**Table S4:** Counts, corrected abundance estimates, and number of bird collisions recorded during the fall 2019 season (September–October) at the University of Victoria (UVic), British Columbia, Canada. # Counted individuals UVic refers to the total number of individuals detected through point counts at UVic, while # Counted individuals RPBO represents the number of birds captured in mist nets at the Rocky Point Bird Observatory (RPBO) during the same period. Corrected abundance estimates were obtained from an integrated model that accounts for imperfect detection by combining UVic and RPBO data and incorporating behavioural factors such as flocking. Estimates are presented as means with associated 95% credible intervals. The # Collisions detected column shows the total number of carcasses found for each species during collision surveys.

| **Species name** | **# Counted individuals UVic** | **# Counted individuals RPBO** | **Corrected abundance UVic (95% CI)** | **Number of collisions detected** |
| --- | --- | --- | --- | --- |
| American crow  *Corvus brachyrhynchos* | 31 | 0 | 63 (41-99) | 0 |
| American goldfinch  *Spinus tristis* | 11 | 10 | 20 (12-35) | 0 |
| American pipit  *Anthus rubescens* | 0 | 0 | 1 (1-2) | 0 |
| American robin  *Turdus migratorius* | 121 | 10 | 203 (170-245) | 0 |
| Anna’s hummingbird  *Calypte anna* | 20 | 1 | 51 (29-88) | 1 |
| Barred owl  *Strix varia* | 0 | 3 | 1 (1-4) | 0 |
| Bewick’s wren  *Thryomanes bewickii* | 6 | 5 | 13 (6-32) | 0 |
| Black-throated gray warbler  *Setophaga nigrescens* | 0 | 0 | 1 (1-2) | 0 |
| Brewer’s blackbird  *Euphagus cyanocephalus* | 0 | 0 | 1 (1-2) | 0 |
| Brown creeper  *Certhia americana* | 0 | 9 | 3 (1-9) | 0 |
| Bushtit  *Psaltriparus minimus* | 0 | 3 | 3 (1-10) | 0 |
| Canada goose  *Branta canadensis* | 28 | 0 | 40 (32-52) | 0 |
| Cedar waxwing  *Bombycilla cedrorum* | 34 | 6 | 50 (40-65) | 0 |
| Chestnut-backed chickadee  *Poecile rufescens* | 45 | 43 | 109 (74-161) | 0 |
| Common raven  *Corvis corax* | 1 | 0 | 1 (1-2) | 0 |
| Common yellowthroat  *Geothlypis trichas* | 0 | 36 | 3 (1-8) | 0 |
| Cooper’s hawk  *Astur cooperii* | 0 | 0 | 1 (1-2) | 0 |
| Dark-eyed junco  *Junco hyemalis* | 58 | 87 | 125 (92-169) | 3 |
| Downy woodpecker  *Dryobates pubescens* | 3 | 0 | 4 (3-11) | 0 |
| European starling  *Sturnus vulgaris* | 37 | 0 | 53 (43-67) | 0 |
| Fox sparrow  *Passerella iliaca* | 2 | 142 | 17 (6-34) | 8 |
| Glaucous-winged gull  *Larus glaucescens* | 13 | 0 | 31 (16-58) | 0 |
| Golden-crowned kinglet  *Regulus satrapa* | 13 | 118 | 37 (20-63) | 6 |
| Golden-crowned sparrow  *Zonotrichia atricapilla* | 3 | 237 | 37 (18-64) | 3 |
| Hairy woodpecker  *Dryobates villosus* | 0 | 0 | 1 (1-2) | 0 |
| Hammond’s flycatcher  *Empidonax hammondii* | 0 | 19 | 5 (1-17) | 0 |
| Hermit thrush  *Catharus guttatus* | 0 | 173 | 16 (6-31) | 7 |
| House finch  *Haemorhous mexicanus* | 57 | 0 | 86 (69-109) | 0 |
| House sparrow  *Passer domesticus* | 3 | 0 | 4 (3-12) | 0 |
| Northern house wren  *Troglodytes aedon* | 0 | 2 | 2 (1-6) | 0 |
| Hutton’s vireo  *Vireo huttoni* | 0 | 8 | 4 (1-13) | 0 |
| Lincoln’s sparrow  *Melospiza lincolnii* | 0 | 134 | 12 (4-22) | 3 |
| MacGillivray’s warbler  *Geothlypis tolmiei* | 0 | 3 | 2 (1-8) | 0 |
| Mallard  *Anas platyrhynchos* | 1 | 0 | 1 (1-2) | 0 |
| Northern flicker  *Colaptes auratus* | 7 | 2 | 15 (7-35) | 0 |
| Northern saw-whet owl  *Aegolius acadicus* | 0 | 3 | 2 (1-8) | 0 |
| Orange-crowned warbler  *Leiothlypis celata* | 7 | 104 | 31 (14-59) | 4 |
| Western flycatcher  *Empidonax difficilis* | 0 | 131 | 14 (5-27) | 0 |
| Pacific wren  *Troglodytes pacificus* | 0 | 88 | 8 (1-18) | 0 |
| Pine siskin  *Spinus pinus* | 0 | 1 | 2 (1-5) | 0 |
| Purple finch  *Haemorhous purpureus* | 1 | 30 | 6 (1-18) | 0 |
| Red-breasted nuthatch  *Sitta canadensis* | 7 | 2 | 16 (7-37) | 0 |
| Red-tailed hawk  *Buteo jamaicensis* | 0 | 1 | 2 (1-5) | 0 |
| Red-winged blackbird  *Agelaius phoeniceus* | 0 | 0 | 1 (1-2) | 0 |
| Ruby-crowned kinglet  *Corthylio calendula* | 5 | 375 | 41 (22-68) | 0 |
| Savannah sparrow  *Passerculus sandwichensis* | 0 | 115 | 8 (2-16) | 2 |
| Sharp-shinned hawk  *Accipiter striatus* | 0 | 0 | 1 (1-2) | 0 |
| Song sparrow  *Melospiza melodia* | 7 | 100 | 26 (10-53) | 1 |
| Spotted towhee  *Pipilo maculatus* | 13 | 296 | 51 (29-86) | 0 |
| Steller’s jay  *Cyanocitta stelleri* | 7 | 53 | 10 (6-19) | 0 |
| Swainson’s thrush  *Catharus ustulatus* | 1 | 105 | 13 (4-26) | 5 |
| Townsend’s solitaire  *Myadestes townsendi* | 0 | 0 | 1 (1-2) | 0 |
| Townsend’s warbler  *Setophaga townsendi* | 1 | 3 | 2 (1-8) | 0 |
| Turkey vulture  *Cathartes aura* | 0 | 0 | 1 (1-2) | 0 |
| Varied thrush  *Ixoreus naevius* | 1 | 40 | 6 (1-13) | 3 |
| Warbling vireo  *Vireo gilvus* | 0 | 5 | 2 (1-6) | 0 |
| Western tanager  *Piranga ludoviciana* | 1 | 1 | 2 (1-6) | 0 |
| White-crowned sparrow  *Zonotrichia leucophrys* | 0 | 148 | 12 (4-22) | 0 |
| White-throated sparrow  *Zonotrichia albicollis* | 0 | 9 | 6 (1-18) | 0 |
| Willow flycatcher  *Empidonax traillii* | 1 | 11 | 2 (1-6) | 0 |
| Wilson’s warbler  *Cardellina pusilla* | 0 | 33 | 4 (1-11) | 0 |
| Yellow-rumped warbler  *Setophaga coronata* | 9 | 26 | 21 (10-43) | 1 |
| Yellow warbler  *Setophaga petechia* | 0 | 109 | 27 (10-56) | 5 |

**Table S5:** Counts, corrected abundance estimates, and number of bird collisions recorded during the fall 2020 season (September–October) at the University of Victoria (UVic), British Columbia, Canada. # Counted individuals UVic refers to the total number of individuals detected through point counts at UVic, while # Counted individuals RPBO represents the number of birds captured in mist nets at the Rocky Point Bird Observatory (RPBO) during the same period. Corrected abundance estimates were obtained from an integrated model that accounts for imperfect detection by combining UVic and RPBO data and incorporating behavioural factors such as flocking. Estimates are presented as means with associated 95% credible intervals. The # Collisions detected column shows the total number of carcasses found for each species during collision surveys.

| **Species name** | **# Counted individuals UVic** | **# Counted individuals RPBO** | **Corrected abundance UVic (95% CI)** | **Number of collisions detected** |
| --- | --- | --- | --- | --- |
| American crow  *Corvus brachyrhynchos* | 27 | 0 | 68 (42-111) | 0 |
| American goldfinch  *Spinus tristis* | 0 | 6 | 4 (1-12) | 0 |
| American pipit  *Anthus rubescens* | 3 | 0 | 5 (3-17) | 4 |
| American robin  *Turdus migratorius* | 21 | 17 | 52 (31-87) | 4 |
| Anna’s hummingbird  *Calypte anna* | 16 | 0 | 34 (19-63) | 0 |
| Barred owl  *Strix varia* | 0 | 2 | 2 (1-7) | 0 |
| Bewick’s wren  *Thryomanes bewickii* | 9 | 12 | 17 (9-36) | 0 |
| Black-throated gray warbler  *Setophaga nigrescens* | 0 | 2 | 2 (1-7) | 0 |
| Brewer’s blackbird  *Euphagus cyanocephalus* | 0 | 1 | 2 (1-5) | 0 |
| Brown creeper  *Certhia americana* | 5 | 2 | 10 (5-24) | 0 |
| Bushtit  *Psaltriparus minimus* | 27 | 7 | 50 (35-74) | 0 |
| Canada goose  *Branta canadensis* | 0 | 0 | 1 (1-2) | 0 |
| Cedar waxwing  *Bombycilla cedrorum* | 10 | 5 | 20 (11-37) | 1 |
| Chestnut-backed chickadee  *Poecile rufescens* | 56 | 14 | 126 (92-176) | 0 |
| Common raven  *Corvis corax* | 11 | 0 | 27 (13-53) | 0 |
| Common yellowthroat  *Geothlypis trichas* | 0 | 29 | 4 (1-11) | 0 |
| Cooper’s hawk  *Astur cooperii* | 3 | 2 | 6 (3-16) | 0 |
| Dark-eyed junco  *Junco hyemalis* | 68 | 76 | 138 (100-189) | 1 |
| Downy woodpecker  *Dryobates pubescens* | 3 | 1 | 5 (3-14) | 0 |
| European starling  *Sturnus vulgaris* | 24 | 0 | 40 (29-56) | 0 |
| Fox sparrow  *Passerella iliaca* | 9 | 124 | 26 (14-44) | 4 |
| Glaucous-winged gull  *Larus glaucescens* | 50 | 0 | 129 (89-186) | 0 |
| Golden-crowned kinglet  *Regulus satrapa* | 34 | 68 | 66 (47-98) | 6 |
| Golden-crowned sparrow  *Zonotrichia atricapilla* | 17 | 184 | 45 (26-73) | 2 |
| Hairy woodpecker  *Dryobates villosus* | 1 | 0 | 1 (1-2) | 0 |
| Hammond’s flycatcher  *Empidonax hammondii* | 0 | 10 | 3 (1-11) | 0 |
| Hermit thrush  *Catharus guttatus* | 1 | 91 | 21 (8-44) | 11 |
| House finch  *Haemorhous mexicanus* | 24 | 1 | 52 (33-83) | 0 |
| House sparrow  *Passer domesticus* | 0 | 0 | 1 (1-3) | 0 |
| Northern house wren  *Troglodytes aedon* | 0 | 1 | 2 (1-5) | 0 |
| Hutton’s vireo  *Vireo huttoni* | 0 | 2 | 2 (1-7) | 0 |
| Lincoln’s sparrow  *Melospiza lincolnii* | 0 | 152 | 22 (10-38) | 0 |
| MacGillivray’s warbler  *Geothlypis tolmiei* | 0 | 2 | 2 (1-7) | 0 |
| Mallard  *Anas platyrhynchos* | 0 | 0 | 1 (1-2) | 0 |
| Northern flicker  *Colaptes auratus* | 8 | 3 | 18 (9-38) | 0 |
| Northern saw-whet owl  *Aegolius acadicus* | 0 | 3 | 2 (1-5) | 0 |
| Orange-crowned warbler  *Leiothlypis celata* | 5 | 95 | 18 (8-36) | 1 |
| Western flycatcher  *Empidonax difficilis* | 2 | 40 | 11 (3-24) | 1 |
| Pacific wren  *Troglodytes pacificus* | 4 | 89 | 14 (6-28) | 0 |
| Pine siskin  *Spinus pinus* | 23 | 25 | 48 (32-71) | 1 |
| Purple finch  *Haemorhous purpureus* | 5 | 29 | 10 (5-20) | 0 |
| Red-breasted nuthatch  *Sitta canadensis* | 10 | 5 | 24 (12-47) | 0 |
| Red-tailed hawk  *Buteo jamaicensis* | 0 | 0 | 1 (1-2) | 0 |
| Red-winged blackbird  *Agelaius phoeniceus* | 1 | 1 | 2 (1-6) | 0 |
| Ruby-crowned kinglet  *Corthylio calendula* | 7 | 335 | 60 (35-93) | 1 |
| Savannah sparrow  *Passerculus sandwichensis* | 1 | 114 | 17 (8-30) | 0 |
| Sharp-shinned hawk  *Accipiter striatus* | 0 | 2 | 2 (1-7) | 0 |
| Song sparrow  *Melospiza melodia* | 4 | 98 | 30 (12-61) | 0 |
| Spotted towhee  *Pipilo maculatus* | 11 | 149 | 32 (17-55) | 0 |
| Steller’s jay  *Cyanocitta stelleri* | 2 | 5 | 5 (2-14) | 0 |
| Swainson’s thrush  *Catharus ustulatus* | 0 | 48 | 10 (2-23) | 2 |
| Townsend’s solitaire  *Myadestes townsendi* | 1 | 0 | 1 (1-2) | 0 |
| Townsend’s warbler  *Setophaga townsendi* | 0 | 1 | 2 (1-5) | 0 |
| Turkey vulture  *Cathartes aura* | 6 | 0 | 13 (6-30) | 0 |
| Varied thrush  *Ixoreus naevius* | 6 | 6 | 15 (6-34) | 3 |
| Warbling vireo  *Vireo gilvus* | 0 | 7 | 3 (1-10) | 0 |
| Western tanager  *Piranga ludoviciana* | 0 | 0 | 1 (1-2) | 0 |
| White-crowned sparrow  *Zonotrichia leucophrys* | 18 | 82 | 23 (17-33) | 0 |
| White-throated sparrow  *Zonotrichia albicollis* | 0 | 13 | 8 (1-24) | 0 |
| Willow flycatcher  *Empidonax traillii* | 0 | 8 | 2 (1-8) | 0 |
| Wilson’s warbler  *Cardellina pusilla* | 0 | 33 | 9 (2-24) | 0 |
| Yellow-rumped warbler  *Setophaga coronata* | 15 | 56 | 36 (21-59) | 2 |
| Yellow warbler  *Setophaga petechia* | 2 | 93 | 37 (15-72) | 0 |

**Table S6:** Counts, corrected abundance estimates, and number of bird collisions recorded during the late winter 2020 season (January–February) at the University of Victoria (UVic), British Columbia, Canada. # Counted individuals UVic refers to the total number of individuals detected through point counts at UVic. Corrected abundance estimates were obtained using an abundance model that accounts for imperfect detection and incorporating behavioural factors such as flocking. Estimates are presented as means with associated 95% credible intervals. The # Collisions detected column shows the total number of carcasses found for each species during collision surveys.

| **Species name** | **# Counted individuals UVic** | **Corrected abundance UVic (95% CI)** | **Number of collisions detected** |
| --- | --- | --- | --- |
| American crow  *Corvus brachyrhynchos* | 18 | 53 (27-95) | 0 |
| American robin  *Turdus migratorius* | 78 | 150 (119-193) | 2 |
| Anna’s hummingbird  *Calypte anna* | 13 | 45 (20-92) | 1 |
| Bewick’s wren  *Thryomanes bewickii* | 7 | 22 (8-51) | 0 |
| Brown creeper  *Certhia americana* | 6 | 19 (7-47) | 0 |
| Bushtit  *Psaltriparus minimus* | 12 | 21 (13-34) | 0 |
| Canada goose  *Branta canadensis* | 0 | 5 (1-22) | 0 |
| Chestnut-backed chickadee  *Poecile rufescens* | 41 | 117 (75-181) | 1 |
| Common raven  *Corvis corax* | 5 | 16 (5-41) | 0 |
| Cooper’s hawk  *Astur cooperii* | 0 | 4 (1-20) | 0 |
| Dark-eyed junco  *Junco hyemalis* | 38 | 101 (65-155) | 0 |
| Downy woodpecker  *Dryobates pubescens* | 2 | 7 (2-28) | 0 |
| Eurasian-collared dove  *Streptopelia decaocto* | 0 | 5 (1-22) | 0 |
| European starling  *Sturnus vulgaris* | 10 | 25 (12-49) | 0 |
| Fox sparrow  *Passerella iliaca* | 4 | 13 (4-38) | 0 |
| Glaucous-winged gull  *Larus glaucescens* | 24 | 67 (39-115) | 0 |
| Golden-crowned kinglet  *Regulus satrapa* | 31 | 81 (51-129) | 0 |
| Golden-crowned sparrow  *Zonotrichia atricapilla* | 0 | 5 (1-21) | 0 |
| Hermit thrush  *Catharus guttatus* | 2 | 7 (2-27) | 0 |
| House finch  *Haemorhous mexicanus* | 30 | 87 (53-143) | 0 |
| Mallard  *Anas platyrhynchos* | 0 | 5 (1-21) | 0 |
| Merlin  *Falco columbarius* | 0 | 4 (1-19) | 0 |
| Northern flicker  *Colaptes auratus* | 1 | 5 (1-23) | 0 |
| Pacific wren  *Troglodytes pacificus* | 7 | 21 (8-55) | 0 |
| Pileated woodpecker  *Dryocopus pileatus* | 0 | 4 (1-19) | 0 |
| Pine siskin  *Spinus pinus* | 0 | 5 (1-21) | 0 |
| Purple finch  *Haemorhous purpureus* | 0 | 4 (1-20) | 0 |
| Red-breasted nuthatch  *Sitta canadensis* | 3 | 10 (3-32) | 0 |
| Red crossbill  *Loxia curvirostra* | 0 | 5 (1-22) | 0 |
| Red-tailed hawk  *Buteo jamaicensis* | 1 | 4 (1-22) | 0 |
| Ruby-crowned kinglet  *Corthylio calendula* | 7 | 22 (8-51) | 0 |
| Sharp-shinned hawk  *Accipiter striatus* | 1 | 5 (1-23) | 0 |
| Song sparrow  *Melospiza melodia* | 7 | 21 (8-51) | 0 |
| Spotted towhee  *Pipilo maculatus* | 4 | 13 (4-37) | 0 |
| Steller’s jay  *Cyanocitta stelleri* | 2 | 7 (2-29) | 0 |
| Varied thrush  *Ixoreus naevius* | 1 | 5 (1-22) | 0 |

**Table S7:** Counts, corrected abundance estimates, and number of bird collisions recorded during the early winter 2021 season (November–December) at the University of Victoria (UVic), British Columbia, Canada. # Counted individuals UVic refers to the total number of individuals detected through point counts at UVic. Corrected abundance estimates were obtained using an abundance model that accounts for imperfect detection and incorporating behavioural factors such as flocking. Estimates are presented as means with associated 95% credible intervals. The # Collisions detected column shows the total number of carcasses found for each species during collision surveys.

| **Species name** | **# Counted individuals UVic** | **Corrected abundance UVic (95% CI)** | **Number of collisions detected** |
| --- | --- | --- | --- |
| American crow  *Corvus brachyrhynchos* | 45 | 122 (81-181) | 0 |
| American robin  *Turdus migratorius* | 86 | 184 (137-252) | 1 |
| Anna’s hummingbird  *Calypte anna* | 8 | 25 (10-56) | 0 |
| Bewick’s wren  *Thryomanes bewickii* | 6 | 19 (7-48) | 0 |
| Brown creeper  *Certhia americana* | 4 | 13 (4-39) | 0 |
| Bushtit  *Psaltriparus minimus* | 0 | 5 (1-23) | 0 |
| Canada goose  *Branta canadensis* | 0 | 4 (1-20) | 0 |
| Chestnut-backed chickadee  *Poecile rufescens* | 41 | 117 (76-177) | 0 |
| Common raven  *Corvis corax* | 6 | 19 (7-48) | 0 |
| Cooper’s hawk  *Astur cooperii* | 0 | 4 (1-22) | 0 |
| Dark-eyed junco  *Junco hyemalis* | 83 | 183 (134-252) | 0 |
| Downy woodpecker  *Dryobates pubescens* | 2 | 7 (2-28) | 0 |
| Eurasian-collared dove  *Streptopelia decaocto* | 1 | 5 (1-23) | 0 |
| European starling  *Sturnus vulgaris* | 22 | 50 (31-83) | 0 |
| Fox sparrow  *Passerella iliaca* | 4 | 13 (4-40) | 0 |
| Glaucous-winged gull  *Larus glaucescens* | 44 | 111 (73-168) | 0 |
| Golden-crowned kinglet  *Regulus satrapa* | 38 | 100 (65-157) | 3 |
| Golden-crowned sparrow  *Zonotrichia atricapilla* | 14 | 38 (19-72) | 0 |
| Hermit thrush  *Catharus guttatus* | 1 | 5 (1-24) | 2 |
| House finch  *Haemorhous mexicanus* | 6 | 19 (7-47) | 0 |
| Mallard  *Anas platyrhynchos* | 3 | 10 (3-30) | 0 |
| Merlin  *Falco columbarius* | 1 | 4 (1-21) | 0 |
| Northern flicker  *Colaptes auratus* | 7 | 22 (8-54) | 0 |
| Pacific wren  *Troglodytes pacificus* | 5 | 16 (5-43) | 0 |
| Pileated woodpecker  *Dryocopus pileatus* | 1 | 4 (1-21) | 0 |
| Pine siskin  *Spinus pinus* | 0 | 5 (1-23) | 0 |
| Purple finch  *Haemorhous purpureus* | 2 | 7 (2-29) | 0 |
| Red-breasted nuthatch  *Sitta canadensis* | 1 | 4 (1-21) | 0 |
| Red crossbill  *Loxia curvirostra* | 0 | 4 (1-20) | 0 |
| Red-tailed hawk  *Buteo jamaicensis* | 1 | 4 (1-21) | 0 |
| Ruby-crowned kinglet  *Corthylio calendula* | 12 | 36 (17-75) | 0 |
| Sharp-shinned hawk  *Accipiter striatus* | 0 | 4 (1-20) | 0 |
| Song sparrow  *Melospiza melodia* | 6 | 19 (7-49) | 0 |
| Spotted towhee  *Pipilo maculatus* | 13 | 39 (18-77) | 0 |
| Steller’s jay  *Cyanocitta stelleri* | 3 | 11 (3-36) | 0 |
| Varied thrush  *Ixoreus naevius* | 1 | 6 (1-29) | 6 |

**Table S8:** Counts, corrected abundance estimates, and number of bird collisions recorded during the late winter 2021 season (January–February) at the University of Victoria (UVic), British Columbia, Canada. # Counted individuals UVic refers to the total number of individuals detected through point counts at UVic. Corrected abundance estimates were obtained using an abundance model that accounts for imperfect detection and incorporating behavioural factors such as flocking. Estimates are presented as means with associated 95% credible intervals. The # Collisions detected column shows the total number of carcasses found for each species during collision surveys.

| **Species name** | **# Counted individuals UVic** | **Corrected abundance UVic (95% CI)** | **Number of collisions detected** |
| --- | --- | --- | --- |
| American crow  *Corvus brachyrhynchos* | 11 | 31 (15-63) | 0 |
| American robin  *Turdus migratorius* | 128 | 211 (171-266) | 3 |
| Anna’s hummingbird  *Calypte anna* | 12 | 31 (15-65) | 1 |
| Bewick’s wren  *Thryomanes bewickii* | 9 | 20 (9-45) | 0 |
| Brown creeper  *Certhia americana* | 3 | 10 (3-31) | 0 |
| Bushtit  *Psaltriparus minimus* | 0 | 4 (1-21) | 0 |
| Canada goose  *Branta canadensis* | 0 | 4 (1-20) | 0 |
| Chestnut-backed chickadee  *Poecile rufescens* | 26 | 67 (41-109) | 0 |
| Common raven  *Corvis corax* | 14 | 34 (17-67) | 0 |
| Cooper’s hawk  *Astur cooperii* | 1 | 4 (1-19) | 0 |
| Dark-eyed junco  *Junco hyemalis* | 57 | 130 (90-188) | 0 |
| Downy woodpecker  *Dryobates pubescens* | 1 | 4 (1-18) | 0 |
| Eurasian-collared dove  *Streptopelia decaocto* | 0 | 4 (1-19) | 0 |
| European starling  *Sturnus vulgaris* | 0 | 4 (1-20) | 0 |
| Fox sparrow  *Passerella iliaca* | 11 | 31 (15-64) | 0 |
| Glaucous-winged gull  *Larus glaucescens* | 14 | 34 (17-68) | 0 |
| Golden-crowned kinglet  *Regulus satrapa* | 37 | 79 (51-122) | 1 |
| Golden-crowned sparrow  *Zonotrichia atricapilla* | 2 | 7 (2-26) | 0 |
| Hermit thrush  *Catharus guttatus* | 1 | 9 (1-37) | 1 |
| House finch  *Haemorhous mexicanus* | 12 | 34 (16-66) | 0 |
| Mallard  *Anas platyrhynchos* | 0 | 4 (1-20) | 0 |
| Merlin  *Falco columbarius* | 1 | 4 (1-20) | 0 |
| Northern flicker  *Colaptes auratus* | 2 | 7 (2-28) | 0 |
| Pacific wren  *Troglodytes pacificus* | 4 | 12 (4-35) | 0 |
| Pileated woodpecker  *Dryocopus pileatus* | 0 | 4 (1-18) | 0 |
| Pine siskin  *Spinus pinus* | 20 | 36 (25-54) | 0 |
| Purple finch  *Haemorhous purpureus* | 2 | 7 (2-25) | 0 |
| Red-breasted nuthatch  *Sitta canadensis* | 3 | 10 (3-31) | 0 |
| Red crossbill  *Loxia curvirostra* | 21 | 27 (18-44) | 0 |
| Red-tailed hawk  *Buteo jamaicensis* | 2 | 7 (2-25) | 0 |
| Ruby-crowned kinglet  *Corthylio calendula* | 6 | 18 (7-44) | 0 |
| Sharp-shinned hawk  *Accipiter striatus* | 0 | 4 (1-19) | 0 |
| Song sparrow  *Melospiza melodia* | 2 | 7 (2-27) | 0 |
| Spotted towhee  *Pipilo maculatus* | 12 | 29 (14-60) | 0 |
| Steller’s jay  *Cyanocitta stelleri* | 0 | 4 (1-19) | 0 |
| Varied thrush  *Ixoreus naevius* | 1 | 4 (1-19) | 0 |

**Table S9:** Counts, corrected abundance estimates, and number of bird collisions recorded during the late winter 2022 season (January–February) at the University of Victoria (UVic), British Columbia, Canada. # Counted individuals UVic refers to the total number of individuals detected through point counts at UVic. Corrected abundance estimates were obtained using an abundance model that accounts for imperfect detection and incorporating behavioural factors such as flocking. Estimates are presented as means with associated 95% credible intervals. The # Collisions detected column shows the total number of carcasses found for each species during collision surveys.

| **Species name** | **# Counted individuals UVic** | **Corrected abundance UVic (95% CI)** | **Number of collisions detected** |
| --- | --- | --- | --- |
| American crow  *Corvus brachyrhynchos* | 15 | 41 (21-78) | 0 |
| American robin  *Turdus migratorius* | 37 | 92 (59-142) | 1 |
| Anna’s hummingbird  *Calypte anna* | 12 | 38 (17-76) | 1 |
| Bewick’s wren  *Thryomanes bewickii* | 3 | 4 (2-15) | 0 |
| Brown creeper  *Certhia americana* | 1 | 4 (1-17) | 0 |
| Bushtit  *Psaltriparus minimus* | 0 | 4 (1-18) | 0 |
| Canada goose  *Branta canadensis* | 2 | 7 (2-24) | 0 |
| Chestnut-backed chickadee  *Poecile rufescens* | 26 | 55 (33-92) | 0 |
| Common raven  *Corvis corax* | 6 | 11 (5-30) | 0 |
| Cooper’s hawk  *Astur cooperii* | 0 | 4 (1-18) | 0 |
| Dark-eyed junco  *Junco hyemalis* | 27 | 70 (43-114) | 0 |
| Downy woodpecker  *Dryobates pubescens* | 1 | 4 (1-17) | 0 |
| Eurasian-collared dove  *Streptopelia decaocto* | 0 | 4 (1-19) | 0 |
| European starling  *Sturnus vulgaris* | 23 | 34 (22-52) | 0 |
| Fox sparrow  *Passerella iliaca* | 8 | 22 (10-51) | 0 |
| Glaucous-winged gull  *Larus glaucescens* | 48 | 109 (75-157) | 0 |
| Golden-crowned kinglet  *Regulus satrapa* | 26 | 72 (43-120) | 1 |
| Golden-crowned sparrow  *Zonotrichia atricapilla* | 6 | 16 (7-39) | 0 |
| Hermit thrush  *Catharus guttatus* | 1 | 4 (1-17) | 0 |
| House finch  *Haemorhous mexicanus* | 3 | 15 (3-47) | 1 |
| Mallard  *Anas platyrhynchos* | 0 | 4 (1-17) | 0 |
| Merlin  *Falco columbarius* | 0 | 4 (1-18) | 0 |
| Northern flicker  *Colaptes auratus* | 3 | 4 (2-13) | 0 |
| Pacific wren  *Troglodytes pacificus* | 4 | 6 (3-20) | 0 |
| Pileated woodpecker  *Dryocopus pileatus* | 0 | 4 (1-18) | 0 |
| Pine siskin  *Spinus pinus* | 0 | 4 (1-19) | 0 |
| Purple finch  *Haemorhous purpureus* | 0 | 4 (1-20) | 0 |
| Red-breasted nuthatch  *Sitta canadensis* | 1 | 4 (1-17) | 0 |
| Red crossbill  *Loxia curvirostra* | 0 | 4 (1-18) | 0 |
| Red-tailed hawk  *Buteo jamaicensis* | 1 | 4 (1-17) | 0 |
| Ruby-crowned kinglet  *Corthylio calendula* | 4 | 12 (4-33) | 0 |
| Sharp-shinned hawk  *Accipiter striatus* | 0 | 4 (1-17) | 0 |
| Song sparrow  *Melospiza melodia* | 3 | 9 (3-30) | 0 |
| Spotted towhee  *Pipilo maculatus* | 8 | 17 (8-41) | 0 |
| Steller’s jay  *Cyanocitta stelleri* | 5 | 14 (5-37) | 0 |
| Varied thrush  *Ixoreus naevius* | 0 | 4 (1-19) | 0 |