>Larus fuscus</i> \$; <i>Larus michahellis</i> \$		
LINN1	<i>Plasmodium matutum</i>	P	MK330156	<i>Larus michahellis</i> \$	Passeriformes, Apterygiformes, Sphenisciformes, Gruiformes, Strigiformes, Charadriiformes, Falconiformes	Europe (Austria, Hungary, Sweden, United Kingdom, Portugal, Spain, Czech Republic, Italy, Germany, Switzerland, Slovakia, Poland), Oceania (New Zealand), Asia (Japan) North America (USA)

MILVUS02 #	<i>Leucocytozoon</i> sp.	L	JN164717	<i>Accipiter gentilis</i> \$	<i>Buteo buteo, Buteo lagopus, Milvus milvus, Haliaeetus albicilla</i>	Europe (Austria, Spain)
STAL2	<i>Haemoproteus syrnii</i>	H	KJ488773	<i>Strix aluco</i>	<i>Strix aluco, Strix nebulosa, Strix uralensis, Bubo bubo</i>	Europe (Portugal, France, Germany), Africa (Morocco)
STAL3 #	<i>Leucocytozoon</i> sp.	L	MK652258	<i>Strix aluco</i>	<i>Strix aluco</i>	Europe (Austria)
STAL5 #	<i>Leucocytozoon</i> sp.	L	KC876042	<i>Strix aluco</i>	<i>Strix aluco</i>	Asia (Turkey)
STRURA03 #	<i>Haemoproteus</i> sp.	H	KJ488826	<i>Bubo bubo</i>	<i>Bubo scandiacus, Bubo bubo, Strix nebulosa, Strix uralensis</i>	Europe (Austria, France, Switzerland)
