

**Appendix 1** Chewing lice genera (taxonomy follows Price *et al.* 2003) introduced to New Zealand (NZ). Chewing lice founder population parameter estimates are based on information collected from the host specimens sampled anywhere in their global range (excluding New Zealand). \* See Methods for how parasite taxonomic data were derived. † The total number of individuals includes host individuals from all potential host species for that particular parasite in the global database. ‡ The number of potential host species for that particular parasite in the global database that were successfully introduced to New Zealand.

Genus*	No. of host individuals sampled in native range†	No. of host individuals introduced to NZ†	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species‡	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Acidoproctus</i>	22	17	0	0.298	0.004	15.37	0.19	0	1	1212.2	4.0	0
<i>Actornithophilus</i>	52	124	0	0.278	0.001	16.22	0.07	0	2	226.0	4.0	0
<i>Amyrsidea</i>	160	717	0	0.019	0.000	21.68	0.04	2	2	584.8	4.3	1
<i>Anaticola</i>	72	158	0	0.263	0.001	10.01	0.07	0	1	947.3	4.0	0
<i>Anatoecus</i>	85	187	0	0.210	0.001	15.40	0.13	1	1	2300.1	4.0	1
<i>Austromenopon</i>	52	124	0.096	0.007	0.000	0.90	0.02	0	2	226.0	4.0	0
<i>Brueelia</i>	2044	5984	0	0.050	0.000	13.16	0.01	13	1	54.8	3.4	1
<i>Cuclotogaster</i>	52	396	0	0.064	0.000	11.40	0.09	0	1	675.9	3.9	0
<i>Goniocotes</i>	212	1113	0	0.019	0.000	8.34	0.02	2	1	617.2	4.2	1
<i>Goniodes</i>	236	2259	0	0.046	0.000	7.96	0.02	3	1	394.6	3.1	1
<i>Holomenopon</i>	24	15	0.034	0.143	0.004	7.80	0.25	0	2	2330.4	4.5	0
<i>Kurodaia</i>	89	228	0	0.039	0.000	10.51	0.06	1	2	173.4	1.0	0
<i>Lagopoecus</i>	126	1394	0	0.016	0.000	8.49	0.12	2	1	314.9	2.5	1
<i>Lipeurus</i>	111	1846	0	0.020	0.000	239.60	0.26	3	1	330.3	2.9	1
<i>Luniceps</i>	52	124	0	0.169	0.001	25.69	0.15	0	1	226.0	4.0	0

Appendix 1 (continued)

Genus*	No. of host individuals sampled in native range <sup>†</sup>	No. of host individuals introduced to NZ <sup>†</sup>	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species <sup>‡</sup>	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Menacanthus</i>	1312	3513	0	0.023	0.000	6.06	0.01	6	2	66.8	3.0	1
<i>Menopon</i>	31	117	0	0.055	0.001	3.70	0.05	0	2	767.4	3.6	0
<i>Menoponidae</i>	277	1133	0	0.064	0.000	11.43	0.02	4	2	774.5	4.2	1
<i>Myrsidea</i>	487	1683	0	0.037	0.000	10.04	0.02	4	2	121.3	3.0	1
<i>Ornithobius</i>	13	29	0	0.312	0.002	34.64	0.24	1	1	9670.0	4.0	1
<i>Oxylipeurus</i>	53	1377	0	0.006	0.000	24.00	0.01	2	1	308.7	2.5	1
<i>Penenirmus</i>	369	1548	0	0.006	0.000	6.72	0.02	2	1	73.9	3.0	0
<i>Philopteridae</i>	849	2675	0	0.017	0.000	12.78	0.04	6	1	199.5	2.9	1
<i>Philopterus</i>	2195	5920	0	0.093	0.000	7.58	0.01	14	1	55.7	3.2	1
<i>Quadriceps</i>	52	124	0	0.183	0.001	14.13	0.05	0	1	226.0	4.0	0
<i>Ricinus</i>	1756	4919	0	0.017	0.000	5.11	0.05	9	2	49.3	3.1	1
<i>Saemundssonina</i>	304	825	0	0.012	0.000	6.22	0.06	1	1	101.9	4.0	0
<i>Strigiphilus</i>	89	228	0	0.327	0.001	11.96	0.02	1	1	173.4	1.0	1
<i>Sturnidoecus</i>	503	1022	0	0.016	0.000	9.66	0.05	2	1	63.3	4.0	1
<i>Trinoton</i>	85	187	0	0.166	0.001	3.44	0.01	1	2	2300.1	4.0	1

**Appendix 2** Chewing lice genera (taxonomy follows Price *et al.* 2003) introduced to New Zealand (NZ). Chewing lice founder population parameter estimates are based on information collected from the host specimens sampled anywhere in the United Kingdom or Ireland. \* See Methods for how parasite taxonomic data were derived. † The total number of individuals includes host individuals from all potential host species for that particular parasite in the UK/Ireland database. ‡ The number of potential host species for that particular parasite in the UK/Ireland database that were successfully introduced to New Zealand.

Genus*	No. of host individuals sampled in native range†	No. of host individuals introduced to NZ†	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species ‡	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Actornithophilus</i>	48	124	0	0.269	0.001	17	0.07	0	2	226	4	0
<i>Amyrsidea</i>	48	711	0	0.007	0	13.6	0	1	2	577.3	4.3	1
<i>Anaticola</i>	30	39	0	0.46	0.003	9.78	0.11	0	1	1151.9	4.2	0
<i>Anatoecus</i>	43	68	0	0.305	0.002	20.42	0.26	1	1	4784.6	4.1	1
<i>Austromenopon</i>	48	124	0.086	0.007	0	0.91	0.02	0	2	226	4	0
<i>Brueelia</i>	1342	5255	0	0.047	0	13.26	0.01	11	1	58.7	3.3	1
<i>Cuclotogaster</i>	15	19	0.068	0.077	0.002	1.41	0.03	0	1	452.5	4	0
<i>Goniocotes</i>	63	730	0	0.012	0	6.62	0	1	1	574	4.3	1
<i>Goniodes</i>	118	734	0	0.06	0	6.26	0.03	1	1	573.7	4.3	1
<i>Holomenopon</i>	13	7	0.578	0.06	0.004	0.42	0.03	0	2	3108	5	0
<i>Kurodaia</i>	35	221	0	0.059	0	10.99	0.01	1	2	164	1	0
<i>Lagopoecus</i>	80	248	0	0.011	0	8.54	0.79	1	1	946	5	0
<i>Lipeurus</i>	48	711	0	0.035	0	340.48	0	1	1	577.3	4.3	1
<i>Luniceps</i>	48	124	0	0.15	0.001	28.89	0.14	0	1	226	4	0

Appendix 2 (continued)

Genus*	No. of host individuals sampled in native range <sup>†</sup>	No. of host individuals introduced to NZ <sup>†</sup>	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species <sup>‡</sup>	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Menacanthus</i>	977	3757	0	0.025	0	6.39	0.01	7	2	124.3	3.2	1
<i>Menopon</i>	38	486	0	0.044	0	12	0.03	0	2	383.8	4	0
<i>Menoponidae</i>	148	194	0	0.049	0	3.02	0.01	1	2	1726.4	4	1
<i>Myrsidea</i>	351	1593	0	0.028	0	11.96	0.02	3	2	122	3	1
<i>Ornithobius</i>	13	29	0	0.312	0.002	34.58	0.23	1	1	9670	4	1
<i>Oxylipeurus</i>	25	244	0	0.02	0	36	0	1	1	953	5	1
<i>Philopteridae</i>	669	2651	0	0.015	0	13.19	0.02	5	1	195.4	2.9	1
<i>Philopterus</i>	1524	5809	0	0.077	0	7.42	0.01	13	1	55	3.2	1
<i>Quadriceps</i>	48	124	0	0.187	0.001	14.1	0.05	0	1	226	4	0
<i>Ricinus</i>	1007	2741	0	0.025	0	5.41	0.06	5	2	61.6	2.8	1
<i>Saemundsonia</i>	258	825	0	0.012	0	6.24	0.05	1	1	101.9	4	0
<i>Strigiphilus</i>	35	221	0	0.14	0	9.68	0	1	1	164	1	1
<i>Sturnidoecus</i>	210	701	0	0.008	0	11.01	0.07	1	1	79.9	4	1
<i>Trinoton</i>	43	68	0	0.201	0.001	3.24	0.02	1	2	4784.6	4.1	1

**Appendix 3** Chewing lice species (taxonomy follows Price *et al.* 2003) introduced to New Zealand (NZ). Chewing lice founder population parameter estimates are based on information collected from the host specimens sampled anywhere in their global range (excluding New Zealand). \* See Methods for how parasite taxonomic data were derived. † The total number of individuals includes host individuals from all potential host species for that particular parasite in the global database. ‡ The number of potential host species for that particular parasite in the global database that were successfully introduced to New Zealand.

Species*	No. of host individuals sampled in native range†	No. of host individuals introduced to NZ†	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species ‡	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Acidoproctus</i>	12	9	0.46	0.06	0.003	1.08	0.06	0	1	823	4	0
<i>Acidoproctus taschenbergi</i>	10	8	0	0.564	0.007	16.6	0.19	0	1	1650	4	0
<i>Actornithophilus gracilis</i>	52	124	0	0.279	0.001	16.27	0.07	0	2	226	4	0
<i>Amyrsidea</i>	11	2	0.832	0.085	0.01	0.84	0.12	1	2	3375	2	1
<i>Amyrsidea (Argimenopon) lagopi</i>	61	4	0.886	0.03	0.005	0.46	0.1	0	2	516	4	0
<i>Amyrsidea (Argimenopon) perdicis</i>	88	711	0	0.018	0	22.09	0.01	1	2	577.3	4.3	1
<i>Anaticola anseris</i>	14	7	0	0.641	0.009	20.57	0.44	0	1	3108	5	0
<i>Anaticola asymmetricus</i>	10	8	0	0.564	0.007	23.94	0.39	0	1	1650	4	0
<i>Anaticola crassicornis</i>	36	134	0	0.207	0.001	7.04	0.02	0	1	800.9	4	0

**Appendix 3 (continued)**

Species*	No. of host individuals sampled in native range†	No. of host individuals introduced to NZ†	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species ‡	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Anaticola mergiserrati</i>	12	9	0	0.546	0.008	4.35	0.08	0	1	823	4	0
<i>Anatoecus</i>	85	187	0	0.211	0.001	15.34	0.13	1	1	2300.1	4	1
<i>Austromenopon aegialitidis</i>	52	124	0.098	0.007	0	0.9	0.02	0	2	226	4	0
<i>Brueelia</i>	584	1875	0	0.033	0	21.44	0.03	5	1	103.4	2.5	1
<i>Brueelia amsel</i>	149	785	0	0.004	0	18.34	0.08	1	1	111.2	2	1
<i>Brueelia breueri</i>	87	91	0	0.115	0.001	8.22	0.1	1	1	27.8	4	1
<i>Brueelia chrysomytris</i>	51	54	0	0.146	0.002	7.04	0.09	1	1	14.5	4	0
<i>Brueelia delicata</i>	115	620	0	0.008	0	7.18	0.02	1	1	26.5	4	1
<i>Brueelia densilimba</i>	67	615	0	0.002	0	31	0	1	1	15.6	4	1
<i>Brueelia kluzi</i>	304	354	0	0.035	0	12.7	0.16	1	1	20.9	2	0
<i>Brueelia merulensis</i>	149	785	0	0.056	0	15.94	0.02	1	1	111.2	2	1
<i>Brueelia mongolica</i>	65	59	0	0.096	0.002	3.96	0.03	0	1	15.4	5	0
<i>Brueelia nebulosa</i>	252	701	0	0.178	0	9.77	0.02	1	1	79.9	4	1
<i>Brueelia ornatissima</i>	23	2	0.907	0.045	0.01	0.56	0.11	0	1	56	4	0
<i>Brueelia parviguttata</i>	155	704	0	0.004	0	12.29	0.09	1	1	37.2	4	1
<i>Brueelia pyrrhularum</i>	46	2	0.821	0.09	0.01	0.85	0.15	0	1	21.8	1	0
<i>Brueelia sibirica</i>	36	618	0	0.002	0	4	0	1	1	13	4	0
<i>Brueelia stadleri</i>	87	203	0	0.067	0	8.34	0.06	0	1	15.3	4	0

**Appendix 3 (continued)**

Species*	No. of host individuals sampled in native range†	No. of host individuals introduced to NZ†	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species ‡	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Brueelia tristis</i>	148	81	0.595	0.005	0	0.41	0.03	0	1	18.2	1	0
<i>Brueelia turdinulae</i>	94	577	0	0.003	0	33.54	0.04	1	1	66.6	2	1
<i>Brueelia varia</i>	24	5	0.255	0.228	0.01	4.2	0.27	0	1	246	5	0
<i>Cuclotogaster barbara</i>	17	15	0	0.557	0.005	19.69	0.26	0	1	376	1	0
<i>Cuclotogaster obscurior</i>	35	381	0	0.045	0	7.4	0.02	0	1	687.7	4	0
<i>Goniocotes</i>	72	6	0.609	0.072	0.007	2.21	0.19	1	1	1469	3.3	1
<i>Goniocotes chrysocephalus</i>	41	244	0	0.02	0	20	0.02	1	1	953	5	1
<i>Goniocotes microthorax</i>	66	829	0	0.013	0	4.09	0	0	1	520.3	4	0
<i>Goniocotes obscurus</i>	16	19	0.31	0.036	0.002	5.52	0.23	0	1	452.5	4	0
<i>Goniocotes pusillus</i>	17	15	0.003	0.238	0.005	5.52	0.1	0	1	376	1	0
<i>Goniodes</i>	83	1741	0	0.033	0	7.23	0.01	3	1	393.6	2.8	1
<i>Goniodes dispar</i>	63	486	0	0.061	0	7.54	0.03	0	1	383.8	4	0
<i>Goniodes lagopi</i>	61	4	0.029	0.575	0.015	9.22	0.34	0	1	516	4	0
<i>Goniodes pavonis</i>	11	2	0.85	0.075	0.01	0.45	0.07	1	1	3375	2	1
<i>Goniodes securiger</i>	17	15	0	0.554	0.005	17.57	0.17	0	1	376	1	0
<i>Goniodes tetraonis</i>	12	13	0	0.421	0.005	3.23	0.03	0	1	910	4	0
<i>Holomenopon leucoxanthum</i>	14	7	0.613	0.056	0.004	0.39	0.03	0	2	3108	5	0

**Appendix 3 (continued)**

Species*	No. of host individuals sampled in native range <sup>†</sup>	No. of host individuals introduced to NZ <sup>†</sup>	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species <sup>‡</sup>	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Holomenopon tadornae</i>	10	8	0.061	0.21	0.006	9.11	0.29	0	2	1650	4	0
<i>Kurodaia</i>	74	221	0	0.03	0	6.3	0.06	1	2	164	1	0
<i>Kurodaia (Conciella) cryptostigmatia</i>	74	221	0.001	0.009	0	25.55	0.12	1	2	164	1	0
<i>Kurodaia (Conciella) subpachygaster</i>	15	7	0.608	0.056	0.004	3.92	0.3	0	2	469.5	2	0
<i>Lagopoecus</i>	12	1133	0	0.01	0	11	0	1	1	170	2	1
<i>Lagopoecus affinis</i>	61	4	0.074	0.47	0.015	13.05	1.32	0	1	516	4	0
<i>Lagopoecus colchicus</i>	41	244	0	0.008	0	3.5	0.01	1	1	953	5	0
<i>Lagopoecus lyrurus</i>	12	13	0	0.522	0.005	4.32	0.05	0	1	910	4	0
<i>Lipeurus</i>	53	1377	0	0.02	0	22.97	0.02	2	1	308.7	2.5	1
<i>Lipeurus caponis</i>	41	244	0.002	0.004	0	1	0	1	1	953	5	0
<i>Lipeurus maculosus</i>	88	711	0	0.01	0	1155.89	0.73	1	1	577.3	4.3	1
<i>Lipeurus pavo</i>	11	2	0.517	0.265	0.02	1.73	0.15	1	1	3375	2	1
<i>Lunaceps holophaeus</i>	52	124	0	0.169	0.001	25.85	0.14	0	1	226	4	0



**Appendix 3 (continued)**

Species*	No. of host individuals sampled in native range†	No. of host individuals introduced to NZ†	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species ‡	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Menacanthus</i>	24	5	0.121	0.31	0.012	4.93	0.16	0	2	246	5	0
<i>Menacanthus alaudae</i>	220	763	0	0.015	0	14.43	0.09	1	2	35.5	4.1	0
<i>Menacanthus curuccae</i>	51	2	0.906	0.05	0.01	0.14	0.03	0	2	14.5	4	0
<i>Menacanthus eurysternus</i>	1001	2724	0	0.025	0	4.66	0.01	5	2	72.5	2.7	1
<i>Menacanthus lyali</i>	16	19	0.081	0.074	0.002	7.1	0.3	0	2	452.5	4	0
<i>Menopon</i>	14	102	0	0.01	0	1	0	0	2	825	4	0
<i>Menopon pallens</i>	17	15	0	0.356	0.005	4.22	0.06	0	2	376	1	0
<i>Menoponidae</i>	277	1133	0	0.064	0	11.39	0.02	4	2	774.5	4.2	1
<i>Myrsidea</i>	24	102	0	0.145	0	21.22	0.05	1	2	488	3	0
<i>Myrsidea anathorax</i>	24	5	0.06	0.382	0.012	7.62	0.26	0	2	246	5	0
<i>Myrsidea cucullaris</i>	252	701	0	0.047	0	3.86	0.01	1	2	79.9	4	0
<i>Myrsidea fuscomarginata</i>	23	2	0.925	0.035	0.01	0.82	0.18	0	2	56	4	0
<i>Myrsidea invadens</i>	15	88	0	0.045	0	5.75	0.01	1	2	110	4	0
<i>Myrsidea isostoma</i>	24	102	0	0.019	0	55.93	0.3	1	2	488	3	0
<i>Myrsidea thoracica</i>	149	785	0	0.009	0	5.29	0.01	1	2	111.2	2	1

**Appendix 3 (continued)**

Species*	No. of host individuals sampled in native range†	No. of host individuals introduced to NZ†	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species ‡	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Ornithobius bucephalus</i>	13	29	0	0.311	0.002	34.47	0.24	1	1	9670	4	1
<i>Oxylipeurus colchicus</i>	41	244	0	0.02	0	35.98	0.03	1	1	953	5	1
<i>Oxylipeurus ellipticus</i>	12	1133	0	0.003	0	4	0	1	1	170	2	1
<i>Penenirmus</i>	149	785	0	0.004	0	11.99	0.03	1	1	111.2	2	0
<i>Penenirmus deductoris</i>	65	59	0.017	0.042	0.001	6.6	0.08	0	1	15.4	5	0
<i>Penenirmus hibari</i>	155	704	0	0.006	0	2.75	0.01	1	1	37.2	4	0
<i>Philopteridae</i>	849	2675	0	0.017	0	12.77	0.04	6	1	199.5	2.9	1
<i>Philopterus</i>	536	1118	0	0.168	0	7.99	0.01	4	1	63.3	4.1	1
<i>Philopterus agelaii</i>	23	2	0.368	0.395	0.02	3.17	0.15	0	1	56	4	0
<i>Philopterus arboreus</i>	18	5	0.76	0.048	0.006	0.96	0.11	0	1	26.9	4	0
<i>Philopterus atratus</i>	24	102	0	0.213	0	13.27	0.02	1	1	488	3	0
<i>Philopterus citrinellae</i>	248	713	0	0.082	0	6.56	0.02	2	1	26.7	4	0
<i>Philopterus fortunatus</i>	304	354	0	0.096	0.001	4.13	0.02	1	1	20.9	2	0
<i>Philopterus fringillae</i>	202	307	0	0.245	0.001	7.1	0.02	1	1	27.4	4	0
<i>Philopterus guttatus</i>	24	5	0.002	0.646	0.012	11.35	0.53	0	1	246	5	0
<i>Philopterus linariae</i>	36	618	0	0.023	0	8.21	0	1	1	13	4	0

**Appendix 3 (continued)**

Species*	No. of host individuals sampled in native range†	No. of host individuals introduced to NZ†	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species ‡	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Philopterus modularis</i>	106	404	0	0.071	0	11.88	0.02	1	1	19.8	2	1
<i>Philopterus montani</i>	49	14	0.151	0.106	0.004	3.1	0.12	0	1	22	5	0
<i>Philopterus rapax</i>	34	120	0	0.113	0	3.99	0.01	0	1	24	4	0
<i>Philopterus residuus</i>	45	11	0.079	0.178	0.006	4.54	0.27	0	1	18.3	4	0
<i>Philopterus rubeculae</i>	148	81	0.571	0.005	0	0.43	0.03	0	1	18.2	1	0
<i>Philopterus stadleri</i>	155	704	0	0.029	0	7.53	0.01	1	1	37.2	4	0
<i>Philopterus turdi</i>	243	1362	0	0.063	0	6.76	0	2	1	92.3	2	1
<i>Quadriceps junceus</i>	52	124	0	0.183	0.001	14.08	0.05	0	1	226	4	0
<i>Ricinus elongatus</i>	495	2063	0	0.016	0	6.01	0.01	3	2	88.1	2.7	1
<i>Ricinus fringillae</i>	1007	2371	0	0.018	0	3.19	0.03	5	2	21.6	3.7	0
<i>Ricinus rubeculae</i>	254	485	0	0.019	0	11.29	0.45	1	2	19.5	1.8	0
<i>Saemundssonia</i>	252	701	0.064	0.001	0	0.94	0.02	1	1	79.9	4	0
<i>Saemundssonia (Saemundssonia) platygaster</i>	52	124	0	0.073	0	6.79	0.07	0	1	226	4	0
<i>Strigiphilus cursitans</i>	74	221	0	0.313	0.001	12.45	0.02	1	1	164	1	1
<i>Strigiphilus rostratus</i>	15	7	0.002	0.734	0.016	4.95	0.11	0	1	469.5	2	0

**Appendix 3 (continued)**

<b>Species*</b>	<b>No. of host individuals sampled in native range<sup>†</sup></b>	<b>No. of host individuals introduced to NZ<sup>†</sup></b>	<b>Probability of missing the boat</b>	<b>Mean prevalence</b>	<b>CI prevalence</b>	<b>Mean intensity</b>	<b>CI intensity</b>	<b>No. of successful host species<sup>‡</sup></b>	<b>Parasite suborder</b>	<b>Mean host body mass</b>	<b>Mean host social index</b>	<b>Detected in NZ</b>
<i>Sturnidoecus refractariolus</i>	202	307	0	0.018	0	12.3	0.08	1	1	27.4	4	0
<i>Sturnidoecus ruficeps</i>	49	14	0.21	0.091	0.004	10.75	0.4	0	1	22	5	0
<i>Sturnidoecus sturni</i>	252	701	0	0.013	0	7.73	0.05	1	1	79.9	4	1
<i>Trinoton alopochen</i>	10	8	0.072	0.212	0.006	1.53	0.03	0	2	1650	4	0
<i>Trinoton anserinum</i>	27	36	0	0.108	0.002	2.88	0.04	1	2	8394.1	4.2	0
<i>Trinoton querquedulae</i>	48	143	0	0.178	0.001	3.64	0.01	0	2	802.3	4	0

**Appendix 4** Chewing lice species (taxonomy follows Price *et al.* 2003) introduced to New Zealand (NZ). Chewing lice founder population parameter estimates are based on information collected from the host specimens sampled anywhere in the United Kingdom or Ireland. \* See Methods for how parasite taxonomic data were derived. † The total number of individuals includes host individuals from all potential host species for that particular parasite in the UK/Ireland database. ‡ The number of potential host species for that particular parasite in the UK/Ireland database that were successfully introduced to New Zealand.

Species*	No. of host individuals sampled in native range†	No. of host individuals introduced to NZ†	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species ‡	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Actornithophilus gracilis</i>	48	124	0	0.269	0.001	17.02	0.07	0	2	226	4	0
<i>Amyrsidea</i>	48	711	0	0.007	0	13.6	0	1	2	577.3	4.3	1
<i>Anaticola anseris</i>	13	7	0	0.614	0.009	21.43	0.45	0	1	3108	5	0
<i>Anaticola crassicornis</i>	17	32	0	0.431	0.002	6.17	0.04	0	1	724	4	0
<i>Anatoecus</i>	43	68	0	0.307	0.001	20.32	0.27	1	1	4784.6	4.1	1
<i>Austromenopon aegialitidis</i>	48	124	0.07	0.008	0	0.93	0.02	0	2	226	4	0
<i>Brueelia</i>	861	3499	0	0.017	0	18.46	0.04	7	1	53.6	3	1
<i>Brueelia amsel</i>	109	785	0	0.004	0	18.32	0.03	1	1	111.2	2	1
<i>Brueelia chrysoytris</i>	30	54	0	0.14	0.001	5.6	0.04	1	1	14.5	4	0
<i>Brueelia densilimba</i>	24	615	0	0.002	0	1	0	1	1	15.6	4	1
<i>Brueelia merulensis</i>	109	785	0	0.048	0	16.65	0.01	1	1	111.2	2	1
<i>Brueelia nebulosa</i>	210	701	0	0.162	0	10.43	0.01	1	1	79.9	4	1

**Appendix 4 (continued)**

Species*	No. of host individuals sampled in native range†	No. of host individuals introduced to NZ†	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species‡	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Brueelia stadleri</i>	56	203	0	0.067	0	8.87	0.03	0	1	15.3	4	0
<i>Brueelia tristis</i>	144	81	0.593	0.005	0	0.41	0.03	0	1	18.2	1	0
<i>Brueelia turdinulae</i>	84	577	0	0.003	0	33.51	0.02	1	1	66.6	2	1
<i>Brueelia varia</i>	17	102	0	0.098	0	9.4	0.01	1	1	488	3	0
<i>Cuclotogaster obscurior</i>	15	19	0.059	0.077	0.002	1.41	0.03	0	1	452.5	4	0
<i>Goniocotes chrysocephalus</i>	25	244	0	0.004	0	27	0	1	1	953	5	1
<i>Goniocotes microthorax</i>	23	467	0	0.015	0	3.57	0	0	1	381	4	0
<i>Goniocotes obscurus</i>	15	19	0.282	0.038	0.002	5.74	0.22	0	1	452.5	4	0
<i>Goniodes</i>	25	244	0	0.082	0	3.85	0	1	1	953	5	1
<i>Goniodes dispar</i>	38	486	0	0.045	0	8.28	0.04	0	1	383.8	4	0
<i>Goniodes lagopi</i>	55	4	0.032	0.552	0.015	8.45	0.36	0	1	516	4	0
<i>Holomenopon leucoanthum</i>	13	7	0.579	0.06	0.004	0.42	0.03	0	2	3108	5	0
<i>Kurodaia (Conciella) cryptostigmatia</i>	35	221	0	0.059	0	11	0.01	1	2	164	1	0
<i>Lagopoecus</i>	25	244	0	0.004	0	2	0	1	1	953	5	0
<i>Lagopoecus affinis</i>	55	4	0.094	0.458	0.015	12.13	1.27	0	1	516	4	0
<i>Lipeurus</i>	25	244	0	0.09	0	21.45	0	1	1	953	5	1
<i>Lipeurus maculosus</i>	48	711	0	0.004	0	2680	0	1	1	577.3	4.3	1
<i>Lunaceps holophaeus</i>	48	124	0	0.15	0.001	28.78	0.15	0	1	226	4	0

Appendix 4 (continued)

Species*	No. of host individuals sampled in native range <sup>†</sup>	No. of host individuals introduced to NZ <sup>†</sup>	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species <sup>‡</sup>	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Menacanthus</i>	30	24	0.009	0.121	0.003	7.24	0.15	0	2	409.5	4.2	0
<i>Menacanthus alaudae</i>	131	763	0	0.009	0	21.56	0.14	1	2	35.5	4.1	0
<i>Menacanthus curuccae</i>	32	2	0.938	0.03	0.005	0.06	0.01	0	2	14.5	4	0
<i>Menacanthus eurysternus</i>	759	2724	0	0.025	0	4.75	0.01	5	2	72.5	2.7	1
<i>Menacanthus stramineus</i>	25	244	0	0.061	0	6.4	0	1	2	953	5	0
<i>Menopon pallens</i>	38	486	0	0.044	0	12	0.03	0	2	383.8	4	0
<i>Menoponidae</i>	148	194	0	0.049	0	3	0.01	1	2	1726.4	4	1
<i>Myrsidea</i>	17	102	0	0.117	0	24.25	0.03	1	2	488	3	0
<i>Myrsidea anathorax</i>	15	5	0.014	0.52	0.012	8.8	0.21	0	2	246	5	0
<i>Myrsidea cucullaris</i>	210	701	0	0.032	0	3.39	0.01	1	2	79.9	4	0
<i>Myrsidea isostoma</i>	17	102	0	0.02	0	55.96	0.12	1	2	488	3	0
<i>Myrsidea thoracica</i>	109	785	0	0.008	0	5.83	0.01	1	2	111.2	2	1
<i>Ornithobius bucephalus</i>	13	29	0	0.311	0.002	34.08	0.26	1	1	9670	4	1
<i>Oxylipeurus colchicus</i>	25	244	0	0.02	0	36	0	1	1	953	5	1

**Appendix 4 (continued)**

Species*	No. of host individuals sampled in native range <sup>†</sup>	No. of host individuals introduced to NZ <sup>†</sup>	Probability of missing the boat	Mean prevalence	CI prevalence	Mean intensity	CI intensity	No. of successful host species <sup>‡</sup>	Parasite suborder	Mean host body mass	Mean host social index	Detected in NZ
<i>Philopteridae</i>	669	2651	0	0.015	0	13.18	0.02	5	1	195.4	2.9	1
<i>Philopterus</i>	764	2217	0	0.102	0	7.42	0.01	5	1	44.1	3.7	1
<i>Philopterus atratus</i>	17	102	0	0.156	0	12.63	0.01	1	1	488	3	0
<i>Philopterus citrinellae</i>	181	713	0	0.059	0	5.67	0.02	2	1	26.7	4	0
<i>Philopterus fringillae</i>	97	307	0	0.188	0	7.34	0.01	1	1	27.4	4	0
<i>Philopterus guttatus</i>	15	5	0.001	0.69	0.012	14.48	0.61	0	1	246	5	0
<i>Philopterus linariae</i>	11	618	0	0.002	0	6	0	1	1	13	4	0
<i>Philopterus modularis</i>	102	404	0	0.062	0	9.78	0.01	1	1	19.8	2	1
<i>Philopterus rubeculae</i>	144	81	0.563	0.005	0	0.44	0.03	0	1	18.2	1	0
<i>Philopterus turdi</i>	193	1362	0	0.056	0	6.3	0	2	1	92.3	2	1
<i>Quadriceps junceus</i>	48	124	0	0.186	0.001	14.12	0.05	0	1	226	4	0
<i>Ricinus elongatus</i>	319	1486	0	0.018	0	6.51	0.01	2	2	96.5	2.9	1
<i>Ricinus fringillae</i>	442	770	0	0.043	0	2.96	0.02	2	2	20.7	3.1	0
<i>Ricinus rubeculae</i>	246	485	0	0.019	0	11.1	0.44	1	2	19.5	1.8	0



**Appendix 4 (continued)**

<b>Species*</b>	<b>No. of host individuals sampled in native range†</b>	<b>No. of host individuals introduced to NZ†</b>	<b>Probability of missing the boat</b>	<b>Mean prevalence</b>	<b>CI prevalence</b>	<b>Mean intensity</b>	<b>CI intensity</b>	<b>No. of successful host species‡</b>	<b>Parasite suborder</b>	<b>Mean host body mass</b>	<b>Mean host social index</b>	<b>Detected in NZ</b>
<i>Saemundssonina</i>	210	701	0.03	0.001	0	0.97	0.01	1	1	79.9	4	0
<i>Saemundssonina (Saemundssonina) platygaster</i>	48	124	0	0.075	0	6.79	0.06	0	1	226	4	0
<i>Strigiphilus cursitans</i>	35	221	0	0.14	0	9.68	0.01	1	1	164	1	1
<i>Sturnidoecus sturni</i>	210	701	0	0.008	0	10.97	0.07	1	1	79.9	4	1
<i>Trinoton anserinum</i>	26	36	0	0.1	0.001	3.03	0.04	1	2	8394.1	4.2	0
<i>Trinoton querquedulae</i>	17	32	0	0.321	0.002	3.34	0.02	0	2	724	4	0

**Appendix 5** Summary of the number of host species excluded from and included in the analyses in relation to host taxonomy (order) within the global and UK/Ireland datasets. (Host species were excluded because there were insufficient host or parasite data available.)

Host order	Global dataset					UK/Ireland dataset			
	Total	Host data missing	Parasite data missing	Included	%	Total	Host data missing	Parasite data missing	Included
Passeriformes	45	5	13	27	60	45	5	18	22
Strigiformes	4	2	0	2	50	4	2	1	1
Galliformes	25	8	8	9	36	25	8	13	4
Anseriformes	23	9	8	6	26	23	9	11	3
Ciconiiformes	5	2	2	1	20	5	2	2	1
Columbiformes	9	6	3	0	0	9	6	3	0
Coraciiformes	1	0	1	0	0	1	0	1	0
Craciformes	2	1	1	0	0	2	1	1	0
Psittaciformes	3	3	0	0	0				
Struthioniformes	2	2	0	0	0				
Turniciformes	1	1	0	0	0				