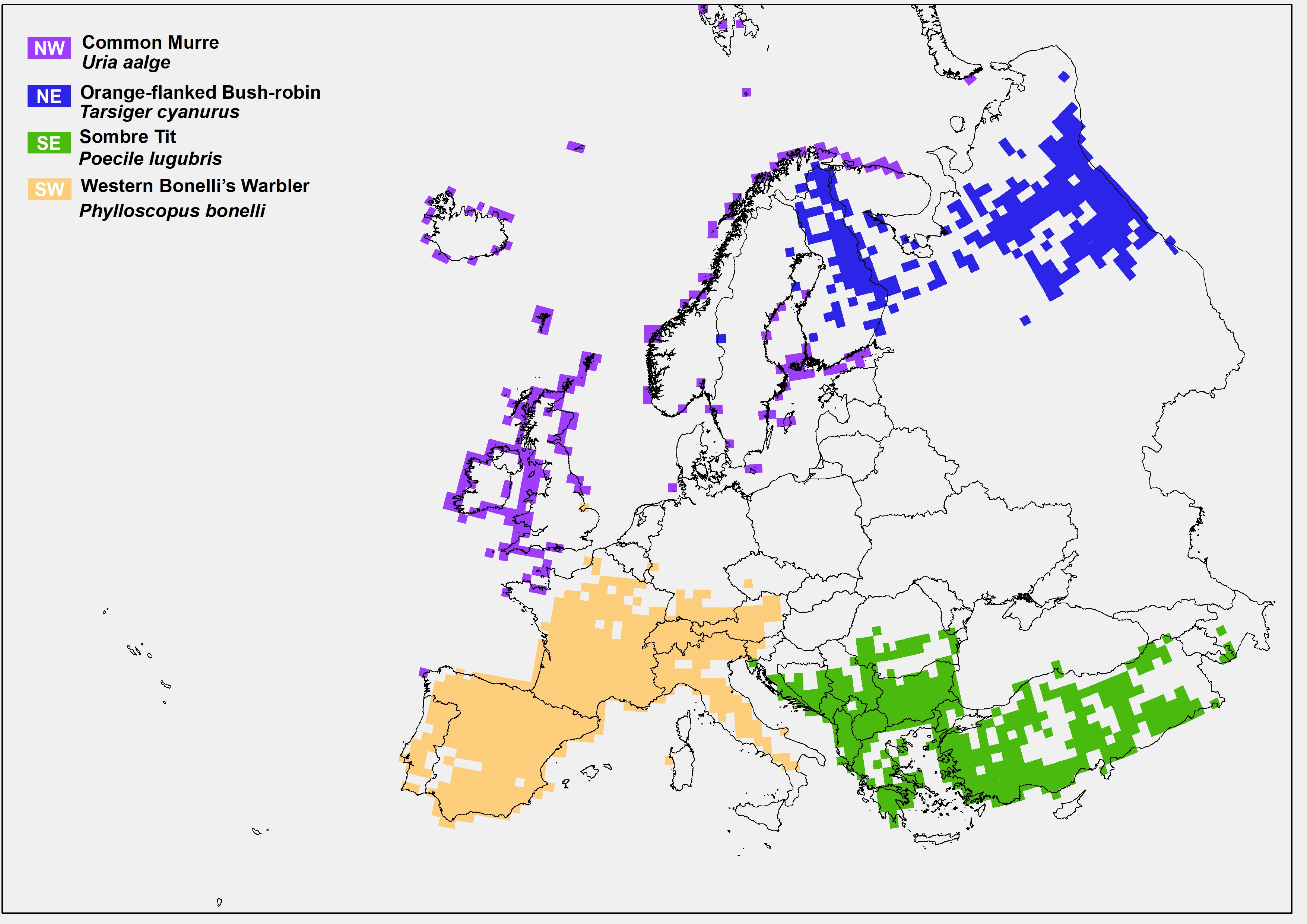
**Supplementary Materials**

**Improving national bird population estimates in Europe: insights from comparisons with atlas abundance data**

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**Appendix S1.** Details of the three different variables used in the ordinal regression models for the continental analysis. After applying the k-means clustering method, we tested for differences between groups in terms of: 1) species’ European breeding range category, i.e, the specific area in which the major part of the European distribution is found (see next paragraph and Fig. S1); 2) whether species were habitat generalists or specialists, considering that the latter are species that are associated with one of the seven main habitats reported in the Appendix S2 of EBBA2 (Keller et al. 2020) and the former with none of them; and 3) a taxonomic-functional categorisation of species, following the principles of BirdLife International (2021).

We categorized species’ European breeding range category according to the distribution of the 50-km squares in which the species breed as North (N), Northeast (NE), Northwest (NW), South (S), Southeast (SE), Southwest (SW), East (E) or West (W). This classification was based on a country basis, so that each European country was assigned to one of the quarters as indicated by the following two-letter country codes (ISO Alpha-2 code): NE quarter: BY, FI, PL, LV, EE, LT and north RU; NW quarter: IS, NO, SE, FO, UK, IE, DK, DE, CZ, NL, BE, LU; SE quarter: GR, AL, BG, CY, TR, GE, AZ, AM, HU, HR, RS, XK, BA, ME, MD, RO, SK, UA, south RU; and SW quarter: PT, ES, AD, FR, IT, CH, SI, AT. Species whose distributions were mostly (>70%) located in one of these quarters were assigned to it. Species whose distribution were mostly (>70%) included in two quarters of the same cardinal point (e.g., NE and NW) were classified as such (e.g., N). Finally, species widespread across Europe or located in non-adjacent quarters (e.g., NW and SE) were classified as “other”. See examples in Fig. S1.



**Fig. S1.** Examples of four bird species whose main breeding range (>70% of 50-km squares in which the species was found to breed in EBBA2) was distributed in EBBA2 in one of the four quarters in which European countries were assigned: Common Murre *Uria aalge*(NW), Orange-flanked Bush-robin *Tarsiger cyanurus* (NE), Sombre Tit *Poecile lugubris* (SE) and Western Bonelli’s Warbler *Phylloscopus bonelli* (SW). This process defined the species’ European breeding range category (‘Range’ in Appendix S2) as North (N), Northeast (NE), Northwest (NW), South (S), Southeast (SE), Southwest (SW), East (E), West (W) or other (see previous text for further details).

**Appendix S2.** List of the 320 species included in the continental (and subsequent clustering) analysis (i.e., species for which EBBA2 abundance data allowed estimating numbers for all countries, see Material and methods), and the variables used in the linear regression model and clustering analysis. “No.occ.sq” refers to the number of 50-km squares where each species is found (as a measure of whether a species is more or less localised or widespread) and the level of threat is divided in three categories (LC = Least Concern, NT = Near Threatened and T = Threatened) in accordance with the latest ERLoB update (BirdLife International 2021). “Dif.est.Eu” is the relative difference between the sum of EBBA2 estimates for each species in all countries, and the sum of ERLoB estimates for each species in all countries, normalized dividing by the mean (see formula in Materials and methods section). Species have been classified in three clustering groups according to whether differences between ERLoB and EBBA2 estimates were large, small or not discernible (see Materials and methods section for an explanation on how the groups were obtained). “Habitat” defines whether a species is generalist or specialist in relation to its main habitat preference. “Range” corresponds to the main location of species across their distributional range in Europe. “Taxonomy” relates to the taxonomic-functional categories of species (see Appendix S1 for more information on how species were assigned to “Habitat”, “Range” and “Taxonomy”). Special caution should be taken for species marked with an asterisk (\*), where variations in the exact location of the border between the European and Asian parts of Russia between the two projects may affect considerably the reported estimates.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| English name | Latin name | No.occ.sq. | Level threat | EBBA2.est | ERLoB.est | Dif.est.EU | Cluster | Habitat | Range | Taxonomy |
| Caucasian Snowcock | *Tetraogallus caucasicus* | 31 | LC | 7,556 | 8,115 | -0.071 | not disc. | specialist | SE | landfowl |
| Caspian Snowcock | *Tetraogallus caspius* | 39 | LC | 1,434 | 6,546 | -1.281 | large diff. | specialist | SE | landfowl |
| Rock Partridge | *Alectoris graeca* | 204 | NT | 36,267 | 47,715 | -0.273 | not disc. | generalist | S | landfowl |
| Barbary Partridge | *Alectoris barbara* | 36 | LC | 30,421 | 7,071 | 1.246 | large diff. | specialist | SW | landfowl |
| Red-legged Partridge | *Alectoris rufa* | 642 | NT | 736,361 | 5,887,701 | -1.555 | large diff. | specialist | W | landfowl |
| Black Francolin | *Francolinus francolinus* | 70 | LC | 59,492 | 14,002 | 1.238 | large diff. | specialist | SE | landfowl |
| Rock Ptarmigan | *Lagopus muta* | 420 | LC | 248,645 | 432,930 | -0.541 | small diff. | specialist | Other | landfowl |
| Hazel Grouse | *Bonasa bonasia* | 1,678 | LC | 1,957,193 | 2,636,401 | -0.296 | not disc. | specialist | Other | landfowl |
| Willow Grouse | *Lagopus lagopus* | 830 | LC | 1,060,405 | 1,564,038 | -0.384 | not disc. | specialist | N | landfowl |
| Grey Partridge | *Perdix perdix* | 2,259 | LC | 815,972 | 1,456,428 | -0.564 | small diff. | specialist | Other | landfowl |
| Western Capercaillie | *Tetrao urogallus* | 1,470 | LC | 1,059,597 | 1,151,686 | -0.083 | not disc. | specialist | Other | landfowl |
| Black Grouse | *Lyrurus tetrix* | 1,637 | LC | 1,126,293 | 1,506,103 | -0.289 | not disc. | generalist | Other | landfowl |
| Caucasian Grouse | *Lyrurus mlokosiewiczi* | 61 | NT | 11,588 | 20,148 | -0.539 | small diff. | specialist | SE | landfowl |
| White-headed Duck | *Oxyura leucocephala* | 53 | T | 546 | 610 | -0.111 | not disc. | specialist | S | waterfowl |
| Mute Swan | *Cygnus olor* | 2,176 | LC | 119,163 | 99,343 | 0.181 | not disc. | specialist | Other | waterfowl |
| Tundra Swan | *Cygnus columbianus* | 40 | T | 3,788 | 3,742 | 0.012 | not disc. | specialist | NE | waterfowl |
| Brent Goose | *Branta bernicla* | 33 | LC | 111 | 154 | -0.325 | not disc. | specialist | N | waterfowl |
| Barnacle Goose | *Branta leucopsis* | 397 | LC | 219,947 | 413,113 | -0.61 | small diff. | specialist | Other | waterfowl |
| Bean Goose | *Anser fabalis* | 317 | LC | 88,998 | 194,652 | -0.745 | small diff. | specialist | N | waterfowl |
| Pink-footed Goose | *Anser brachyrhynchus* | 75 | LC | 50,766 | 67,083 | -0.277 | not disc. | generalist | N | waterfowl |
| Greater White-fronted Goose | *Anser albifrons* | 66 | LC | 732,796 | 283,901 | 0.883 | small diff. | specialist | N | waterfowl |
| Lesser White-fronted Goose | *Anser erythropus* | 15 | T | 135 | 206 | -0.416 | not disc. | specialist | N | waterfowl |
| King Eider | *Somateria spectabilis* | 46 | LC | 3,513 | 8,665 | -0.846 | small diff. | specialist | N | waterfowl |
| Common Eider | *Somateria mollissima* | 517 | T | 503,081 | 595,123 | -0.168 | not disc. | specialist | N | waterfowl |
| Velvet Scoter | *Melanitta fusca* | 298 | T | 19,276 | 26,765 | -0.325 | not disc. | specialist | N | waterfowl |
| Common Scoter | *Melanitta nigra* | 289 | LC | 18,484 | 28,318 | -0.42 | not disc. | specialist | N | waterfowl |
| Barrow's Goldeneye | *Bucephala islandica* | 7 | NT | 1,116 | 849 | 0.272 | not disc. | specialist | NW | waterfowl |
| Smew | *Mergellus albellus* | 329 | LC | 6,858 | 13,391 | -0.645 | small diff. | specialist | NE | waterfowl |
| Goosander | *Mergus merganser* | 1,357 | LC | 120,877 | 98,865 | 0.2 | not disc. | specialist | Other | waterfowl |
| Red-breasted Merganser | *Mergus serrator* | 911 | NT | 70,394 | 94,625 | -0.294 | not disc. | specialist | N | waterfowl |
| Harlequin Duck | *Histrionicus histrionicus* | 49 | LC | 5,384 | 3,873 | 0.326 | not disc. | specialist | NW | waterfowl |
| Common Shelduck | *Tadorna tadorna* | 1,130 | LC | 74,682 | 62,112 | 0.184 | not disc. | specialist | Other | waterfowl |
| Marbled Teal | *Marmaronetta angustirostris* | 27 | T | 1,110 | 636 | 0.543 | small diff. | generalist | S | waterfowl |
| Greater Scaup | *Aythya marila* | 237 | LC | 25,176 | 63,940 | -0.87 | small diff. | specialist | N | waterfowl |
| Eurasian Wigeon | *Mareca penelope* | 1,163 | LC | 123,444 | 286,526 | -0.796 | small diff. | generalist | N | waterfowl |
| Northern Pintail | *Anas acuta* | 842 | T | 32,974 | 174,422 | -1.364 | large diff. | generalist | Other | waterfowl |
| Great Crested Grebe | *Podiceps cristatus* | 2,972 | LC | 393,924 | 449,871 | -0.133 | not disc. | specialist | Other | other |
| Horned Grebe | *Podiceps auritus* | 480 | NT | 7,643 | 8,204 | -0.071 | not disc. | specialist | N | other |
| Stock Dove | *Columba oenas* | 2,141 | LC | 666,885 | 850,030 | -0.241 | not disc. | specialist | Other | other |
| Common Woodpigeon | *Columba palumbus* | 4,117 | LC | 22,258,177 | 24,168,679 | -0.082 | not disc. | generalist | Other | other |
| Black-bellied Sandgrouse | *Pterocles orientalis* | 187 | T | 62,886 | 10,968 | 1.406 | large diff. | specialist | S | other |
| Red-necked Nightjar | *Caprimulgus ruficollis* | 165 | NT | 10,868 | 116,254 | -1.658 | large diff. | specialist | SW | other |
| European Nightjar | *Caprimulgus europaeus* | 2,812 | LC | 593,432 | 807,359 | -0.305 | not disc. | generalist | Other | other |
| White-rumped Swift | *Apus caffer* | 50 | NT | 698 | 295 | 0.812 | small diff. | specialist | SW | other |
| Great Spotted Cuckoo | *Clamator glandarius* | 365 | T | 81,220 | 151,115 | -0.602 | small diff. | specialist | S | other |
| Common Cuckoo | *Cuculus canorus* | 4,420 | LC | 3,964,476 | 5,374,201 | -0.302 | not disc. | generalist | Other | other |
| Corncrake | *Crex crex* | 2,552 | LC | 919,429 | 1,398,904 | -0.414 | not disc. | specialist | Other | other |
| Red-knobbed Coot | *Fulica cristata* | 21 | T | 148 | 31 | 1.307 | large diff. | specialist | SW | other |
| Demoiselle Crane | *Anthropoides virgo* | 177 | T | 3,032 | 5,249 | -0.535 | small diff. | specialist | SE | other |
| Little Bustard | *Tetrax tetrax* | 345 | T | 52,372 | 229,253 | -1.256 | large diff. | specialist | Other | other |
| Great Bustard | *Otis tarda* | 224 | LC | 21,845 | 38,273 | -0.547 | small diff. | specialist | Other | other |
| Red-throated Loon | *Gavia stellata* | 647 | LC | 14,593 | 32,317 | -0.756 | small diff. | specialist | N | seabird |
| Arctic Loon | *Gavia arctica* | 802 | LC | 32,279 | 82,951 | -0.879 | small diff. | specialist | N | seabird |
| Common Loon | *Gavia immer* | 48 | LC | 473 | 346 | 0.31 | not disc. | specialist | NW | seabird |
| Band-rumped Storm-petrel | *Hydrobates castro* | 17 | LC | 8,218 | 569 | 1.741 | large diff. | specialist | SW | seabird |
| Northern Fulmar | *Fulmarus glacialis* | 243 | T | 2,284,603 | 2,281,526 | 0.001 | not disc. | specialist | NW | seabird |
| Scopoli's Shearwater | *Calonectris diomedea* | 70 | LC | 54,264 | 36,440 | 0.393 | not disc. | specialist | S | seabird |
| Cory's Shearwater | *Calonectris borealis* | 41 | LC | 249,801 | 1,100 | 1.982 | large diff. | specialist | SW | seabird |
| Manx Shearwater | *Puffinus puffinus* | 30 | LC | 380,497 | 363,449 | 0.046 | not disc. | specialist | W | seabird |
| Yelkouan Shearwater | *Puffinus yelkouan* | 41 | T | 45,084 | 30,641 | 0.381 | not disc. | specialist | S | seabird |
| Balearic Shearwater | *Puffinus mauretanicus* | 12 | T | 3,039 | 2,950 | 0.03 | not disc. | specialist | SW | seabird |
| Northern Bald Ibis | *Geronticus eremita* | 4 | T | 55 | 65 | -0.167 | not disc. | specialist | S | other |
| Eurasian Bittern | *Botaurus stellaris* | 1,871 | LC | 69,292 | 86,905 | -0.226 | not disc. | specialist | Other | other |
| Common Little Bittern | *Ixobrychus minutus* | 1,728 | LC | 127,951 | 112,242 | 0.131 | not disc. | specialist | Other | other |
| Cattle Egret | *Bubulcus ibis* | 403 | LC | 145,340 | 81,476 | 0.563 | small diff. | specialist | S | other |
| Great White Pelican | *Pelecanus onocrotalus* | 27 | LC | 38,362 | 13,724 | 0.946 | small diff. | specialist | SE | other |
| Northern Gannet | *Morus bassanus* | 47 | LC | 763,996 | 411,551 | 0.6 | small diff. | specialist | NW | seabird |
| Eurasian Oystercatcher | *Haematopus ostralegus* | 1,414 | T | 289,397 | 298,648 | -0.031 | not disc. | specialist | Other | wader |
| Pied Avocet | *Recurvirostra avosetta* | 524 | LC | 54,002 | 54,068 | -0.001 | not disc. | specialist | Other | wader |
| Black-winged Stilt | *Himantopus himantopus* | 1,069 | LC | 92,030 | 78,701 | 0.156 | not disc. | specialist | S | wader |
| Grey Plover | *Pluvialis squatarola* | 25 | LC | 10,605 | 17,292 | -0.479 | small diff. | specialist | NE | wader |
| Eurasian Golden Plover | *Pluvialis apricaria* | 872 | LC | 863,058 | 970,998 | -0.118 | not disc. | specialist | N | wader |
| Eurasian Dotterel | *Eudromias morinellus* | 183 | LC | 13,851 | 15,037 | -0.082 | not disc. | specialist | NW | wader |
| Greater Sandplover | *Charadrius leschenaultii* | 30 | NT | 273 | 847 | -1.025 | small diff. | specialist | SE | wader |
| Caspian Plover | *Charadrius asiaticus* | 3 | T | 9 | 8 | 0.118 | not disc. | specialist | SE | wader |
| Spur-winged Lapwing | *Vanellus spinosus* | 50 | LC | 574 | 1,326 | -0.792 | small diff. | specialist | SE | wader |
| Sociable Lapwing | *Vanellus gregarius* | 3 | T | 9 | 5 | 0.571 | small diff. | specialist | SE | wader |
| White-tailed Lapwing | *Vanellus leucurus* | 32 | LC | 1,050 | 3,308 | -1.036 | small diff. | specialist | SE | wader |
| Whimbrel | *Numenius phaeopus* | 761 | LC | 410,648 | 358,097 | 0.137 | not disc. | specialist | N | wader |
| Red-wattled Lapwing | *Vanellus indicus* | 14 | T | 42 | 24 | 0.545 | small diff. | generalist | SE | wader |
| Bar-tailed Godwit | *Limosa lapponica* | 68 | LC | 8,591 | 6,898 | 0.219 | not disc. | specialist | N | wader |
| Ruddy Turnstone | *Arenaria interpres* | 211 | LC | 7,170 | 20,155 | -0.95 | small diff. | specialist | N | wader |
| Broad-billed Sandpiper | *Calidris falcinellus* | 122 | T | 21,407 | 26,637 | -0.218 | not disc. | specialist | N | wader |
| Temminck's Stint | *Calidris temminckii* | 211 | LC | 53,107 | 101,446 | -0.626 | small diff. | specialist | N | wader |
| Dunlin | *Calidris alpina* | 361 | LC | 408,716 | 486,239 | -0.173 | not disc. | specialist | N | wader |
| Little Stint | *Calidris minuta* | 44 | LC | 88,584 | 98,427 | -0.105 | not disc. | specialist | NE | wader |
| Eurasian Woodcock | *Scolopax rusticola* | 2,655 | LC | 2,565,591 | 5,701,787 | -0.759 | small diff. | specialist | Other | wader |
| Pintail Snipe \* | *Gallinago stenura* | 32 | LC | 17,938 | 13,784 | 0.262 | not disc. | generalist | NE | wader |
| Swinhoe's Snipe \* | *Gallinago megala* | 4 | NT | 12 | 17 | -0.345 | not disc. | specialist | NE | wader |
| Great Snipe | *Gallinago media* | 504 | LC | 32,402 | 68,046 | -0.71 | small diff. | specialist | N | wader |
| Common Snipe | *Gallinago gallinago* | 2,567 | T | 1,439,515 | 3,075,122 | -0.725 | small diff. | generalist | Other | wader |
| Jack Snipe | *Lymnocryptes minimus* | 266 | LC | 15,794 | 24,080 | -0.416 | not disc. | specialist | N | wader |
| Red-necked Phalarope | *Phalaropus lobatus* | 324 | LC | 146,842 | 309,715 | -0.713 | small diff. | specialist | N | wader |
| Green Sandpiper | *Tringa ochropus* | 1,937 | LC | 1,075,916 | 735,952 | 0.375 | not disc. | specialist | Other | wader |
| Common Greenshank | *Tringa nebularia* | 1,106 | LC | 271,612 | 324,363 | -0.177 | not disc. | generalist | N | wader |
| Wood Sandpiper | *Tringa glareola* | 1,144 | LC | 1,043,743 | 1,233,152 | -0.166 | not disc. | specialist | N | wader |
| Spotted Redshank | *Tringa erythropus* | 176 | LC | 20,929 | 27,463 | -0.27 | not disc. | specialist | N | wader |
| Marsh Sandpiper | *Tringa stagnatilis* | 332 | LC | 7,001 | 11,456 | -0.483 | small diff. | specialist | E | wader |
| Black-winged Pratincole | *Glareola nordmanni* | 99 | LC | 8,572 | 8,485 | 0.01 | not disc. | specialist | SE | wader |
| Little Gull | *Hydrocoloeus minutus* | 569 | LC | 41,365 | 43,982 | -0.061 | not disc. | specialist | NE | seabird |
| Ivory Gull | *Pagophila eburnea* | 33 | T | 1,425 | 1,732 | -0.194 | not disc. | specialist | N | seabird |
| Slender-billed Gull | *Larus genei* | 89 | T | 18,399 | 33,173 | -0.573 | small diff. | specialist | Other | seabird |
| Pallas's Gull | *Larus ichthyaetus* | 73 | LC | 51,258 | 21,968 | 0.8 | small diff. | specialist | SE | seabird |
| Mediterranean Gull | *Larus melanocephalus* | 343 | LC | 110,757 | 79,776 | 0.325 | not disc. | specialist | Other | seabird |
| Audouin's Gull | *Larus audouinii* | 94 | T | 22,033 | 18,113 | 0.195 | not disc. | specialist | S | seabird |
| Mew Gull | *Larus canus* | 1,898 | LC | 1,290,470 | 1,116,067 | 0.145 | not disc. | generalist | N | seabird |
| European Herring Gull | *Larus argentatus* | 1,192 | LC | 609,833 | 565,290 | 0.076 | not disc. | specialist | Other | seabird |
| Armenian Gull | *Larus armenicus* | 33 | LC | 19,875 | 27,983 | -0.339 | not disc. | specialist | SE | seabird |
| Yellow-legged Gull | *Larus michahellis* | 810 | LC | 359,103 | 452,320 | -0.23 | not disc. | generalist | S | seabird |
| Glaucous Gull | *Larus hyperboreus* | 156 | LC | 16,863 | 13,714 | 0.206 | not disc. | specialist | N | seabird |
| Common Gull-billed Tern | *Gelochelidon nilotica* | 190 | LC | 33,626 | 15,275 | 0.751 | small diff. | generalist | S | seabird |
| Caspian Tern | *Hydroprogne caspia* | 134 | LC | 8,997 | 7,694 | 0.156 | not disc. | specialist | Other | seabird |
| Roseate Tern | *Sterna dougallii* | 27 | LC | 2,153 | 1,981 | 0.083 | not disc. | specialist | W | seabird |
| Sandwich Tern | *Thalasseus sandvicensis* | 195 | LC | 140,053 | 104,834 | 0.288 | not disc. | specialist | Other | seabird |
| Long-tailed Jaeger | *Stercorarius longicaudus* | 154 | LC | 20,806 | 43,458 | -0.705 | small diff. | specialist | N | seabird |
| Arctic Jaeger | *Stercorarius parasiticus* | 336 | T | 23,870 | 30,915 | -0.257 | not disc. | specialist | N | seabird |
| Pomarine Jaeger | *Stercorarius pomarinus* | 12 | LC | 804 | 3,172 | -1.191 | large diff. | specialist | NE | seabird |
| Great Skua | *Catharacta skua* | 110 | LC | 15,968 | 12,742 | 0.225 | not disc. | specialist | NW | seabird |
| Atlantic Puffin | *Fratercula arctica* | 162 | T | 4,485,006 | 3,873,846 | 0.146 | not disc. | specialist | NW | seabird |
| Black Guillemot | *Cepphus grylle* | 381 | LC | 100,814 | 159,396 | -0.45 | small diff. | specialist | N | seabird |
| Little Auk | *Alle alle* | 60 | LC | 396,350 | 707,107 | -0.563 | small diff. | specialist | N | seabird |
| Thick-billed Murre | *Uria lomvia* | 63 | LC | 1,676,152 | 822,290 | 0.684 | small diff. | specialist | N | seabird |
| Common Murre | *Uria aalge* | 172 | LC | 2,029,730 | 3,259,538 | -0.465 | small diff. | specialist | NW | seabird |
| Common Barn-owl | *Tyto alba* | 1,547 | LC | 184,505 | 118,114 | 0.439 | small diff. | specialist | Other | raptor |
| Northern Hawk-owl | *Surnia ulula* | 460 | LC | 22,550 | 19,510 | 0.145 | not disc. | specialist | N | raptor |
| Eurasian Pygmy-owl | *Glaucidium passerinum* | 1,153 | LC | 72,105 | 112,631 | -0.439 | small diff. | specialist | Other | raptor |
| Little Owl | *Athene noctua* | 2,344 | LC | 735,319 | 781,175 | -0.06 | not disc. | specialist | Other | raptor |
| Boreal Owl | *Aegolius funereus* | 1,379 | LC | 77,158 | 124,206 | -0.467 | small diff. | specialist | Other | raptor |
| Eurasian Scops-owl | *Otus scops* | 1,616 | LC | 279,270 | 282,739 | -0.012 | not disc. | specialist | Other | raptor |
| Cyprus Scops-owl | *Otus cyprius* | 11 | LC | 2,310 | 3,873 | -0.506 | small diff. | specialist | SE | raptor |
| Pallid Scops-owl | *Otus brucei* | 8 | T | 195 | 112 | 0.541 | small diff. | generalist | SE | raptor |
| Northern Long-eared Owl | *Asio otus* | 3,238 | LC | 445,794 | 388,494 | 0.137 | not disc. | generalist | Other | raptor |
| Tawny Owl | *Strix aluco* | 2,705 | LC | 677,638 | 758,268 | -0.112 | not disc. | specialist | Other | raptor |
| Great Grey Owl | *Strix nebulosa* | 490 | LC | 4,878 | 7,819 | -0.463 | small diff. | specialist | NE | raptor |
| Eurasian Eagle-owl | *Bubo bubo* | 1,986 | LC | 23,623 | 22,988 | 0.027 | not disc. | specialist | Other | raptor |
| Brown Fish-owl | *Ketupa zeylonensis* | 8 | T | 24 | 63 | -0.897 | small diff. | generalist | SE | raptor |
| Bearded Vulture | *Gypaetus barbatus* | 188 | NT | 724 | 763 | -0.052 | not disc. | specialist | S | raptor |
| Short-toed Snake-eagle | *Circaetus gallicus* | 1,352 | LC | 30,805 | 12,385 | 0.853 | small diff. | specialist | Other | raptor |
| Steppe Eagle \* | *Aquila nipalensis* | 94 | T | 1,470 | 918 | 0.462 | small diff. | specialist | SE | raptor |
| Spanish Imperial Eagle | *Aquila adalberti* | 74 | T | 551 | 537 | 0.026 | not disc. | specialist | SW | raptor |
| Eastern Imperial Eagle | *Aquila heliaca* | 345 | LC | 1,976 | 2,398 | -0.193 | not disc. | specialist | Other | raptor |
| Bonelli's Eagle | *Aquila fasciata* | 255 | LC | 1,238 | 1,141 | 0.082 | not disc. | specialist | S | raptor |
| Western Marsh-harrier | *Circus aeruginosus* | 2,785 | LC | 154,844 | 190,167 | -0.205 | not disc. | specialist | Other | raptor |
| Hen Harrier | *Circus cyaneus* | 1,339 | LC | 45,142 | 69,512 | -0.425 | not disc. | generalist | Other | raptor |
| Pallid Harrier | *Circus macrourus* | 163 | LC | 1,066 | 1,440 | -0.298 | not disc. | specialist | E | raptor |
| Shikra \* | *Accipiter badius* | 7 | NT | 116 | 226 | -0.643 | small diff. | generalist | SE | raptor |
| Eurasian Sparrowhawk | *Accipiter nisus* | 3,626 | LC | 427,172 | 448,429 | -0.049 | not disc. | specialist | Other | raptor |
| Rough-legged Buzzard | *Buteo lagopus* | 429 | LC | 20,101 | 40,224 | -0.667 | small diff. | specialist | N | raptor |
| Eurasian Buzzard | *Buteo buteo* | 3,974 | LC | 864,660 | 1,027,545 | -0.172 | not disc. | generalist | Other | raptor |
| Long-legged Buzzard | *Buteo rufinus* | 792 | LC | 61,456 | 17,655 | 1.107 | large diff. | specialist | SE | raptor |
| European Bee-eater | *Merops apiaster* | 2,339 | LC | 1,865,855 | 4,478,095 | -0.824 | small diff. | generalist | Other | other |
| European Roller | *Coracias garrulus* | 1,063 | LC | 106,537 | 69,360 | 0.423 | not disc. | specialist | S | other |
| Eurasian Wryneck | *Jynx torquilla* | 3,124 | LC | 843,536 | 1,089,293 | -0.254 | not disc. | generalist | Other | woodpecker |
| Grey-faced Woodpecker | *Picus canus* | 1,893 | LC | 199,187 | 234,864 | -0.164 | not disc. | specialist | Other | woodpecker |
| Eurasian Green Woodpecker | *Picus viridis* | 2,016 | LC | 722,809 | 780,057 | -0.076 | not disc. | generalist | Other | woodpecker |
| Black Woodpecker | *Dryocopus martius* | 2,786 | LC | 577,608 | 835,538 | -0.365 | not disc. | specialist | Other | woodpecker |
| Three-toed Woodpecker | *Picoides tridactylus* | 1,105 | LC | 216,382 | 408,493 | -0.615 | small diff. | specialist | Other | woodpecker |
| Middle Spotted Woodpecker | *Leiopicus medius* | 1,568 | LC | 425,896 | 524,952 | -0.208 | not disc. | specialist | Other | woodpecker |
| Lesser Spotted Woodpecker | *Dryobates minor* | 3,118 | LC | 713,894 | 1,062,091 | -0.392 | not disc. | specialist | Other | woodpecker |
| Syrian Woodpecker | *Dendrocopos syriacus* | 1,168 | LC | 589,100 | 494,052 | 0.176 | not disc. | generalist | SE | woodpecker |
| Great Spotted Woodpecker | *Dendrocopos major* | 3,942 | LC | 7,931,127 | 10,766,942 | -0.303 | not disc. | generalist | Other | woodpecker |
| Red-footed Falcon | *Falco vespertinus* | 621 | T | 48,503 | 69,971 | -0.362 | not disc. | specialist | E | raptor |
| Eleonora's Falcon | *Falco eleonorae* | 96 | LC | 15,396 | 13,984 | 0.096 | not disc. | specialist | S | raptor |
| Merlin | *Falco columbarius* | 867 | T | 19,991 | 28,850 | -0.363 | not disc. | specialist | N | raptor |
| Eurasian Hobby | *Falco subbuteo* | 3,458 | LC | 103,561 | 171,284 | -0.493 | small diff. | generalist | Other | raptor |
| Lanner Falcon | *Falco biarmicus* | 95 | NT | 233 | 569 | -0.838 | small diff. | specialist | S | raptor |
| Saker Falcon | *Falco cherrug* | 161 | T | 683 | 502 | 0.305 | not disc. | specialist | SE | raptor |
| Gyrfalcon | *Falco rusticolus* | 198 | LC | 895 | 988 | -0.099 | not disc. | specialist | N | raptor |
| Eurasian Golden Oriole | *Oriolus oriolus* | 3,281 | LC | 3,489,109 | 5,597,370 | -0.464 | small diff. | generalist | Other | passerine |
| Red-backed Shrike | *Lanius collurio* | 3,483 | LC | 6,924,455 | 10,186,580 | -0.381 | not disc. | specialist | Other | passerine |
| Great Grey Shrike | *Lanius excubitor* | 1,278 | LC | 77,189 | 81,703 | -0.057 | not disc. | specialist | Other | passerine |
| Iberian Grey Shrike | *Lanius meridionalis* | 249 | T | 171,202 | 466,148 | -0.926 | small diff. | specialist | SW | passerine |
| Woodchat Shrike | *Lanius senator* | 916 | NT | 882,110 | 2,445,725 | -0.94 | small diff. | specialist | S | passerine |
| Masked Shrike | *Lanius nubicus* | 233 | LC | 90,458 | 61,945 | 0.374 | not disc. | specialist | SE | passerine |
| Red-billed Chough | *Pyrrhocorax pyrrhocorax* | 523 | LC | 86,258 | 59,469 | 0.368 | not disc. | generalist | S | passerine |
| Yellow-billed Chough | *Pyrrhocorax graculus* | 296 | LC | 105,225 | 169,534 | -0.468 | small diff. | specialist | S | passerine |
| Siberian Jay | *Perisoreus infaustus* | 482 | LC | 273,153 | 296,321 | -0.081 | not disc. | specialist | N | passerine |
| Iberian Azure-winged Magpie | *Cyanopica cooki* | 116 | LC | 215,777 | 542,003 | -0.861 | small diff. | specialist | SW | passerine |
| Eurasian Jay | *Garrulus glandarius* | 3,764 | LC | 6,011,644 | 8,180,172 | -0.306 | not disc. | specialist | Other | passerine |
| Eurasian Magpie | *Pica pica* | 4,340 | LC | 9,525,409 | 12,069,005 | -0.236 | not disc. | generalist | Other | passerine |
| Northern Nutcracker | *Nucifraga caryocatactes* | 963 | LC | 311,523 | 422,396 | -0.302 | not disc. | specialist | Other | passerine |
| Rook | *Corvus frugilegus* | 2,489 | T | 7,675,328 | 7,665,219 | 0.001 | not disc. | specialist | Other | passerine |
| Coal Tit | *Periparus ater* | 2,931 | LC | 16,157,684 | 20,596,695 | -0.242 | not disc. | specialist | Other | passerine |
| Crested Tit | *Lophophanes cristatus* | 2,120 | LC | 4,392,868 | 6,037,121 | -0.315 | not disc. | specialist | Other | passerine |
| Sombre Tit | *Poecile lugubris* | 394 | LC | 229,184 | 769,561 | -1.082 | large diff. | specialist | SE | passerine |
| Caspian Tit | *Poecile hyrcanus* | 2 | LC | 632 | 1,118 | -0.555 | small diff. | specialist | SE | passerine |
| Willow Tit | *Poecile montanus* | 2,540 | LC | 8,667,899 | 9,386,529 | -0.08 | not disc. | specialist | Other | passerine |
| Siberian Tit | *Poecile cinctus* | 229 | LC | 242,522 | 371,566 | -0.42 | not disc. | specialist | N | passerine |
| Eurasian Blue Tit | *Cyanistes caeruleus* | 3,783 | LC | 33,502,017 | 36,969,623 | -0.098 | not disc. | generalist | Other | passerine |
| African Blue Tit | *Cyanistes teneriffae* | 18 | LC | 316 | 346 | -0.091 | not disc. | specialist | SW | passerine |
| Azure Tit | *Cyanistes cyanus* | 72 | NT | 1,433 | 4,396 | -1.017 | small diff. | specialist | E | passerine |
| Great Tit | *Parus major* | 4,376 | LC | 69,602,004 | 79,276,977 | -0.13 | not disc. | generalist | Other | passerine |
| Desert Lark | *Ammomanes deserti* | 4 | T | 16 | 45 | -0.951 | small diff. | generalist | SE | passerine |
| Dupont's Lark | *Chersophilus duponti* | 47 | T | 2,742 | 2,349 | 0.154 | not disc. | specialist | SW | passerine |
| Lesser Short-toed Lark | *Alaudala rufescens* | 251 | LC | 1,046,149 | 1,109,315 | -0.059 | not disc. | specialist | S | passerine |
| Bimaculated Lark | *Melanocorypha bimaculata* | 112 | LC | 94,563 | 1,418,731 | -1.75 | large diff. | specialist | SE | passerine |
| Calandra Lark | *Melanocorypha calandra* | 837 | LC | 12,959,107 | 13,692,563 | -0.055 | not disc. | specialist | S | passerine |
| Black Lark \* | *Melanocorypha yeltoniensis* | 8 | T | 1,343 | 49 | 1.859 | large diff. | specialist | SE | passerine |
| Greater Short-toed Lark | *Calandrella brachydactyla* | 809 | LC | 4,478,030 | 6,341,639 | -0.344 | not disc. | specialist | S | passerine |
| Woodlark | *Lullula arborea* | 2,610 | LC | 2,426,151 | 3,003,899 | -0.213 | not disc. | generalist | Other | passerine |
| White-winged Lark \* | *Alauda leucoptera* | 40 | LC | 312,247 | 33,166 | 1.616 | large diff. | specialist | SE | passerine |
| Thekla's Lark | *Galerida theklae* | 220 | LC | 1,246,666 | 2,193,085 | -0.55 | small diff. | specialist | SW | passerine |
| Zitting Cisticola | *Cisticola juncidis* | 717 | LC | 2,169,278 | 1,373,525 | 0.449 | small diff. | specialist | S | passerine |
| Graceful Prinia | *Prinia gracilis* | 46 | LC | 151,582 | 2,000 | 1.948 | large diff. | generalist | SE | passerine |
| Sykes's Warbler | *Iduna rama* | 9 | LC | 9,390 | 5,294 | 0.558 | small diff. | generalist | SE | passerine |
| Olivaceous Warbler | *Iduna pallida* | 613 | LC | 1,348,328 | 4,679,983 | -1.105 | large diff. | generalist | SE | passerine |
| Isabelline Warbler | *Iduna opaca* | 69 | LC | 7,805 | 5,000 | 0.438 | small diff. | generalist | SW | passerine |
| Upcher's Warbler | *Hippolais languida* | 95 | LC | 32,126 | 27,937 | 0.139 | not disc. | generalist | SE | passerine |
| Olive-tree Warbler | *Hippolais olivetorum* | 185 | LC | 54,983 | 15,820 | 1.106 | large diff. | specialist | SE | passerine |
| Melodious Warbler | *Hippolais polyglotta* | 694 | LC | 1,091,838 | 2,603,631 | -0.818 | small diff. | generalist | SW | passerine |
| Icterine Warbler | *Hippolais icterina* | 2,227 | LC | 3,413,068 | 3,131,070 | 0.086 | not disc. | generalist | Other | passerine |
| Aquatic Warbler | *Acrocephalus paludicola* | 50 | T | 13,595 | 11,363 | 0.179 | not disc. | generalist | Other | passerine |
| Marsh Warbler | *Acrocephalus palustris* | 2,430 | LC | 6,607,684 | 7,026,469 | -0.061 | not disc. | generalist | Other | passerine |
| Common Reed-warbler | *Acrocephalus scirpaceus* | 2,472 | LC | 2,220,240 | 2,525,041 | -0.128 | not disc. | specialist | Other | passerine |
| Paddyfield Warbler | *Acrocephalus agricola* | 292 | LC | 215,418 | 283,975 | -0.275 | not disc. | specialist | E | passerine |
| Savi's Warbler | *Locustella luscinioides* | 1,521 | LC | 478,415 | 490,216 | -0.024 | not disc. | specialist | Other | passerine |
| River Warbler | *Locustella fluviatilis* | 1,830 | LC | 1,156,868 | 1,843,535 | -0.458 | small diff. | generalist | E | passerine |
| Common Grasshopper-warbler | *Locustella naevia* | 1,959 | LC | 723,133 | 834,942 | -0.144 | not disc. | generalist | Other | passerine |
| Eastern Bonelli's Warbler | *Phylloscopus orientalis* | 141 | LC | 41,287 | 52,466 | -0.238 | not disc. | generalist | SE | passerine |
| Western Bonelli's Warbler | *Phylloscopus bonelli* | 540 | LC | 1,546,770 | 2,742,033 | -0.557 | small diff. | specialist | SW | passerine |
| Wood Warbler | *Phylloscopus sibilatrix* | 2,583 | LC | 9,698,429 | 10,687,524 | -0.097 | not disc. | specialist | Other | passerine |
| Yellow-browed Warbler \* | *Phylloscopus inornatus* | 46 | LC | 31,399 | 24,495 | 0.247 | not disc. | specialist | NE | passerine |
| Willow Warbler | *Phylloscopus trochilus* | 2,934 | LC | 53,700,997 | 64,344,469 | -0.18 | not disc. | generalist | Other | passerine |
| Mountain Chiffchaff | *Phylloscopus sindianus* | 83 | LC | 129,779 | 149,044 | -0.138 | not disc. | specialist | SE | passerine |
| Cetti's Warbler | *Cettia cetti* | 1,338 | LC | 2,083,342 | 2,554,415 | -0.203 | not disc. | specialist | S | passerine |
| Long-tailed Tit | *Aegithalos caudatus* | 3,421 | LC | 6,219,760 | 10,778,746 | -0.536 | small diff. | generalist | Other | passerine |
| Eurasian Blackcap | *Sylvia atricapilla* | 3,752 | LC | 44,864,924 | 53,514,115 | -0.176 | not disc. | generalist | Other | passerine |
| Iraq Babbler | *Argya altirostris* | 5 | NT | 157 | 57 | 0.935 | small diff. | generalist | SE | passerine |
| Short-toed Treecreeper | *Certhia brachydactyla* | 1,478 | LC | 3,451,120 | 6,427,211 | -0.603 | small diff. | specialist | Other | passerine |
| Eurasian Treecreeper | *Certhia familiaris* | 2,694 | LC | 5,316,774 | 7,157,320 | -0.295 | not disc. | specialist | Other | passerine |
| Eurasian Nuthatch | *Sitta europaea* | 3,066 | LC | 12,754,039 | 12,567,700 | 0.015 | not disc. | specialist | Other | passerine |
| Krueper's Nuthatch | *Sitta krueperi* | 163 | LC | 110,591 | 242,270 | -0.746 | small diff. | specialist | SE | passerine |
| Wallcreeper | *Tichodroma muraria* | 252 | LC | 12,739 | 24,409 | -0.628 | small diff. | specialist | S | passerine |
| Northern Wren | *Troglodytes troglodytes* | 3,324 | LC | 37,537,189 | 42,321,434 | -0.12 | not disc. | generalist | Other | passerine |
| Spotless Starling | *Sturnus unicolor* | 325 | LC | 6,123,186 | 27,016,256 | -1.261 | large diff. | specialist | SW | passerine |
| White's Thrush \* | *Zoothera aurea* | 87 | LC | 7,111 | 13,038 | -0.588 | small diff. | specialist | E | passerine |
| Mistle Thrush | *Turdus viscivorus* | 3,326 | LC | 4,503,386 | 4,883,229 | -0.081 | not disc. | specialist | Other | passerine |
| Song Thrush | *Turdus philomelos* | 3,791 | LC | 29,969,763 | 30,050,805 | -0.003 | not disc. | generalist | Other | passerine |
| Redwing | *Turdus iliacus* | 1,846 | LC | 10,873,920 | 10,623,590 | 0.023 | not disc. | generalist | N | passerine |
| Eurasian Blackbird | *Turdus merula* | 4,084 | LC | 66,431,646 | 69,770,483 | -0.049 | not disc. | generalist | Other | passerine |
| Fieldfare | *Turdus pilaris* | 2,655 | LC | 13,864,644 | 15,947,002 | -0.14 | not disc. | generalist | Other | passerine |
| Ring Ouzel | *Turdus torquatus* | 645 | LC | 296,464 | 388,459 | -0.269 | not disc. | generalist | Other | passerine |
| Black-throated Thrush \* | *Turdus atrogularis* | 40 | LC | 57,497 | 31,623 | 0.581 | small diff. | specialist | NE | passerine |
| Rufous-tailed Scrub-robin | *Cercotrichas galactotes* | 196 | LC | 69,845 | 227,777 | -1.061 | large diff. | specialist | S | passerine |
| Spotted Flycatcher | *Muscicapa striata* | 3,940 | LC | 11,453,343 | 13,799,586 | -0.186 | not disc. | generalist | Other | passerine |
| European Robin | *Erithacus rubecula* | 3,955 | LC | 60,391,582 | 66,729,540 | -0.1 | not disc. | generalist | Other | passerine |
| White-throated Robin | *Irania gutturalis* | 170 | LC | 79,992 | 605,723 | -1.533 | large diff. | specialist | SE | passerine |
| Bluethroat | *Cyanecula svecica* | 2,122 | LC | 3,847,550 | 5,412,861 | -0.338 | not disc. | specialist | Other | passerine |
| Thrush Nightingale | *Luscinia luscinia* | 1,896 | LC | 3,845,984 | 5,590,376 | -0.37 | not disc. | generalist | E | passerine |
| Siberian Rubythroat \* | *Calliope calliope* | 12 | LC | 1,368 | 1,200 | 0.131 | not disc. | specialist | E | passerine |
| Orange-flanked Bush-robin | *Tarsiger cyanurus* | 282 | LC | 140,169 | 326,993 | -0.8 | small diff. | specialist | NE | passerine |
| Red-breasted Flycatcher | *Ficedula parva* | 1,797 | LC | 1,415,488 | 2,458,201 | -0.538 | small diff. | specialist | E | passerine |
| Semi-collared Flycatcher | *Ficedula semitorquata* | 186 | LC | 34,892 | 61,467 | -0.552 | small diff. | specialist | SE | passerine |
| European Pied Flycatcher | *Ficedula hypoleuca* | 2,447 | LC | 9,297,967 | 9,780,286 | -0.051 | not disc. | specialist | Other | passerine |
| Black Redstart | *Phoenicurus ochruros* | 2,636 | LC | 6,693,479 | 8,304,828 | -0.215 | not disc. | generalist | Other | passerine |
| Common Redstart | *Phoenicurus phoenicurus* | 3,533 | LC | 5,604,210 | 7,090,777 | -0.234 | not disc. | specialist | Other | passerine |
| White-winged Redstart | *Phoenicurus erythrogastrus* | 25 | NT | 2,358 | 3,301 | -0.333 | not disc. | specialist | SE | passerine |
| Rufous-tailed Rock-thrush | *Monticola saxatilis* | 585 | LC | 76,081 | 154,803 | -0.682 | small diff. | generalist | S | passerine |
| Blue Rock-thrush | *Monticola solitarius* | 802 | LC | 170,310 | 150,138 | 0.126 | not disc. | specialist | S | passerine |
| Whinchat | *Saxicola rubetra* | 3,192 | LC | 10,551,294 | 8,983,278 | 0.161 | not disc. | specialist | Other | passerine |
| Northern Wheatear | *Oenanthe oenanthe* | 3,895 | LC | 3,723,993 | 8,005,143 | -0.73 | small diff. | generalist | Other | passerine |
| Isabelline Wheatear | *Oenanthe isabellina* | 670 | LC | 3,358,471 | 3,871,577 | -0.142 | not disc. | specialist | SE | passerine |
| Black-eared Wheatear | *Oenanthe hispanica* | 732 | LC | 1,019,078 | 2,137,591 | -0.709 | small diff. | specialist | S | passerine |
| Cyprus Wheatear | *Oenanthe cypriaca* | 13 | LC | 88,893 | 70,711 | 0.228 | not disc. | specialist | SE | passerine |
| Pied Wheatear | *Oenanthe pleschanka* | 203 | LC | 21,058 | 35,244 | -0.504 | small diff. | specialist | SE | passerine |
| Black Wheatear | *Oenanthe leucura* | 118 | LC | 9,404 | 8,071 | 0.153 | not disc. | specialist | SW | passerine |
| Finsch's Wheatear | *Oenanthe finschii* | 180 | LC | 167,552 | 177,214 | -0.056 | not disc. | generalist | SE | passerine |
| Red-tailed Wheatear | *Oenanthe chrysopygia* | 3 | T | 49 | 52 | -0.059 | not disc. | generalist | SE | passerine |
| Kurdish Wheatear | *Oenanthe xanthoprymna* | 11 | LC | 2,338 | 707 | 1.071 | large diff. | generalist | SE | passerine |
| Goldcrest | *Regulus regulus* | 2,738 | LC | 18,718,154 | 18,679,435 | 0.002 | not disc. | specialist | Other | passerine |
| Bohemian Waxwing | *Bombycilla garrulus* | 658 | LC | 558,581 | 906,696 | -0.475 | small diff. | specialist | N | passerine |
| Alpine Accentor | *Prunella collaris* | 294 | LC | 117,692 | 135,560 | -0.141 | not disc. | specialist | S | passerine |
| Siberian Accentor \* | *Prunella montanella* | 52 | LC | 27,054 | 16,751 | 0.47 | small diff. | generalist | NE | passerine |
| Dunnock | *Prunella modularis* | 2,596 | LC | 13,953,236 | 14,036,042 | -0.006 | not disc. | generalist | Other | passerine |
| Black-throated Accentor \* | *Prunella atrogularis* | 13 | LC | 2,427 | 1,897 | 0.245 | not disc. | specialist | E | passerine |
| Radde's Accentor | *Prunella ocularis* | 48 | LC | 11,534 | 23,627 | -0.688 | small diff. | specialist | SE | passerine |
| Pale Sparrow | *Carpospiza brachydactyla* | 53 | LC | 19,431 | 8,618 | 0.771 | small diff. | generalist | SE | passerine |
| Chestnut-shouldered Bush-sparrow | *Gymnoris xanthocollis* | 27 | LC | 30,181 | 1,000 | 1.872 | large diff. | generalist | SE | passerine |
| White-winged Snowfinch | *Montifringilla nivalis* | 210 | LC | 46,320 | 263,128 | -1.401 | large diff. | specialist | S | passerine |
| Tree Pipit | *Anthus trivialis* | 3,472 | LC | 26,965,903 | 25,851,978 | 0.042 | not disc. | specialist | Other | passerine |
| Olive-backed Pipit \* | *Anthus hodgsoni* | 143 | LC | 336,033 | 105,830 | 1.042 | small diff. | specialist | E | passerine |
| Red-throated Pipit | *Anthus cervinus* | 132 | LC | 649,921 | 1,531,314 | -0.808 | small diff. | specialist | N | passerine |
| Water Pipit | *Anthus spinoletta* | 443 | LC | 1,104,639 | 1,549,338 | -0.335 | not disc. | specialist | S | passerine |
| Tawny Pipit | *Anthus campestris* | 1,567 | LC | 827,931 | 1,478,687 | -0.564 | small diff. | specialist | S | passerine |
| Western Yellow Wagtail | *Motacilla flava* | 3,635 | LC | 10,855,409 | 15,396,083 | -0.346 | not disc. | specialist | Other | passerine |
| Citrine Wagtail | *Motacilla citreola* | 983 | LC | 281,242 | 479,123 | -0.52 | small diff. | specialist | E | passerine |
| White Wagtail | *Motacilla alba* | 4,611 | LC | 12,325,115 | 19,527,191 | -0.452 | small diff. | generalist | Other | passerine |
| Common Chaffinch | *Fringilla coelebs* | 4,349 | LC | 129,461,188 | 183,146,517 | -0.343 | not disc. | generalist | Other | passerine |
| Hawfinch | *Coccothraustes coccothraustes* | 2,768 | LC | 4,316,325 | 4,644,032 | -0.073 | not disc. | specialist | Other | passerine |
| Common Rosefinch | *Carpodacus erythrinus* | 2,382 | LC | 3,245,590 | 4,861,388 | -0.399 | not disc. | generalist | E | passerine |
| Great Rosefinch | *Carpodacus rubicilla* | 25 | LC | 3,464 | 5,263 | -0.412 | not disc. | specialist | SE | passerine |
| Pine Grosbeak | *Pinicola enucleator* | 189 | LC | 61,216 | 168,067 | -0.932 | small diff. | specialist | N | passerine |
| Eurasian Bullfinch | *Pyrrhula pyrrhula* | 2,750 | LC | 4,488,147 | 6,457,590 | -0.36 | not disc. | specialist | Other | passerine |
| Eurasian Crimson-winged Finch | *Rhodopechys sanguineus* | 82 | LC | 9,554 | 104,347 | -1.664 | large diff. | specialist | SE | passerine |
| Mongolian Finch | *Bucanetes mongolicus* | 11 | LC | 606 | 907 | -0.398 | not disc. | generalist | SE | passerine |
| Desert Finch | *Rhodospiza obsoleta* | 29 | LC | 16,513 | 4,344 | 1.167 | large diff. | generalist | SE | passerine |
| Twite | *Linaria flavirostris* | 264 | LC | 51,350 | 142,154 | -0.939 | small diff. | specialist | Other | passerine |
| Common Linnet | *Linaria cannabina* | 3,531 | LC | 13,332,016 | 23,084,525 | -0.536 | small diff. | specialist | Other | passerine |
| Redpoll | *Acanthis flammea* | 1,351 | LC | 6,006,162 | 6,214,827 | -0.034 | not disc. | generalist | Other | passerine |
| Parrot Crossbill | *Loxia pytyopsittacus* | 554 | LC | 161,968 | 309,809 | -0.627 | small diff. | specialist | N | passerine |
| Scottish Crossbill | *Loxia scotica* | 5 | LC | 15 | 6,753 | -1.991 | large diff. | specialist | NW | passerine |
| Red Crossbill | *Loxia curvirostra* | 2,370 | LC | 3,333,708 | 4,311,363 | -0.256 | not disc. | specialist | Other | passerine |
| European Goldfinch | *Carduelis carduelis* | 3,931 | LC | 24,848,798 | 34,614,298 | -0.328 | not disc. | generalist | Other | passerine |
| Citril Finch | *Carduelis citrinella* | 149 | LC | 67,241 | 265,205 | -1.191 | large diff. | specialist | SW | passerine |
| European Serin | *Serinus serinus* | 1,986 | LC | 10,987,908 | 21,452,624 | -0.645 | small diff. | specialist | Other | passerine |
| Red-fronted Serin | *Serinus pusillus* | 150 | LC | 111,473 | 522,663 | -1.297 | large diff. | specialist | SE | passerine |
| Lapland Longspur | *Calcarius lapponicus* | 224 | LC | 591,483 | 1,285,238 | -0.739 | small diff. | specialist | N | passerine |
| Snow Bunting | *Plectrophenax nivalis* | 308 | LC | 276,578 | 312,870 | -0.123 | not disc. | specialist | N | passerine |
| Red-headed Bunting \* | *Emberiza bruniceps* | 45 | LC | 12,238 | 7,246 | 0.512 | small diff. | specialist | E | passerine |
| Corn Bunting | *Emberiza calandra* | 2,479 | LC | 15,721,459 | 26,096,197 | -0.496 | small diff. | specialist | Other | passerine |
| Rock Bunting | *Emberiza cia* | 939 | LC | 980,739 | 2,797,469 | -0.962 | small diff. | generalist | S | passerine |
| Grey-necked Bunting | *Emberiza buchanani* | 16 | LC | 5,968 | 11,706 | -0.649 | small diff. | generalist | SE | passerine |
| Cinereous Bunting | *Emberiza cineracea* | 53 | NT | 53,154 | 3,732 | 1.738 | large diff. | specialist | SE | passerine |
| Cretzschmar's Bunting | *Emberiza caesia* | 136 | LC | 90,330 | 160,157 | -0.558 | small diff. | specialist | SE | passerine |
| Cirl Bunting | *Emberiza cirlus* | 1,099 | LC | 2,020,927 | 3,284,862 | -0.476 | small diff. | specialist | S | passerine |
| Reed Bunting | *Emberiza schoeniclus* | 3,162 | LC | 5,398,711 | 6,197,576 | -0.138 | not disc. | specialist | Other | passerine |
| Pallas's Bunting \* | *Emberiza pallasi* | 15 | LC | 25,781 | 13,038 | 0.657 | small diff. | generalist | NE | passerine |
| Yellow-breasted Bunting | *Emberiza aureola* | 136 | T | 5,787 | 849 | 1.488 | large diff. | specialist | E | passerine |
| Rustic Bunting | *Emberiza rustica* | 568 | LC | 412,214 | 583,951 | -0.345 | not disc. | specialist | NE | passerine |
| Little Bunting | *Emberiza pusilla* | 377 | LC | 2,233,882 | 2,978,543 | -0.286 | not disc. | specialist | NE | passerine |

**References**

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