**Supplemental Information for:**

**Extra-pair paternity in birds**

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**Table S1**. Overview of the studies on socially monogamous bird species with biparental care reporting 434 rates of the percentage of extra-pair paternity (EPP) for offspring and/or for the percentage of broods (EPbr) with at least one extra-pair offspring. N= number of offspring sampled, Nbr= number of broods sampled, Lat=latitude, Long=longitude. Habitat for passerines was extracted from the handbook of the Birds of the World (1) and was classified as: 1=woodland, 2=savanna, 3=scattered trees, 4=grassland, 5=cliffs, 6=scrub, 7=extensive undergrowth, 8=forest, 9= hedgerows, agricultural, gardens, vineyards etc., 10= heaths and moorland, 11=reed bed, 12=marshes, saltmarsh, 13=rainforest, 14=mountain steppes, 15=desert. The remarks column indicates studies which were conducted over a large geographic range, intra- or conspecific brood parasitism (IBP/CBP) was present, we report a subset of the data, we had difficulty in extracting numbers (and thus should be treated with care).

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scientific name | Common name | N | EPP | Nbr | EPbr | Lat | Long | Habitat | Remarks | Ref |
| *Acanthiza pusilla* | brown thornbill | 178 | 6.2 | 67 | 11.9 | -35.27 | 149.10 | 1,8,6,7,9 |  | (*2*) |
| *Accipiter cooperii* | Cooper’s hawk | 140 | 19.3 | 44 | 34.1 | 44.97 | -90.05 | - |  | (*3*) |
| *Acrocephalus arundinaceus* | great reed warbler | 194 | 9.8 | 48 | 10.4 | 49.67 | 10.85 | 11 |  | (*4*) |
| *Acrocephalus arundinaceus* | great reed warbler | 678 | 3.4 | - | - | 59.17 | 15.42 | 11 |  | (*5*) |
| *Acrocephalus arundinaceus* | great reed warbler | - | - | 272 | 6.6 | 59.17 | 15.42 | 11 |  | (*6*) |
| *Acrocephalus bistrigiceps* | black-browed reed-warbler | 140 | 6.4 | 37 | 13.5 | 36.87 | 139.05 | 11,12 |  | (*7*) |
| *Acrocephalus palustris* | marsh warbler | 131 | 3.1 | 33 | 9.1 | 50.37 | 10.75 | 6,7,11,12,9 |  | (*8*) |
| *Acrocephalus schoenobaenus* | sedge warbler | 201 | 7.5 | 44 | 22.7 | 59.17 | 15.42 | 12 |  | (*9*) |
| *Acrocephalus schoenobaenus* | sedge warbler | 403 | 8.4 | 85 | 18.8 | 51.45 | -0.55 | 12 |  | (*10*) |
| *Acrocephalus scirpaceus* | Eurasian reed-warbler | 186 | 6.5 | 52 | 15.4 | 52.30 | 0.30 | 11,12 |  | (*11*) |
| *Actitis hypoleucos* | common sandpiper | 83 | 15.7 | 27 | 18.5 | 54.75 | -3.02 | - |  | (*12*) |
| *Actitis hypoleucos* | common sandpiper | 53 | 7.5 | 15 | 20.0 | 57.78 | 12.32 | - |  | (*13*) |
| *Aegolius funereus* | boreal owl | 109 | 0.0 | 32 | 0.0 | 37.8─  64.9 | -107.8─  -147.7 | - | Sampled over large geographic range | (*14*) |
| *Agelaius phoeniceus* | red-winged blackbird | 125 | 25.6 | 40 | 50.0 | 42.40 | -85.40 | 12,9 |  | (*15*) |
| *Agelaius phoeniceus* | red-winged blackbird | 87 | 26.4 | 27 | 48.1 | 41.55 | -80.18 | 12,9 |  | (*15*) |
| *Agelaius phoeniceus* | red-winged blackbird | 56 | 28.6 | 20 | 50.0 | 26.53 | -78.53 | 12,9 |  | (*15*) |
| *Agelaius phoeniceus* | red-winged blackbird | 235 | 24.7 | 68 | 41.2 | 42.50 | -76.47 | 12,9 |  | (*16*) |
| *Agelaius phoeniceus* | red-winged blackbird | 617 | 25.6 | 203 | - | 44.52 | -76.37 | 12,9 |  | (*17*) |
| *Agelaius phoeniceus* | red-winged blackbird | 403 | 33.7 | 134 | 53.7 | 46.88 | -119.25 | 12,9 |  | (*18*) |
| *Agelaius xanthomus* | yellow-shouldered blackbird | 87 | 23.0 | 30 | 36.7 | 17.93 | -67.10 | 1,6,8 |  | (*19*) |
| *Alauda arvensis* | skylark | 171 | 20.5 | 52 | 26.9 | 51.17 | -4.63 | 10,4,12,9 |  | (*20*) |
| *Alle alle* | little auk | 26 | 0.0 | 26 | 0.0 | 77.00 | 15.37 | - |  | (*21*) |
| *Alle alle* | little auk | 62 | 3.2 | 64 | 3.1 | 77.00 | 15.55 | - |  | (*22*) |
| *Ammodramus maritimus* | seaside sparrow | 47 | 10.6 | 18 | 16.7 | 32.77 | -79.98 | 12 |  | (*23*) |
| *Anas platyrhynchos* | mallard | 204 | 9.3 | 25 | 48.0 | 49.15 | 14.72 | - | Also 10% offspring were CBP | (*24*) |
| *Anas strepera* | gadwalls | 261 | 4.2 | 29 | 27.6 | 48.62 | -99.08 | - |  | (*25*) |
| *Anthus spinoletta* | water pipit | 1052 | 5.2 | 258 | 12.4 | 46.78 | 9.85 | 4,14 |  | (*26*) |
| *Apus apus* | common swift | 88 | 4.5 | 42 | 9.5 | 51.75 | -1.25 | - |  | (*27*) |
| *Aquila heliaca* | Eastern imperial eagle | 166 | 0.0 | 86 | 0.0 | 53.48 | 63.62 | - |  | (*28*) |
| *Ardea alba* | great egret | 50 | 0.0 | 25 | 0.0 | -16.43─  -30.27 | -51.38─  -56.58 | - | Sibship analyses, sampled over large geographic range | (*29*) |
| *Asio otus* | long-eared owl | 59 | 0.0 | 12 | 0.0 | 46.88 | -114.12 | - |  | (*30*) |
| *Athene cunicularia* | burrowing owl | 121 | 1.7 | 68 | 1.5 | -38.72 | -62.27 | - | Also IBP | (*31*) |
| *Athene noctua* | little owl | 53 | 0.0 | 16 | 0.0 | 51.27 | 6.37 | - |  | (*32*) |
| *Baeolophus bicolor* | tufted titmouse | 34 | 8.8 | 9 | 22.2 | 40.00 | -82.88 | 1,9 |  | (*33*) |
| *Bartramia longicauda* | upland sandpiper | 177 | 18.1 | 56 | 30.0 | 39.08 | -96.58 | - |  | (*34*) |
| *Branta bernicla* | black brant | 374 | 5.6 | - | - | 61.25 | -165.58 | - |  | (*35*) |
| *Branta canadensis* | Canada geese | - | - | 42 | 14.3 | 43.00 | -84.00 | - |  | (*36*) |
| *Branta leucopsis* | barnacle goose | 16 | 0.0 | 9 | 0.0 | 78.92 | 11.90 | - |  | (*37*) |
| *Branta leucopsis* | barnacle goose | 137 | 0.0 | 63 | 0.0 | 57.28 | 18.75 | - |  | (*38*) |
| *Buteo ridgwayi* | Ridgway’s hawk | 79 | 0.0 | 41 | 0.0 | 19.00 | -70.00 | - |  | (*39*) |
| *Buteo swainsoni* | Swainson’s hawk | 56 | 5.4 | 27 | 7.4 | 41.82 | -122.00 | - |  | (*40*) |
| *Calamospiza melanocorys* | lark bunting | 455 | 25.1 | 153 | 52.3 | 41.35 | -104.08 | 4,6,9 |  | (*41*, *42*) |
| *Calidris alba* | sanderling | 342 | 2.0 | 48 | 6.2 | 74.50 | -21.00 | - |  | (*43*) |
| *Calidris maritima* | purple sandpiper | 82 | 1.2 | 27 | 3.7 | 78.22 | 15.58 | - |  | (*44*) |
| *Calidris mauri* | western sandpiper | 61 | 6.6 | 25 | 8.0 | 64.33 | -164.93 | - |  | (*13*) |
| *Callipepla squamata* | scaled quail | - | - | 22 | 9.1 | 36.00 | -100.00 | - |  | (*45*) |
| *Calonectris diomedea* | Cory’s shearwater | 69 | 11.6 | 44 | 18.2 | 36.92 | -25.17 | - |  | (*46*) |
| *Calonectris diomedea* | Cory’s shearwater | 34 | 0.0 | 22 | 0.0 | 42.00 | 9.00 | - |  | (*47*) |
| *Calonectris diomedea* | Cory’s shearwater | 46 | 0.0 | 29 | 0.0 | 35.00 | 24.00 | - |  | (*48*) |
| *Cardinalis cardinalis* | Northern cardinal | 37 | 13.5 | 19 | 15.8 | 37.65 | -84.12 | 1,8,6 |  | (*49*) |
| *Carduelis cannabina* | Eurasian linnet | 106 | 3.8 | 22 | 9.1 | 56.50 | 10.83 | 3,9,10 |  | (*50*) |
| *Carduelis tristis* | American goldfinch | 70 | 14.3 | 15 | 26.7 | 43.53 | -80.23 | 1,9 |  | (*51*) |
| *Carpodacus erythrinus* | scarlet rosefinch | 496 | 16.1 | 116 | 26.7 | 48.82 | 13.93 | 1,8,6,11,9 |  | (*52*) |
| *Carpodacus mexicanus* | house finch | 212 | 9.0 | 59 | 15.3 | 46.85 | -114.02 | 1,6,9 |  | (*53*) |
| *Carpodacus mexicanus* | house finch | 119 | 8.4 | 35 | 14.3 | 42.27 | -83.73 | 1,6,9 |  | (*54*) |
| *Catharacta lonnbergi* | brown skua | 45 | 0.0 | 16 | 0.0 | -43.80 | -176.50 | - |  | (*55*) |
| *Catharacta maccormicki* | south polar skua | 14 | 7.1 | 13 | 7.7 | -77.52 | 167.77 | - |  | (*56*) |
| *Centropus phasianinus* | pheasant coucal | 59 | 18.6 | 21 | 47.6 | -12.43 | 131.00 | - | Cuckoo, but duetting and exclusive territoriality so they are monogamous | (*57*) |
| *Cepphus grylle* | black guillemot | 46 | 0.0 | 32 | 0.0 | 67.43 | 11.88 | - |  | (*58*) |
| *Cercomacra tyrannina* | dusky antbird | 15 | 0.0 | 9 | 0.0 | 9.12 | -79.70 | 7,8 |  | (*59*) |
| *Charadrius alexandrinus* | Kentish plover | 46 | 0.0 | 19 | 0.0 | 38.40 | -26.96 | - |  | (*60*) |
| *Charadrius alexandrinus* | Kentish plover | 120 | 0.8 | 63 | 1.6 | 15.90 | -23.98 | - |  | (*60*) |
| *Charadrius alexandrinus* | Kentish plover | 184 | 1.6 | 73 | 4.1 | 36.72 | 35.05 | - |  | (*60*) |
| *Charadrius alexandrinus* | Kentish plover | 19 | 0.0 | 12 | 0.0 | 16.80 | 41.88 | - |  | (*60*) |
| *Charadrius alexandrinus* | Kentish plover | 57 | 0.0 | 28 | 0.0 | 24.27 | 54.60 | - |  | (*60*) |
| *Charadrius falklandicus* | two-banded plover | 15 | 0.0 | 6 | 0.0 | -52.43 | -59.08 | - |  | (*60*) |
| *Charadrius hiaticula* | ringed plover | 50 | 0.0 | 18 | 0.0 | 57.13 | 12.21 | - |  | (*61*) |
| *Charadrius marginatus* | white-fronted plover | 17 | 0.0 | 10 | 0.0 | -24.05 | 43.73 | - |  | (*60*) |
| *Charadrius modestus* | rufous-chested dotterel | 14 | 0.0 | 8 | 0.0 | -52.43 | -59.08 | - |  | (*60*) |
| *Charadrius nivosus* | snowy plover | 201 | 0.0 | 93 | 0.0 | 20.00 | -100.00 | - |  | (*60*) |
| *Charadrius pecuarius* | Kittlitz’s plover | 18 | 0.0 | 15 | 0.0 | -22.03 | 43.65 | - |  | (*60*) |
| *Charadrius ruficapillus* | red-capped plover | 7 | 0.0 | 4 | 0.0 | -37.88 | 144.78 | - |  | (*60*) |
| *Charadrius semipalmatus* | semipalmated plover | 85 | 4.7 | 24 | 4.2 | 58.75 | -95.07 | - |  | (*62*) |
| *Charadrius thoracicus* | Madagascar plover | 20 | 0.0 | 12 | 0.0 | -20.00 | 46.00 | - |  | (*60*) |
| *Chen caerulescens* | lesser snow goose | 80 | 5.0 | 23 | 13.0 | 67.23 | -100.27 | - |  | (*63*) |
| *Chen rossii* | Ross’s goose | 83 | 2.4 | 24 | 8.3 | 67.23 | -100.27 | - |  | (*63*) |
| *Chlidonias hybrida* | whiskered tern | 37 | 8.1 | 17 | 11.8 | 51.73 | 18.63 | - | Difficult to extract sample sizes | (*64*) |
| *Chlidonias niger* | North American black tern | 28 | 0.0 | 11 | 0.0 | 43.45 | -88.92 | - |  | (*65*) |
| *Ciconia ciconia* | white stork | - | - | 145 | 26.9 | 44.00 | 5.00 | - | Sibship analyses | (*66*) |
| *Cinclus cinclus* | white-throated dipper | 185 | 1.6 | 40 | 5.0 | 60.38 | 10.52 | 1,8,10 |  | (*67*) |
| *Circus pygargus* | Montagu’s harrier | 32 | 3.1 | 10 | 10.0 | 52.00 | 22.00 | - | Sibship analyses | (*68*) |
| *Colaptes auratus* | northern flicker | 326 | 0.0 | 46 | 0.0 | 51.87 | -122.03 | - |  | (*69*) |
| *Colinus virginianus* | Northern bobwhite | - | - | 34 | 85.3 | 36.00 | -100.00 | - |  | (*45*) |
| *Coracias garrulus* | European roller | 169 | 5.3 | 49 | 4.1 | 37.30 | -3.18 | - | Difficcult to extract sample sizes | (*70*) |
| *Coragyps atratus* | black vulture | 36 | 0.0 | 16 | 0.0 | 35.75 | -78.92 | - |  | (*71*) |
| *Corvus monedula* | Eurasian jackdaw | 39 | 2.6 | 15 | 6.7 | 50.92 | 11.57 | 1,3,10,9 |  | (*72*) |
| *Corvus monedula* | Eurasian jackdaw | 74 | 0.0 | 20 | 0.0 | 52.63 | -1.13 | 1,3,10,9 |  | (*73*) |
| *Cyanocitta stelleri* | Steller’s jay | 79 | 15.2 | 41 | 14.6 | 40.98 | -124.00 | 1,8,9 |  | (*74*) |
| *Cyanoliseus patagonus* | burrowing parakeet | 166 | 0.0 | 49 | 0.0 | -41.05 | -62.80 | - |  | (*75*) |
| *Cygnus atratus* | black swan | 332 | 15.1 | 85 | 37.6 | -37.55 | 14.82 | - |  | (*76*) |
| *Delichon urbicum* | house martin | 135 | 18.5 | 39 | 33.3 | 56.10 | -3.93 | 3,9,16 |  | (*77*) |
| *Delichon urbicum* | house martin | 73 | 19.2 | 20 | 35.0 | 61.42 | 8.87 | 3,9,16 |  | (*78*) |
| *Dendrocopos major* | great spotted woodpecker | 161 | 0.0 | 36 | 0.0 | 48.22 | 16.27 | - |  | (*79*) |
| *Dendrocopos medius* | middle spotted woodpecker | 61 | 0.0 | 13 | 0.0 | 48.22 | 16.27 | - |  | (*79*) |
| *Dendroica caerulescens* | black-throated blue warbler | 285 | 20.7 | 80 | 31.2 | 43.93 | -71.75 | 8 |  | (*80*) |
| *Dendroica caerulescens* | black-throated blue warbler | 125 | 27.2 | 38 | 44.7 | 43.93 | -71.75 | 8 |  | (*81*) |
| *Dendroica pensylvanica* | chestnut-sided warbler | 95 | 47.4 | 33 | 60.6 | 42.67 | -73.05 | 1,6,8 |  | (*82*) |
| *Dendroica petechia* | yellow warbler | 150 | 30.7 | 57 | 49.1 | 37.60 | -118.82 | 1,6,9 |  | (*83*) |
| *Dendroica petechia* | yellow warbler | 53 | 13.2 | 12 | 25.0 | 58.67 | -94.42 | 1,6,9 |  | (*84*) |
| *Dendroica petechia* | yellow warbler | 484 | 33.1 | 130 | 53.8 | 44.57 | -76.33 | 1,6,9 |  | (*85*) |
| *Diomedea exulans* | wandering albatross | 104 | 13.5 | 147 | 10.9 | -54.00 | -38.00 | - |  | (*86*) |
| *Diomedea exulans* | wandering albatross | 247 | 18.2 | 194 | 20.1 | -46.87 | 37.68 | - |  | (*87*) |
| *Diomedea exulans* | wandering albatross | 50 | 12.0 | 50 | 12.0 | -46.42 | 51.75 | - |  | (*88*) |
| *Diomedea exulans* | wandering albatross | 24 | 8.3 | 24 | 8.3 | -49.25 | 69.53 | - |  | (*88*) |
| *Dumetella carolinensis* | grey catbird | 455 | 13.0 | 165 | 24.8 | 39.00 | -76.00 | 7,9 |  | (*89*) |
| *Elaenia chiriquensis* | lesser elaenia | 38 | 36.8 | 15 | 66.7 | 9.12 | -79.68 | 1,3,9 |  | (*90*) |
| *Elaenia flavogaster* | yellow-bellied elaenia | 24 | 4.2 | 13 | 7.7 | 9.12 | -79.68 | 1,2,3,6 |  | (*90*) |
| *Emberiza citrinella* | yellowhammer | 123 | 37.4 | 32 | 68.8 | 59.90 | 17.53 | 1,6,10,9 |  | (*91*) |
| *Emberiza schoeniclus* | reed bunting | 216 | 54.6 | 58 | 86.2 | 52.13 | -1.13 | 12 |  | (*92*) |
| *Emberiza schoeniclus* | reed bunting | 473 | 51.0 | 121 | 73.6 | 51.75 | 4.75 | 12 |  | (*93*) |
| *Emberiza schoeniclus* | reed bunting | 835 | 37.7 | 213 | 62.9 | 46.90 | 6.93 | 12 |  | (*94*) |
| *Emberiza schoeniclus* | reed bunting | 669 | 37.1 | 181 | 56.4 | 47.00 | 8.00 | 12 |  | (*95*) |
| *Emberiza schoeniclus* | reed bunting | 332 | 29.5 | 72 | 54.2 | 61.42 | 8.87 | 12 |  | (*96*) |
| *Empidonax minimus* | least flycatcher | 86 | 34.9 | 23 | 56.5 | 44.57 | -76.32 | 6,8 |  | (*97*) |
| *Empidonax traillii* | willow flycatcher | 140 | 14.3 | 56 | 21.4 | 35.65 | -118.03 | 3,6 |  | (*98*) |
| *Empidonax virescens* | acadian flycatcher | 28 | 57.1 | 14 | 64.3 | 41.77 | -79.93 | 8 |  | (*99*) |
| *Empidonax virescens* | acadian flycatcher | 29 | 13.8 | 12 | 25.0 | 42.72 | -81.10 | 8 |  | (*100*) |
| *Empidonax virescens* | acadian flycatcher | 133 | 40.6 | 53 | 58.5 | 41.77 | -79.93 | 8 |  | (*101*) |
| *Erythrura gouldiae* | gouldian finch | 232 | 8.6 | 57 | 22.8 | -15.57 | 128.00 | 1 |  | (*102*) |
| *Eudromias morinellus* | Eurasian dotterel | 44 | 4.5 | 22 | 9.1 | 57.05 | -3.57 | - |  | (*103*) |
| *Eudyptes pachyrhynchus* | Fiordland penguin | 33 | 0.0 | 24 | 0.0 | -43.83 | 168.88 | - |  | (*104*) |
| *Eudyptes schlegeli* | royal penguin | 26 | 3.8 | 13 | 7.7 | -54.50 | 158.95 | - |  | (*105*) |
| *Euplectes orix* | red bishop | 115 | 39.1 | 47 | 63.8 | -33.43 | 25.75 | 4 |  | (*106*) |
| *Euplectes orix* | red bishop | 432 | 17.6 | 187 | 30.5 | -33.43 | 25.75 | 4 |  | (*107*) |
| *Falco columbarius* | merlin | 47 | 0.0 | 18 | 0.0 | 52.12 | -106.63 | - |  | (*108*) |
| *Falco eleonorae* | Eleonoras falcon | 60 | 0.0 | 17 | 0.0 | 38.00 | 24.98 | - |  | (*109*) |
| *Falco naumanni* | lesser kestrel | 24 | 4.2 | 8 | 12.5 | 37.17 | -6.35 | - |  | (*110*) |
| *Falco naumanni* | lesser kestrel | 72 | 8.3 | 23 | 8.7 | 41.35 | -0.18 | - |  | (*110*) |
| *Falco peregrinus* | peregrine falcon | 64 | 0.0 | 18 | 0.0 | - | - | - |  | (*111*) |
| *Falco sparverius* | American kestrel | 89 | 11.2 | 21 | 9.5 | 42.42 | -75.08 | - |  | (*112*) |
| *Falco tinnunculus* | Eurasian kestrel | 319 | 1.9 | 75 | 2.7 | 62.98 | 22.83 | - |  | (*113*) |
| *Ficedula albicollis* | collared flycatcher | 800 | 26.8 | 135 | 57.0 | 49.53 | 17.07 | 1,3,8,9 |  | (*114*) |
| *Ficedula albicollis* | collared flycatcher | 459 | 15.5 | 79 | 32.9 | 57.17 | 18.33 | 1,3,8,9 |  | (*115*) |
| *Ficedula albicollis* | collared flycatcher | 165 | 24.2 | 27 | 51.9 | 49.53 | 17.07 | 1,3,8,9 |  | (*116*) |
| *Ficedula albicollis* | collared flycatcher | - | - | 45 | 55.6 | 47.70 | 19.02 | 1,3,8,9 |  | (*117*) |
| *Ficedula albicollis* | collared flycatcher | - | - | 44 | 13.6 | 49.83─  57.17 | 17.25̶─  18.20 | 1,3,8,9 | Combined estimate for two populations | (*118*) |
| *Ficedula albicollis* | collared flycatcher | 482 | 15.6 | 78 | 34.6 | 50.10 | 20.40 | 1,3,8,9 |  | (*119*) |
| *Ficedula hypoleuca* | pied flycatcher | 268 | 13.1 | 59 | 28.8 | 40.80 | -4.02 | 1,8,9 |  | (*120*) |
| *Ficedula hypoleuca* | pied flycatcher | 884 | 5.1 | 164 | 12.8 | 52.45 | 7.25 | 1,8,9 |  | (*121*) |
| *Ficedula hypoleuca* | pied flycatcher | 135 | 4.4 | 27 | 14.8 | 59.98 | 10.63 | 1,8,9 |  | (*122*) |
| *Ficedula hypoleuca* | pied flycatcher | 165 | 5.5 | 31 | 12.9 | 52.53 | 7.35 | 1,8,9 |  | (*123*) |
| *Ficedula hypoleuca* | pied flycatcher | 1126 | 15.2 | 233 | 33.0 | 41.07 | -3.45 | 1,8,9 |  | (*124*) |
| *Ficedula hypoleuca* | pied flycatcher | 857 | 4.4 | 191 | 13.1 | 60.42 | 22.17 | 1,8,9 |  | (*125*) |
| *Ficedula hypoleuca* | pied flycatcher | 53 | 1.9 | 9 | 11.1 | 59.97 | 10.78 | 1,8,9 | Control dataset | (*126*) |
| *Ficedula hypoleuca* | pied flycatcher | 38 | 23.7 | 7 | 42.9 | 59.83 | 17.67 | 1,8,9 |  | (*127*) |
| *Ficedula hypoleuca* | pied flycatcher | 348 | 7.5 | 58 | 22.4 | 40.80 | -4.02 | 1,8,9 |  | (*128*) |
| *Ficedula hypoleuca* | pied flycatcher | 313 | 17.6 | 60 | 38.3 | 40.80 | -4.02 | 1,8,9 |  | (*129*) |
| *Ficedula hypoleuca* | pied flycatcher | 223 | 10.8 | 36 | 22.2 | 62.62 | 26.33 | 1,8,9 |  | (*130*) |
| *Ficedula hypoleuca* | pied flycatcher | - | - | 20 | 5.0 | 62.62 | 26.33 | 1,8,9 | Control dataset | (*131*) |
| *Ficedula hypoleuca* | pied flycatcher | 481 | 8.9 | 93 | 19.4 | 52.03 | 5.85 | 1,8,9 |  | (*132*) |
| *Ficedula parva* | red-breasted flycatcher | 159 | 7.5 | 33 | 24.2 | 52.68 | 23.87 | 1,8,9 |  | (*133*) |
| *Ficedula zanthopygia* | yellow rumped flycatcher | 325 | 22.2 | 64 | 54.7 | 45.00 | 126.00 | 8 |  | (*134*) |
| *Fratercula arctica* | Atlantic puffin | 38 | 0.0 | 38 | 0.0 | 67.43 | 11.88 | - |  | (*135*) |
| *Fregata minor* | great frigatebird | 92 | 1.1 | 92 | 1.1 | 23.75 | -166.02 | - |  | (*136*) |
| *Fregata minor* | great frigatebird | 46 | 8.7 | 46 | 8.7 | 23.75 | -166.02 | - |  | (*137*) |
| *Fringilla coelebs* | chaffinch | 47 | 17.0 | 13 | 23.1 | 53.33 | -1.53 | 1,8,9 |  | (*138*) |
| *Fulmarus glacialis* | Northern fulmar | 28 | 0.0 | 28 | 0.0 | 59.53 | -1.62 | - |  | (*139*) |
| *Gallinula chloropus* | moorhen | 68 | 0.0 | 13 | 0.0 | 52.63 | -0.27 | - |  | (*140*) |
| *Gavia immer* | common loon | 58 | 0.0 | 47 | 0.0 | 45.70 | -89.62 | - |  | (*141*) |
| *Geospiza fortis* | medium ground-finch | 1248 | 17.1 | - | - | -0.42 | -90.37 | 6,8 |  | (*142*) |
| *Geospiza scandens* | cactus finch | 368 | 10.3 | - | - | -0.42 | -90.37 | 15 |  | (*142*) |
| *Geothlypis trichas* | yellowthroat | 486 | 19.1 | 138 | 43.5 | 43.38 | -88.02 | 7,12 |  | (*143*) |
| *Grallina cyanoleuca* | Australian magpie-lark | 103 | 2.9 | 47 | 6.4 | -35.27 | 149.12 | 3,9 |  | (*144*) |
| *Grus canadensis* | sandhill crane | 45 | 11.1 | 18 | 22.2 | 43.60 | -89.60 | - |  | (*145*) |
| *Gyps fulvus* | griffon vulture | 30 | 0.0 | - | - | 44.27 | 5.27 | - |  | (*146*) |
| *Gyps fulvus* | griffon vulture | 10 | 0.0 | - | - | 43.77 | 6.37 | - |  | (*146*) |
| *Habia fuscicauda* | red-throated ant-tanager | 41 | 41.5 | 19 | 52.6 | 9.08 | -79.65 | 6,8 |  | (*147*) |
| *Haematopus ostralegus* | Eurasian oystercatcher | 65 | 1.5 | 26 | 3.8 | 53.48 | 6.22 | - |  | (*148*) |
| *Hirundo ariel* | fairy martin | 203 | 13.8 | 70 | 20.0 | -37.80 | 144.95 | 1,3,4 |  | (*149*) |
| *Hirundo rustica* | barn swallow | 214 | 28.5 | 52 | 51.9 | 45.43 | 8.62 | 3,4,9 |  | (*150*) |
| *Hirundo rustica* | barn swallow | 603 | 31.2 | 139 | - | 44.47 | -76.47 | 3,4,9 |  | (*151*) |
| *Hirundo rustica* | barn swallow | 917 | 28.8 | 210 | 48.1 | 44.57 | -76.32 | 3,4,9 |  | (*152*) |
| *Hirundo rustica* | barn swallow | 261 | 28.0 | 63 | 33.3 | 57.20 | 10.00 | 3,4,9 |  | (*153*) |
| *Hirundo rustica* | barn swallow | 108 | 23.1 | 25 | 60.0 | 49.07 | 14.73 | 3,4,9 |  | (*154*) |
| *Hirundo rustica* | barn swallow | 80 | 30.0 | 18 | 50.0 | 50.50 | 30.82 | 3,4,9 |  | (*154*, *155*) |
| *Hirundo rustica* | barn swallow | 424 | 34.2 | 94 | 55.3 | 37.22 | -80.42 | 3,4,9 |  | (*156*) |
| *Hirundo rustica* | barn swallow | 296 | 2.7 | 65 | 7.7 | 37.12 | 138.02 | 3,4,9 |  | (*157*) |
| *Hirundo rustica* | barn swallow | 143 | 8.4 | 33 | 15.2 | 35.22 | 139.88 | 3,4,9 |  | (*158*) |
| *Hirundo rustica* | barn swallow | 158 | 22.2 | 38 | 36.8 | 35.18 | 139.92 | 3,4,9 |  | (*158*) |
| *Hirundo rustica* | barn swallow | 674 | 17.8 | 170 | 32.4 | 38.83 | -6.98 | 3,4,9 |  | (*159*) |
| *Hirundo rustica* | barn swallow | - | - | 53 | 49.1 | 42.35 | -76.50 | 3,4,9 |  | (*160*) |
| *Hirundo rustica* | barn swallow | - | - | 11 | 45.5 | 44.55 | -76.32 | 3,4,9 |  | (*161*) |
| *Hirundo rustica* | barn swallow | 161 | 15.5 | 41 | 43.9 | 32.97 | 35.55 | 3,4,9 |  | (*162*) |
| *Hylocichla mustelina* | wood thrush | 151 | 6.0 | 51 | 13.7 | 41.77 | -79.93 | 1,8 |  | (*163*) |
| *Hylocichla mustelina* | wood thrush | 112 | 40.2 | 36 | 66.7 | 43.25 | -80.88 | 1,8 |  | (*100*) |
| *Hymenolaimus malacorhynchos* | blue duck | 14 | 0.0 | 10 | 0.0 | -39.38 | 175.13 | - |  | (*164*) |
| *Icteria virens* | yellow-breasted chat | 13 | 30.8 | 55 | 50.9 | 49.13─ 49.49 | -117.70─  -119.60 | 1,6 | Sibship analyses, sampled over large geographic range | (*165*) |
| *Icterus galbula* | Bullock´s oriole | 202 | 32.2 | 48 | 45.8 | 36.37 | -121.55 | 1,9 |  | (*166*) |
| *Jabiru mycteria* | jabiru | 34 | 2.9 | 13 | 7.7 | -17.00 | -56.00 | - |  | (*167*) |
| *Junco hyemalis* | dark-eyed junco | 229 | 26.2 | 89 | - | 32.87 | -117.02 | 1,8,9 | Population resulted from recent colonization | (*168*) |
| *Junco hyemalis* | dark-eyed junco | 124 | 36.3 | 40 | - | 32.87 | -116.03 | 1,8,9 |  | (*168*) |
| *Junco hyemalis* | dark-eyed junco | 2148 | 27.2 | - | - | 37.37 | -80.53 | 1,8,9 |  | (*169*) |
| *Junco hyemalis* | dark-eyed junco | - | - | 41 | 43.9 | 37.37 | -80.53 | 1,8,9 | Control dataset | (*170*) |
| *Jynx torquilla* | Eurasian wryneck | 292 | 0.7 | 50 | 2.0 | 51.90 | 11.00 | - |  | (*171*) |
| *Lagopus lagopus* | willow ptarmigan | 256 | 9.4 | 38 | 13.2 | 59.83 | -136.33 | - |  | (*172*) |
| *Lagopus leucura* | white-tailed ptarmigan | 58 | 5.2 | 18 | 16.7 | 48.68 | -113.72 | - |  | (*173*) |
| *Laniarius atrococcineus* | crimson-breasted shrike | 74 | 18.9 | 41 | 29.3 | -26.97 | 21.82 | 1,2,3 |  | (*174*) |
| *Lanius bucephalus* | bull-headed shrike | 99 | 10.1 | 24 | 16.7 | 34.57 | 135.53 | 8,6,9 |  | (*175*) |
| *Lanius ludovicianus* | loggerhead shrike | 179 | 4.5 | 36 | 13.9 | 34.00 | -98.00 | 9 |  | (*176*) |
| *Lanius minor* | lesser gray shrike | 136 | 0.0 | 36 | 0.0 | 48.58 | 19.30 | 1,3,9 |  | (*177*) |
| *Larus canus* | common gull | 55 | 3.6 | 24 | 8.3 | 51.67 | 21.58 | - |  | (*178*) |
| *Larus occidentalis* | western gull | 33 | 0.0 | 22 | 0.0 | 37.70 | -123.00 | - |  | (*179*) |
| *Larus ridibundus* | Black-headed gull | 79 | 20.3 | 30 | 33.3 | 48.92 | 17.08 | - |  | (*180*) |
| *Lichenostomus chrysops* | yellow-faced honeyeater | 18 | 44.4 | - | - | -37.68 | 145.52 | 1,3,8 |  | (*181*) |
| *Locustella luscinioides* | Savi’s warbler | 392 | 4.1 | 102 | 5.9 | 40.63 | -8.68 | 11,12 |  | (*182*) |
| *Loxia curvirostra* | common crossbill | 96 | 0.0 | 34 | 0.0 | 59.50 | 11.33 | 1,8 |  | (*183*) |
| *Loxioides bailleui* | palila | 20 | 0.0 | 12 | 0.0 | 19.82 | -155.47 | 8,3 |  | (*184*) |
| *Luscinia megarhynchos* | common nightingale | 121 | 21.5 | 28 | 46.4 | 52.40 | 12.97 | 1,3,9 |  | (*185*) |
| *Luscinia svecica* | bluethroat | 1568 | 26.3 | 245 | 47.8 | 62.42 | 8.87 | 6,7,3,11,12 | Control dataset | (*186*) |
| *Luscinia svecica* | bluethroat | 183 | 25.7 | 33 | 54.5 | 62.42 | 8.87 | 6,7,3,11,12 |  | (*187*) |
| *Luscinia svecica* | bluethroat | 162 | 42.0 | 36 | 63.9 | 27.33 | -2.42 | 6,7,3,11,12 |  | (*188*) |
| *Megascops asio* | eastern screech-owl | 80 | 0.0 | 23 | 0.0 | 37.62 | -84.12 | - |  | (*189*) |
| *Melospiza georgiana* | swamp sparrow | 149 | 20.8 | 59 | 44.1 | 39.60 | -79.30 | 1,12 |  | (*190*) |
| *Melospiza georgiana* | swamp sparrow | 201 | 20.9 | 54 | 38.9 | 39.30 | -75.50 | 1,12 |  | (*190*) |
| *Melospiza melodia* | song sparrow | 191 | 23.6 | 72 | 36.1 | 47.65 | -122.03 | 1,3 |  | (*191*) |
| *Melospiza melodia* | song sparrow | 38 | 10.5 | 10 | 30.0 | 44.75 | -63.68 | 1,3 |  | (*192*) |
| *Melospiza melodia* | song sparrow | 2667 | 28.2 | - | - | 48.63 | -123.02 | 1,3 |  | (*193*) |
| *Miliaria calandra* | corn bunting | 44 | 4.5 | 15 | 6.7 | 57.62 | -7.50 | 4,14,9,10 |  | (*194*) |
| *Mycteria americana* | wood stork | 58 | 0.0 | 29 | 0.0 | -16.70─  -1.93 | -50.23─  -57.50 | - | Sibship analyses, sampled over large geographic range | (*29*) |
| *Myiopsitta monachus* | monk parakeet | 58 | 0.0 | 52 | 0.0 | 27.00 | -81.00 | - |  | (*195*) |
| *Myiopsitta monachus* | monk parakeet | 27 | 0.0 | 14 | 0.0 | 41.00 | -72.00 | - |  | (*195*) |
| *Nectarinia osea* | orange-tufted sunbird | 88 | 22.7 | 47 | 36.2 | 32.08 | 34.78 | 1,2,4,8 |  | (*196*) |
| *Notiomystis cincta* | New Zealand hihi | 1538 | 68.0 | 485 | 88.9 | -36.60 | 174.88 | 8 | Difficult to extract sample sizes | (*197*) |
| *Notiomystis cincta* | New Zealand hihi | 188 | 47.3 | 61 | 82.0 | -38.08 | 176.28 | 8 |  | (*198*) |
| *Notiomystis cincta* | New Zealand hihi | 34 | 35.3 | 10 | 80.0 | -36.60 | 174.88 | 8 |  | (*199*) |
| *Oceanites oceanicus* | Wilson’s storm-petrel | 63 | 0.0 | 63 | 0.0 | -51.72 | -61.29 | - |  | (*200*) |
| *Oceanodroma leucorhoa* | Leach’s storm-petrel | 42 | 0.0 | 42 | 0.0 | 44.58 | -66.75 | - |  | (*201*) |
| *Oenanthe oenanthe* | northern wheatear | 73 | 11 | 17 | 29.4 | 52.77 | -4.78 | 3,10,14 |  | (*202*) |
| *Oenanthe oenanthe* | northern wheatear | 62 | 3.2 | 10 | 10.0 | 52.77 | -4.78 | 3,10,14 | Control dataset | (*203*) |
| *Oenanthe oenanthe* | northern wheatear | 132 | 25.8 | 28 | 46.4 | 49.50 | 8.17 | 3,10,14 |  | (*204*) |
| *Otus elegans* | elegant scops-owl | 200 | 0.5 | 108 | 0.9 | 22.00 | 121.08 | - |  | (*205*) |
| *Otus flammeolus* | flammulated owl | 37 | 0.0 | 17 | 0.0 | 34.50 | -108.00 | - |  | (*206*) |
| *Pachycephala pectoralis* | golden whistlers | 130 | 19.2 | 65 | 23.1 | -37.52 | 145.53 | 1,8,13 |  | (*207*) |
| *Pachyptila belcheri* | thin-billed prion | 34 | 20.6 | 34 | 20.6 | -51.72 | -61.28 | - |  | (*208*) |
| *Panurus biarmicus* | bearded tit | 187 | 14.4 | 44 | 29.5 | 47.93 | 16.75 | 11,12 |  | (*209*) |
| *Paradoxornis webbianus* | vinous-throated parrotbills | 246 | 7.7 | 50 | 26.0 | 37.53 | 127.03 | 6,11,12,9 |  | (*210*) |
| *Parus ater* | coal tit | 3559 | 31.4 | 483 | 70.8 | 52.45 | 7.25 | 1,8,9 |  | (*211*) |
| *Parus ater* | coal tit | 158 | 25.3 | 20 | 75.0 | 52.33 | 11.00 | 1,8,9 |  | (*212*) |
| *Parus atricapillus* | black-capped chickadee | 351 | 14.8 | 57 | 33.3 | 44.57 | -76.32 | 1,8 |  | (*213*) |
| *Parus atricapillus* | black-capped chickadee | 359 | 8.9 | 58 | 29.3 | 44.57 | -76.32 | 1,8 |  | (*214*) |
| *Parus caeruleus* | blue tit | 288 | 25.3 | 50 | 68.0 | 42.52 | -8.77 | 1,6,9 |  | (*215*) |
| *Parus caeruleus* | blue tit | 839 | 16.1 | 97 | 69.1 | 43.67 | 3.67 | 1,6,9 |  | (*216*) |
| *Parus caeruleus* | blue tit | 205 | 18.0 | 30 | 50.0 | 42.55 | 8.92 | 1,6,9 |  | (*216*) |
| *Parus caeruleus* | blue tit | - | - | 84 | 27.4 | 53.13 | 6.58 | 1,6,9 | Control dataset | (*217*) |
| *Parus caeruleus* | blue tit | 850 | 13.8 | 84 | 48.8 | 48.28 | 4.28 | 1,6,9 |  | (*218*) |
| *Parus caeruleus* | blue tit | 2452 | 15.7 | 248 | - | 48.22 | 16.33 | 1,6,9 |  | (*219*) |
| *Parus caeruleus* | blue tit | 51 | 5.9 | 7 | 28.6 | 59.83 | 17.63 | 1,6,9 |  | (*220*) |
| *Parus caeruleus* | blue tit | 88 | 6.8 | 14 | 28.6 | 59.93 | 10.55 | 1,6,9 | Control dataset | (*221*) |
| *Parus caeruleus* | blue tit | 1443 | 12.5 | 165 | 41.8 | 51.25 | 4.47 | 1,6,9 |  | (*222*) |
| *Parus caeruleus* | blue tit | 466 | 6.7 | 47 | 36.2 | 58.87 | 9.60 | 1,6,9 |  | (*223*) |
| *Parus caeruleus* | blue tit | 986 | 11.7 | 103 | 39.8 | 54.05 | -2.80 | 1,6,9 |  | (*224*) |
| *Parus caeruleus* | blue tit | 1176 | 12.8 | 122 | 46.7 | 53.13 | 6.58 | 1,6,9 |  | (*225*) |
| *Parus caeruleus* | blue tit | - | - | 396 | 46.0 | 48.13 | 10.88 | 1,6,9 |  | (*226*) |
| *Parus caeruleus* | blue tit | 635 | 11.3 | - | - | 48.13 | 10.88 | 1,6,9 |  | (*227*) |
| *Parus caeruleus* | blue tit | - | - | 561 | 57.0 | 48.22 | 16.33 | 1,6,9 |  | (*226*) |
| *Parus caeruleus* | blue tit | - | - | 36 | 55.6 | 53.13 | 6.58 | 1,6,9 | Control dataset | (*228*) |
| *Parus cristatus* | crested tit | 136 | 11.0 | 20 | 30.0 | 51.48 | 4.93 | 1,3 |  | (*229*) |
| *Parus major* | great tit | 6441 | 9.6 | - | - | 47.97 | 11.23 | 1,8,9 |  | (*230*) |
| *Parus major* | great tit | 445 | 6.3 | 47 | 31.9 | 47.08 | 17.83 | 1,8,9 |  | (*231*) |
| *Parus major* | great tit | 304 | 20.4 | 47 | 55.3 | 39.55 | -4.33 | 1,8,9 |  | (*232*) |
| *Parus major* | great tit | 47 | 14.9 | 10 | 50.0 | 59.83 | 17.67 | 1,8,9 |  | (*220*) |
| *Parus major* | great tit | 82 | 8.5 | 13 | 30.8 | 59.93 | 10.55 | 1,8,9 | Control dataset | (*221*) |
| *Parus major* | great tit | 229 | 16.6 | 32 | 53.1 | 33.52 | 130.03 | 1,8,9 |  | (*233*) |
| *Parus major* | great tit | 408 | 8.1 | 55 | 27.3 | 58.87 | 9.60 | 1,8,9 |  | (*223*) |
| *Parus major* | great tit | 2013 | 7.5 | 265 | 34.0 | 52.37 | 11.02 | 1,8,9 |  | (*234*) |
| *Parus major* | great tit | 192 | 9.9 | 23 | 39.1 | 55.67 | 12.57 | 1,8,9 |  | (*235*) |
| *Parus major* | great tit | 1185 | 12.7 | 164 | 48.8 | 51.77 | -1.13 | 1,8,9 |  | (*236*) |
| *Parus major* | great tit | 681 | 8.5 | 78 | 39.7 | 51.42 | 7.65 | 1,8,9 |  | (*237*) |
| *Parus major* | great tit | 667 | 6.4 | 99 | 25.3 | 52.00 | 5.83 | 1,8,9 |  | (*238*) |
| *Parus major* | great tit | 516 | 3.5 | 82 | 8.5 | 53.30 | 5.07 | 1,8,9 |  | (*239*) |
| *Parus major* | great tit | 34 | 2.9 | 4 | 25.0 | 52.15 | 10.32 | 1,8,9 |  | (*240*) |
| *Parus major* | great tit | 710 | 8.7 | 92 | 30.4 | 42.67 | 141.60 | 1,8,9 |  | (*241*) |
| *Parus montanus* | willow tit | 787 | 6.7 | 117 | 21.4 | 65.00 | 25.50 | 1,8 |  | (*242*) |
| *Parus montanus* | willow tit | 112 | 0.9 | 24 | 4.2 | 65.00 | 25.50 | 1,8 |  | (*243*) |
| *Parus teneriffae* | African blue tit | 137 | 15.3 | 31 | 38.7 | 28.42 | 16.38 | 1,6,9 |  | (*244*) |
| *Parus varius* | varied tit | 251 | 14.7 | 40 | 40.0 | 40.02 | 122.93 | 7,8 |  | (*245*) |
| *Passer domesticus* | house sparrow | 176 | 36.9 | 69 | 63.8 | 47.33 | -2.87 | 3,9 |  | (*246*) |
| *Passer domesticus* | house sparrow | 53 | 3.8 | 17 | 11.8 | 53.07 | -0.95 | 3,9 |  | (*247*) |
| *Passer domesticus* | house sparrow | 109 | 10.1 | 25 | 28.0 | 41.38 | 2.15 | 3,9 |  | (*247*) |
| *Passer domesticus* | house sparrow | 517 | 17.2 | 146 | - | 35.20 | -97.43 | 3,9 |  | (*248*) |
| *Passer domesticus* | house sparrow | 305 | 1.3 | 112 | 3.6 | 51.00 | -4.00 | 3,9 |  | (*249*) |
| *Passer domesticus* | house sparrow | 3939 | 17.5 | 1115 | 37.9 | 51.00 | -4.00 | 3,9 |  | (*250*) |
| *Passer domesticus* | house sparrow | 419 | 10.7 | 126 | 26.2 | 35.00 | -83.00 | 3,9 |  | (*251*) |
| *Passer domesticus* | house sparrow | 267 | 12.7 | 75 | 26.7 | 35.00 | -83.00 | 3,9 |  | (*252*) |
| *Passer domesticus* | house sparrow | 129 | 10.1 | 35 | 28.6 | 48.17 | 16.30 | 3,9 |  | (*253*) |
| *Passer domesticus* | house sparrow | - | - | 9 | 66.7 | 48.17 | 16.30 | 3,9 | Control dataset | (*254*) |
| *Passer domesticus* | house sparrow | 171 | 7.0 | 54 | 9.3 | 40.63 | -4.00 | 3,9 |  | (*255*) |
| *Passer domesticus* | house sparrow | 536 | 13.6 | 183 | 26.8 | 53.07 | -0.95 | 3,9 |  | (*256*) |
| *Passer domesticus* | house sparrow | 136 | 19.9 | 41 | 36.6 | 35.20 | -97.43 | 3,9 |  | (*257*) |
| *Passer montanus* | tree sparrow | 114 | 10.5 | 35 | 22.9 | 46.52 | 6.57 | 1,9 |  | (*258*) |
| *Passer montanus* | tree sparrow | 151 | 7.9 | 40 | 25.0 | 41.58 | -2.43 | 1,9 |  | (*258*) |
| *Passer montanus* | tree sparrow | 76 | 9.2 | 19 | 21.1 | 46.25 | 20.13 | 1,9 |  | (*259*) |
| *Passerculus sandwichensis* | savannah sparrow | 160 | 23.1 | 42 | 42.9 | 44.58 | -66.77 | 4,14,9 |  | (*260*) |
| *Passerculus sandwichensis* | savannah sparrow | 145 | 47.6 | 43 | 65.1 | 44.58 | -66.77 | 4,14,9 |  | (*261*) |
| *Passerculus sandwichensis* | savannah sparrow | 411 | 47.2 | 116 | 68.1 | 44.58 | -66.77 | 4,14,9 |  | (*262*) |
| *Passerculus sandwichensis* | savannah sparrow | 191 | 53.9 | 77 | 71.4 | 44.00 | -72.00 | 4,14,9 | Control dataset, difficult to extract sample sizes | (*263*) |
| *Passerina caerulea* | blue grosbeak | 55 | 52.7 | 20 | 70.0 | 32.60 | -85.30 | 8,9,6 |  | (*264*) |
| *Passerina cyanea* | indigo bunting | 63 | 34.9 | 25 | 48.0 | 35.88 | -79.02 | 1,9 |  | (*265*) |
| *Petroica australis* | New Zealand robin | 62 | 0.0 | 37 | 0.0 | -41.08 | 174.27 | 6,8,9 |  | (*266*) |
| *Petroica australis* | New Zealand robin | 198 | 0.5 | 54 | 1.9 | -45.00 | 168.00 | 6,8,9 |  | (*267*) |
| *Petroica goodenovii* | red-capped robin | 240 | 22.1 | - | 37.0 | -36.17 | 144.22 | 1,6 |  | (*268*) |
| *Petronia petronia* | rock sparrow | 277 | 24.5 | 56 | 44.6 | 44.97 | 6.63 | 14,15,9 |  | (*269*) |
| *Petronia petronia* | rock sparrow | 181 | 32.0 | 42 | 57.1 | - | - | 14,15,9 |  | (*270*) |
| *Phainopepla nitens* | phainopepla | 48 | 0.0 | 25 | 0.0 | 33.68 | -117.00 | 1,3,15 |  | (*271*) |
| *Phalacrocorax aristotelis* | shag | 161 | 9.3 | 87 | 12.6 | 56.18 | -2.57 | - |  | (*272*) |
| *Phalacrocorax atriceps* | imperial shag | 110 | 0.0 | 37 | 0.0 | -43.08 | -64.50 | - |  | (*273*) |
| *Phalacrocorax carbo* | great cormorant | 124 | 10.5 | 30 | 30.0 | 51.73 | 18.63 | - | Sibship analyses | (*274*) |
| *Phalaropus lobatus* | red-necked phalarope | 226 | 1.8 | 63 | 6.3 | 66.55 | -163.61 | - |  | (*275*) |
| *Philesturnus carunculatus* | Saddleback | 202 | 0.0 | 39 | 0.0 | -46.90 | 168.10 | 8 |  | (*267*) |
| *Phoebastria irrorata* | waved albatross | 16 | 25.0 | 16 | 25.0 | -1.38 | -89.62 | - |  | (*276*) |
| *Phoebastria irrorata* | waved albatross | 154 | 16.9 | 154 | 16.9 | -1.38 | -89.62 | - |  | (*277*) |
| *Phoenicurus ochruros* | black redstart | 222 | 28.8 | 53 | 30.2 | 47.97 | 11.23 | 3,9 |  | (*278*) |
| *Phoenicurus phoenicurus* | common redstart | 253 | 2.0 | 38 | 10.5 | 62.47 | 11.80 | 1,3,8,9 |  | (*279*) |
| *Phylidonyris pyrrhopterus* | crescent honeyeater | 19 | 57.9 | - | - | -39.03 | 146.33 | 1,3,8,7 |  | (*181*) |
| *Phylloscopus fuscatus* | dusky warbler | 195 | 45.1 | 46 | 58.7 | 59.85 | 154.02 | 8,3,6,11,12 |  | (*280*) |
| *Phylloscopus sibilatrix* | wood warbler | 6 | 16.7 | 3 | 33.3 | 47.42 | 7.55 | 1,3 | Control dataset | (*281*) |
| *Phylloscopus sibilatrix* | wood warbler | 56 | 0.0 | 13 | 0.0 | - | - | 1,3 |  | (*282*) |
| *Phylloscopus trochilus* | willow warbler | 109 | 33.0 | 20 | 50.0 | 61.42 | 8.87 | 1,3,6,10 |  | (*283*) |
| *Phylloscopus trochilus* | willow warbler | 68 | 27.9 | 12 | 58.3 | 56.92 | 18.12 | 1,3,6,10 |  | (*284*) |
| *Phylloscopus trochilus* | willow warbler | 200 | 23.5 | 34 | 47.1 | 56.28 | -2.70 | 1,3,6,10 |  | (*285*) |
| *Phylloscopus trochilus* | willow warbler | 120 | 0.0 | 19 | 0.0 | 59.32 | 18.00 | 1,3,6,10 |  | (*282*) |
| *Picoides tridactylus* | Eurasian three-toed woodpecker | 80 | 2.5 | 26 | 7.7 | 61.18 | 25.10 | - | Some quasi-parasitism | (*286*) |
| *Picoides tridactylus* | Eurasian three-toed woodpecker | 55 | 7.3 | 26 | 15.4 | 47.53 | 12.93 | - |  | (*287*) |
| *Pipilo maculatus* | spotted towhee | 575 | 26.3 | 228 | 44.3 | 45.50 | -122.68 | 6,7,8 |  | (*288*) |
| *Piranga olivacea* | scarlet tanager | 54 | 16.7 | 17 | 29.4 | 41.77 | -79.93 | 1,8,9 |  | (*289*) |
| *Platalea ajaja* | roseate spoonbill | 74 | 2.7 | 37 | 5.4 | -32.48─  1.93 | -50.40─  -56.97 | - | Sibship analyses, sampled over large geographic range | (*29*) |
| *Plectrophenax nivalis* | snow bunting | 380 | 10.8 | 91 | 20.9 | 78.22 | 15.63 | 14,16 |  | (*290*) |
| *Pluvialis dominica* | American golden plover | 131 | 7.6 | 37 | 16.2 | 71.29 | -156.80 | - |  | (*291*) |
| *Poephila acuticauda* | long-tailed finch | 391 | 12.8 | 101 | 25.7 | -15.55 | 128.00 | 2 |  | (*292*) |
| *Porphyrio hochstetteri* | takahe | 27 | 0.0 | 9 | 0.0 | -36.4̶─  -41.08 | 173.88─  174.9 | - | Sampled over large geographic range | (*293*) |
| *Progne subis* | purple martin | 1235 | 22.1 | 297 | 46.1 | 42.13 | -80.30 | 1,3,8 |  | (*294*) |
| *Progne subis* | purple martin | 138 | 18.8 | - | - | 39.08 | -76.57 | 1,3,8 |  | (*295*) |
| *Promerops cafer* | Cape sugarbird | 185 | 64.9 | 104 | 70.2 | -34.00 | 18.97 | 6,9 |  | (*296*) |
| *Prosthemadera novaeseelandiae* | tui | 163 | 55.2 | 57 | 71.9 | -36.37 | 174.83 | 6,8,7,9 |  | (*297*) |
| *Puffinus tenuirostris* | short-tailed shearwater | 83 | 10.8 | 83 | 10.8 | -43.10 | 147.42 | - |  | (*298*) |
| *Pygoscelis adeliae* | Adélie penguin | 22 | 9.1 | 18 | 11.1 | -74.35 | 165.13 | - |  | (*299*) |
| *Pygoscelis antarcticus* | chinstrap penguin | 76 | 0.0 | 38 | 0.0 | -63.00 | -60.67 | - |  | (*300*) |
| *Quelea quelea* | red-billed quelea | 56 | 21.4 | 37 | 32.4 | -21.08 | 31.92 | 4 | Difficult to extract sample sizes | (*301*) |
| *Ramphocelus costaricensis* | Cherrie’s tanager | 55 | 49.1 | 31 | 54.8 | 8.70 | -83.20 | 6,8,4,9 |  | (*302*) |
| *Remiz coronatus* | white-crowned penduline tit | 29 | 0.0 | 5 | 0.0 | 42.42 | 70.48 | 1,3,9 |  | (*303*) |
| *Rhipidura fuliginosa* | grey fantail | 49 | 55.1 | 25 | 64.0 | -35.45 | 149.28 | 1,3,8,13 |  | (*304*) |
| *Riparia riparia* | sand martin | 167 | 13.8 | 45 | 35.6 | 56.20 | -3.98 | 3,9,4 |  | (*305*) |
| *Riparia riparia* | sand martin | 168 | 20.2 | 41 | 36.6 | 48.30 | 21.08 | 3,9,4 |  | (*306*) |
| *Rissa tridactyla* | black-legged kittiwake | 119 | 0.0 | 86 | 0.0 | 48.08 | -4.58 | - |  | (*307*) |
| *Sayornis phoebe* | Eastern phoebe | 769 | 5.1 | 174 | 9.2 | 38.90 | -86.90 | 1,8,3 |  | (*308*) |
| *Sayornis phoebe* | Eastern phoebe | 76 | 11.8 | 20 | 20.0 | 44.57 | -76.32 | 1,8,3 |  | (*309*) |
| *Serinus canaria* | canary | 45 | 0.0 | 15 | 0.0 | 32.58 | -16.47 | 1,8,9 |  | (*310*) |
| *Serinus serinus* | serin | 139 | 9.4 | 47 | 14.9 | 37.87 | -3.92 | 1,9 |  | (*311*) |
| *Serinus serinus* | serin | 61 | 0.0 | 21 | 0.0 | 40.17 | -8.55 | 1,9 |  | (*312*) |
| *Setophaga ruticilla* | American redstart | 81 | 44.4 | 28 | 64.3 | 41.77 | -79.93 | 1,6,8 |  | (*313*) |
| *Setophaga ruticilla* | American redstart | 108 | 39.8 | 32 | 59.4 | 45.07 | -67.03 | 1,6,8 |  | (*314*) |
| *Setophaga ruticilla* | American redstart | 239 | 23.4 | 75 | 42.7 | 44.57 | -76.32 | 1,6,8 |  | (*315*) |
| *Sialia currucoides* | mountain bluebird | 465 | 36.3 | 92 | 71.7 | 44.63 | -107.00 | 3,4,2,1 |  | (*316*) |
| *Sialia currucoides* | mountain bluebird | 900 | 32.0 | 177 | 65.0 | 51.00 | -122.00 | 3,4,2,1 | Control dataset | (*317*) |
| *Sialia sialis* | Eastern bluebird | 83 | 8.4 | 21 | 23.8 | 44.57 | -76.32 | 1,2,3,9 |  | (*318*) |
| *Sitta europaea* | European nuthatch | 188 | 9.6 | 32 | 37.5 | 48.53 | 9.05 | 1,8 |  | (*319*) |
| *Spheniscus humboldti* | Humboldt penguin | 49 | 0.0 | 21 | 0.0 | -15.37 | -75.20 | - |  | (*320*) |
| *Spiza americana* | dickcissel | 218 | 38.5 | 92 | 52.2 | 39.08 | -96.58 | 4 |  | (*321*) |
| *Spizella pusilla* | field sparrow | 308 | 9.7 | 80 | 40.0 | 40.20 | -87.72 | 1,6,9 |  | (*322*) |
| *Steganopus tricolor* | Wilson’s phalarope | 43 | 0.0 | 15 | 0.0 | 51.45 | -105.17 | - |  | (*323*) |
| *Sterna hirundo* | common tern | 102 | 1.0 | 34 | 2.9 | 53.52 | 8.08 | - |  | (*324*) |
| *Sterna hirundo* | common tern | 29 | 0.0 | 10 | 0.0 | 45.35 | 12.27 | - |  | (*325*) |
| *Strix aluco* | tawny owl | 137 | 0.7 | 37 | 2.7 | 46.00 | 6.00 | - |  | (*326*) |
| *Sturnus unicolor* | spotless starling | 334 | 15.9 | 96 | 41.7 | 40.50 | -4.00 | 1,3,9 |  | (*327*) |
| *Sturnus unicolor* | spotless starling | 202 | 15.3 | 20 | 65.0 | 40.50 | -4.00 | 1,3,9 | Control dataset | (*328*) |
| *Sturnus vulgaris* | common starling | 196 | 16.8 | 48 | 43.8 | 46.52 | 6.57 | 1,3,9 |  | (*329*) |
| *Sturnus vulgaris* | common starling | 62 | 9.7 | 14 | 28.6 | 51.22 | 4.67 | 1,3,9 |  | (*330*) |
| *Sturnus vulgaris* | common starling | 157 | 15.9 | 37 | 40.5 | 55.72 | 13.45 | 1,3,9 |  | (*331*) |
| *Sula dactylatra* | masked booby | 6 | 0.0 | 6 | 0.0 | -18.17 | -39.33 | - |  | (*332*) |
| *Sula granti* | Nazca booby | 32 | 0.0 | 21 | 0.0 | -1.33 | -89.67 | - |  | (*333*) |
| *Sula nebouxii* | blue-footed booby | 799 | 6.9 | 453 | 10.6 | 21.87 | -105.90 | - |  | (*334*) |
| *Sula sula* | red-footed booby | 14 | 0.0 | 14 | 0.0 | -1.33 | -89.67 | - |  | (*335*) |
| *Tachycineta albilinea* | mangrove swallow | 97 | 15.5 | 31 | 25.8 | 9.17 | -79.85 | 1,3 |  | (*336*) |
| *Tachycineta bicolor* | tree swallow | 63 | 33.3 | 11 | 63.6 | 44.57 | -76.32 | 3,12 | Control dataset | (*337*) |
| *Tachycineta bicolor* | tree swallow | 111 | 68.5 | 25 | 84.0 | 44.70 | -76.20 | 3,12 | Data from natural nest holes | (*338*) |
| *Tachycineta bicolor* | tree swallow | 529 | 51.4 | 106 | 74.5 | 44.57 | -76.32 | 3,12 |  | (*339*) |
| *Tachycineta bicolor* | tree swallow | 67 | 55.2 | 13 | 84.6 | 44.58 | -66.77 | 3,12 |  | (*339*) |
| *Tachycineta bicolor* | tree swallow | 365 | 47.9 | 67 | 82.1 | 44.57 | -76.32 | 3,12 |  | (*340*) |
| *Tachycineta bicolor* | tree swallow | - | - | 23 | 69.6 | 43.38 | -88.02 | 3,12 |  | (*341*) |
| *Tachycineta bicolor* | tree swallow | 3438 | 49.0 | 587 | 84.0 | 45.00 | -74.00 | 3,12 |  | (*342*) |
| *Tachycineta bicolor* | tree swallow | 216 | 35.2 | 40 | 85.0 | 53.00 | -123.00 | 3,12 |  | (*343*) |
| *Tachycineta bicolor* | tree swallow | 502 | 47.2 | 99 | 82.8 | 44.57 | -76.32 | 3,12 |  | (*344*) |
| *Tachycineta bicolor* | tree swallow | - | - | 248 | 83.9 | 45.00 | -74.00 | 3,12 |  | (*345*) |
| *Tachycineta bicolor* | tree swallow | 281 | 48.8 | 54 | 88.9 | 43.38 | -88.02 | 3,12 |  | (*346*) |
| *Tachycineta bicolor* | tree swallow | 439 | 38.5 | - | - | 43.38 | -88.02 | 3,12 |  | (*347*) |
| *Tachycineta leucorrhoa* | white rumped swallow | 342 | 56.4 | 78 | 76.9 | -35.57 | -58.02 | 3,9,12 |  | (*348*) |
| *Tachycineta meyeni* | Chilean swallow | 161 | 6.8 | 52 | 13.5 | -54.73 | -68.20 | 3,9,12 |  | (*349*) |
| *Taeniopygia guttata* | zebra finch | 82 | 2.4 | 25 | 8.0 | -36.15 | 145.43 | 3,4 |  | (*350*) |
| *Taeniopygia guttata* | zebra finch | 316 | 1.6 | 80 | 5.0 | -31.08 | 142.70 | 3,4 |  | (*351*) |
| *Thalassarche cauta* | shy albatross | 29 | 6.9 | 29 | 6.9 | -40.38 | 144.65 | - |  | (*352*) |
| *Thalassarche chrysostoma* | grey-headed albatross | 83 | 7.2 | 90 | 6.7 | -54.00 | -38.00 | - |  | (*86*) |
| *Thalassarche melanophrys* | black-browed albatross | 87 | 5.7 | 90 | 5.6 | -54.00 | -38.00 | - |  | (*86*) |
| *Thalassoica antarctica* | Antarctic petrel | 41 | 7.3 | 41 | 7.3 | -71.88 | 5.17 | - |  | (*353*) |
| *Thamnophilus atrinucha* | black-crowned antshrike | 89 | 3.4 | 50 | 4.0 | 9.22 | -79.65 | 8 |  | (*354*) |
| *Thryothorus ludovicianus* | Carolina wren | 84 | 0.0 | 23 | 0.0 | 34.82 | -87.63 | 1,8,9 |  | (*355*) |
| *Thryothorus pleurostictus* | banded wren | 156 | 4.5 | 50 | 10.0 | 10.67 | -85.50 | 6,8 |  | (*356*) |
| *Thryothorus rufalbus* | rufous-and-white wren | 158 | 1.9 | 51 | 5.9 | 10.67 | -85.50 | 8 |  | (*357*) |
| *Tockus monteiri* | Monteiro’s hornbill | 135 | 0.0 | 38 | 0.0 | -22.53 | 16.97 | - |  | (*358*) |
| *Troglodytes aedon* | house wren | 1772 | 16.4 | 361 | 35.2 | 40.67 | -88.88 | 1,3,8,9 |  | (*359*) |
| *Troglodytes aedon* | house wren | 54 | 1.9 | 9 | 11.1 | 49.38 | -88.02 | 1,3,8,9 | Control dataset | (*360*) |
| *Troglodytes aedon* | house wren | 857 | 13.5 | 181 | 37.6 | 42.52 | -76.47 | 1,3,8,9 |  | (*361*) |
| *Troglodytes aedon* | house wren | - | - | 46 | 45.7 | 44.68 | -106.98 | 1,3,8,9 | Control dataset | (*362*) |
| *Troglodytes aedon* | house wren | 316 | 12.7 | 79 | 63.3 | 44.67 | -105.93 | 1,3,8,9 |  | (*363*) |
| *Troglodytes aedon* | house wren | 377 | 24.9 | 82 | 53.7 | 42.52 | -76.47 | 1,3,8,9 |  | (*364*) |
| *Troglodytes aedon* | house wren | 166 | 15.7 | 40 | 32.5 | -36.43 | -56.94 | 1,3,8,9 |  | (*364*) |
| *Troglodytes aedon* | house wren | 584 | 10.1 | 103 | 28.2 | 43.38 | -88.02 | 1,3,8,9 |  | (*365*) |
| *Troglodytes aedon* | house wren | 790 | 8.4 | 146 | 26.7 | 40.67 | -88.88 | 1,3,8,9 |  | (*366*) |
| *Troglodytes troglodytes* | Eurasian wren | 153 | 16.3 | 29 | 37.9 | 53.13 | 6.58 | 1,3,8,9 |  | (*367*) |
| *Turdus albicollis* | white-necked thrush | 22 | 18.2 | 11 | 36.4 | -24.07 | -47.97 | 1,3,6,8,9 |  | (*368*) |
| *Turdus grayi* | clay-colored robin | 37 | 37.8 | 19 | 52.6 | 9.12 | -79.70 | 1,3,8,9 |  | (*369*) |
| *Turdus migratorius* | American robin | 187 | 48.1 | 64 | 71.9 | 40.03 | -88.17 | 1,3,8,9 |  | (*370*) |
| *Tyrannus forficatus* | scissor-tailed flycatchers | 168 | 48.8 | 44 | 65.9 | 34.77 | -98.48 | 1,3,2,4,15 | Text reports 42 nests, but table reports 44 | (*371*) |
| *Tyrannus tyrannus* | Eastern kingbird | 264 | 47.0 | 89 | 60.7 | 43.00 | -119.00 | 1,3,8,9,15 |  | (*372*) |
| *Tyrannus tyrannus* | Eastern kingbird | 64 | 42.2 | 20 | 60.0 | 43.30 | -74.88 | 1,3,8,9,15 |  | (*373*) |
| *Tyto alba* | barn owl | 455 | 1.3 | 95 | 2.1 | 46.82 | 6.95 | - |  | (*374*) |
| *Upupa epops* | Eurasian hoopoe | 254 | 3.9 | 41 | 17.1 | 46.33 | 7.67 | - |  | (*375*) |
| *Upupa epops* | Eurasian hoopoe | 126 | 7.1 | 36 | 13.9 | 37.00 | -3.00 | - |  | (*376*) |
| *Uria aalge* | common murres | 77 | 7.8 | 77 | 7.8 | 51.75 | -5.28 | - |  | (*377*) |
| *Uria lomvia* | thick-billed murres | 27 | 7.4 | 27 | 7.4 | 62.00 | -83.00 | - |  | (*378*) |
| *Vermivora chrysoptera* | golden-winged warbler | 62 | 38.7 | 17 | 76.5 | 44.57 | -76.32 | 1,6 |  | (*379*) |
| *Vireo griseus* | white-eyed vireo | 102 | 2.0 | 36 | 5.6 | 31.40 | -97.80 | 6,7 |  | (*380*) |
| *Vireo olivaceus* | red-eyed vireo | 19 | 57.9 | 7 | 57.1 | 41.00 | -79.00 | 8 |  | (*381*) |
| *Vireo solitarius* | blue-headed vireo | 37 | 2.7 | 16 | 6.2 | 41.00 | -79.00 | 8 |  | (*381*) |
| *Volatinia jacarina* | blue-black grassquits | 20 | 50.0 | 11 | 63.6 | -15.95 | -47.93 | 4,6 |  | (*382*) |
| *Volatinia jacarina* | blue-black grassquits | 208 | 21.2 | 95 | 30.5 | -15.93 | -47.93 | 4,6 |  | (*383*) |
| *Wilsonia citrina* | hooded warbler | 356 | 26.7 | 119 | 35.3 | 41.00 | -79.00 | 1,7,8 |  | (*384*) |
| *Zonotrichia albicollis* | white-throated sparrow | 1183 | 15.4 | 379 | 26.6 | 44.15 | -74.78 | 8,9 |  | (*385*) |
| *Zonotrichia albicollis* | white-throated sparrow | 89 | 18.0 | 32 | 31.2 | 44.15 | -74.78 | 8,9 | Data for two morphs combined | (*386*) |
| *Zonotrichia capensis* | rufous-collared sparrow | 24 | 41.7 | 11 | 63.6 | -0.35 | -78.15 | 6,3,9 |  | (*387*) |
| *Zonotrichia capensis* | rufous-collared sparrow | 23 | 52.2 | 10 | 60.0 | -0.12 | -77.92 | 6,3,9 |  | (*387*) |
| *Zonotrichia leucophrys* | white-crowned sparrow | 68 | 47.1 | 28 | 64.3 | 48.02 | -122.05 | 1,6,9 |  | (*42*, *388*) |
| *Zonotrichia leucophrys* | white-crowned sparrow | 342 | 41.2 | 96 | 44.8 | 38.57 | -119.03 | 1,6,9 |  | (*389*) |
| *Zonotrichia leucophrys* | white-crowned sparrow | 189 | 29.1 | 62 | 38.7 | 43.16 | -124.41 | 1,6,9 |  | (*390*) |
| *Zosterops lateralis* | capricorn silvereye | 122 | 0.0 | 53 | 0.0 | -23.43 | 151.90 | 1,3,6,8,9 |  | (*391*) |

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