

APPENDIX 1. Sample size for each host species captured at each locality of sampling. (Loc 1= Rinconada de Maipú, Loc 2= Pantanillos, Loc 3= Ancud, Chiloé Island, Loc 4= Punta Arenas, Loc 5= Puerto Williams, Navarino Island).

Species	Loc 1	Loc 2	Loc 3	Loc 4	Loc 5	Totals
Columbidae:						
<i>Zenaida auriculata</i>	1	0	0	0	0	1
Strigidae:						
<i>Glaucidium nanum</i>	0	0	0	0	1	1
Trochilidae:						
<i>Sephanoides sephanoides</i>	0	7	12	0	0	19
Picidae:						
<i>Colaptes pitius</i>	0	0	2	0	0	2
Emberizidae:						
<i>Diuca diuca</i>	5	0	0	0	0	5
<i>Phrygilus alaudinus</i>	3	0	0	0	0	3
<i>Phrygilus fruticeti</i>	5	0	0	0	0	5
<i>Phrygilus patagonicus</i>	0	1	1	1	50	53
<i>Sicalis luteola</i>	0	15	1	0	0	16
<i>Zonotrichia capensis</i>	37	8	0	6	20	71
Fringillidae:						
<i>Carduelis barbatus</i>	0	8	4	0	30	42
Furnariidae:						
<i>Aphrastura spinicauda</i>	0	8	44	5	65	122
<i>Asthenes humilis</i>	2	0	0	0	0	2
<i>Cinclodes patagonicus</i>	0	0	3	0	1	4
<i>Leptasthenura aegithaloides</i>	1	0	0	0	0	1
<i>Sylviorthorhynchus desmursii</i>	0	0	2	0	0	2
<i>Upucerthia dumetaria</i>	2	0	0	0	0	2
Hirundinidae:						
<i>Tachycineta meyeri</i>	0	0	6	4	16	26
Icteridae:						
<i>Curaeus curaeus</i>	0	0	0	0	2	2
Mimidae:						
<i>Mimus tenca</i>	1	0	0	0	0	1
Troglodytidae:						
<i>Cistothorus platensis</i>	0	0	1	0	0	1
<i>Troglodytes musculus</i>	1	7	28	6	28	70
Turdidae:						
<i>Turdus falcklandii</i>	1	1	8	12	5	27
Tyranidae:						
<i>Anairetes parulus</i>	2	4	7	0	3	16
<i>Elaenia albiceps</i>	0	20	45	8	47	120
<i>Xolmis pyrope</i>	0	0	1	0	2	3
All Species	61	79	165	42	270	617

APPENDIX 2. Host family, genus, species, number of individuals infected (N) and GenBank accession numbers for each sequence recovered for every parasite lineage at each locality (ChH: *Haemoproteus*; ChP: *Plasmodium*; ChL: *Leucocytozoon*; *:Nestling).

Lineage	Locality	Host family	Scientific Name	Common name	N	GenBank accession number
ChH1	Pantanillos	Furnaridae	<i>Aphrastura spinicauda</i>	Thorn-tailed Rayadito	1	EF153646
	Pantanillos	Tyrannidae	<i>Elaenia albiceps</i>	White-crested Elaenia	7	
	Pantanillos	Emberizidae	<i>Zonotrichia capensis</i>	Rufous-collared Sparrow	2	
	Pantanillos	Trochilidae	<i>Sephanoides sephanoides</i>	Green-backed Firecrown	1	
	Ancud	Tyrannidae	<i>Elaenia albiceps</i>	White-crested Elaenia	3	
	Ancud	Troglodytidae	<i>Troglodytes musculus</i>	Southern House Wren	1	
	Ancud	Furnaridae	<i>Aphrastura spinicauda</i>	Thorn-tailed Rayadito	1*	
	Navarino	Tyrannidae	<i>Elaenia albiceps</i>	White-crested Elaenia	1	
ChH2	Punta Arenas	Tyrannidae	<i>Elaenia albiceps</i>	White-crested Elaenia	1	EF153647
ChH3	Navarino	Emberizidae	<i>Zonotrichia capensis</i>	Rufous-collared Sparrow	1	EF153648
ChH4	Punta Arenas	Emberizidae	<i>Zonotrichia capensis</i>	Rufous-collared Sparrow	1	EF153649
ChH5	Rinconada	Emberizidae	<i>Phrygilus alaudinus</i>	Band-tailed Sierra-finch	1	EF153650
	Rinconada	Emberizidae	<i>Diuca diuca</i>	Common Diuca Finch	1	
ChH6	Rinconada	Emberizidae	<i>Zonotrichia capensis</i>	Rufous-collared Sparrow	3	EF153652
	Rinconada	Emberizidae	<i>Zonotrichia capensis</i>	Rufous-collared Sparrow	5	
	Pantanillos	Troglodytidae	<i>Troglodytes musculus</i>	Southern House Wren	1	
	Pantanillos	Emberizidae	<i>Zonotrichia capensis</i>	Rufous-collared Sparrow	2	
	Pantanillos	Tyrannidae	<i>Elaenia albiceps</i>	White-crested Elaenia	1	
	Ancud	Turdidae	<i>Turdus falcklandii</i>	Austral Thrush	3	
	Ancud	Tyrannidae	<i>Elaenia albiceps</i>	White-crested Elaenia	1	
	Ancud	Furnaridae	<i>Aphrastura spinicauda</i>	Thorn-tailed Rayadito	1	
Navarino	Tyrannidae	<i>Elaenia albiceps</i>	White-crested Elaenia	1		
ChH7	Rinconada	Emberizidae	<i>Phrygilus fruticeti</i>	Mourning Sierra-finch	1	EF153653
ChH8	Rinconada	Emberizidae	<i>Phrygilus fruticeti</i>	Mourning Sierra-finch	1	EF153654
ChP1	Pantanillos	Troglodytidae	<i>Troglodytes musculus</i>	Southern House Wren	1	EF153638
	Ancud	Troglodytidae	<i>Troglodytes musculus</i>	Southern House Wren	1	
	Ancud	Tyrannidae	<i>Elaenia albiceps</i>	White-crested Elaenia	1	
	Navarino	Tyrannidae	<i>Elaenia albiceps</i>	White-crested Elaenia	1	
ChP2	Ancud	Turdidae	<i>Turdus falcklandii</i>	Austral Thrush	6	EF153639
ChP3	Ancud	Furnaridae	<i>Aphrastura spinicauda</i>	Thorn-tailed Rayadito	5	EF153640
ChP4	Pantanillos	Emberizidae	<i>Zonotrichia capensis</i>	Rufous-collared Sparrow	2	EF153641
	Pantanillos	Turdidae	<i>Turdus falcklandii</i>	Austral Thrush	1	
	Pantanillos	Troglodytidae	<i>Troglodytes musculus</i>	Southern House Wren	1	
	Ancud	Tyrannidae	<i>Elaenia albiceps</i>	White-crested Elaenia	1	
ChP5	Punta Arenas	Emberizidae	<i>Phrygilus patagonicus</i>	Patagonian Sierra finch	1	EF153642
ChP6	Rinconada	Emberizidae	<i>Zonotrichia capensis</i>	Rufous-collared Sparrow	6	EF153643
	Pantanillos	Furnaridae	<i>Aphrastura spinicauda</i>	Thorn-tailed Rayadito	1	
	Pantanillos	Tyrannidae	<i>Elaenia albiceps</i>	White-crested Elaenia	1	
ChP7	Pantanillos	Tyrannidae	<i>Elaenia albiceps</i>	White-crested Elaenia	1	EF153644
ChP8	Ancud	Troglodytidae	<i>Troglodytes musculus</i>	Southern House Wren	1	EF153645

APPENDIX 2. Continued

Lineage	Locality	Host family	Scientific Name	Common name	N	GenBank accession number
ChL1	Ancud	Furnaridae	<i>Aphrastura spinicauda</i>	Thorn-tailed Rayadito	1	EF153655
	Navarino	Furnaridae	<i>Aphrastura spinicauda</i>	Thorn-tailed Rayadito	5	
ChL2	Navarino	Tyrannidae	<i>Elaenia albiceps</i>	White-crested Elaenia	1	EF153656
	Navarino	Furnaridae	<i>Aphrastura spinicauda</i>	Thorn-tailed Rayadito	2	
	Navarino	Fringillidae	<i>Carduelis barbata</i>	Black-chinned Siskin	2	
	Navarino	Icteridae	<i>Curaeus curaeus</i>	Austral Blackbird	1	
	Navarino	Emberizidae	<i>Phrygilus patagonicus</i>	Patagonian Sierra Finch	4	
	Navarino	Troglodytidae	<i>Troglodytes musculus</i>	Southern House Wren	2	
	Navarino	Emberizidae	<i>Zonotrichia capensis</i>	Rufous-collared Sparrow	2	
ChL3	Pantaniillos	Emberizidae	<i>Zonotrichia capensis</i>	Rufous-collared Sparrow	1	EF153657
	Pantaniillos	Fringillidae	<i>Carduelis barbata</i>	Black-chinned Siskin	3	
	Navarino	Furnaridae	<i>Aphrastura spinicauda</i>	Thorn-tailed Rayadito	2	
	Navarino	Fringillidae	<i>Carduelis barbata</i>	Black-chinned Siskin	11	
	Navarino	Emberizidae	<i>Phrygilus patagonicus</i>	Patagonian Sierra Finch	1	
	Navarino	Emberizidae	<i>Zonotrichia capensis</i>	Rufous-collared Sparrow	1	
ChL4	Ancud	Turdidae	<i>Turdus falcklandii</i>	Austral Thrush	5	EF153658
ChL5	Ancud	Trochilidae	<i>Sephanoides sephanoides</i>	Green-backed Firecrown	2	EF153659
ChL6	Pantaniillos	Emberizidae	<i>Sicalis luteola</i>	Misto Yellow-finch	1	EF153660
ChL7	Rinconada	Emberizidae	<i>Phrygilus alaudinus</i>	Band-tailed Sierra-finch	1	EF153661
ChL8	Rinconada	Emberizidae	<i>Zonotrichia capensis</i>	Rufous-collared Sparrow	1	EF153662
ChL9	Pantaniillos	Turdidae	<i>Turdus falcklandii</i>	Austral Thrush	1	EF153663
	Ancud	Turdidae	<i>Turdus falcklandii</i>	Austral Thrush	1	
ChL10	Ancud	Turdidae	<i>Turdus falcklandii</i>	Austral Thrush	1	EF153664
ChL11	Rinconada	Emberizidae	<i>Zonotrichia capensis</i>	Rufous-collared Sparrow	1	EF153665

Species found uninfected (n): *Anairetes parulus* (16), *Cinclodes patagonicus* (4), *Cistothorus platensis* (1), *Colaptes pitiús* (2), *Leptasthenura aegithaloides* (1), *Sylviorthorhynchus desmursii* (2), *Tachycineta meyeri* (26), *Xolmis pyrope* (3), *Glaucidium nanum* (1), *Upucerthia dumetaria* (2), *Asthenes humicola* (2), *Mimus thenca* (1), *Zenaida auriculata* (1)