**BirdLife and taxonomy**

BirdLife International maintains its own [taxonomic checklist](http://www.birdlife.info/docs/SpcChecklist/Checklist_v3_June10.zip) of the world's bird species because (1) there are so many different global, regional, national, site and family taxonomic checklists, and (2) the current major phase of taxonomic revision requires BirdLife to track and evaluate new arrangements as they are proposed; thus there is an urgent and sustained need to resolve the taxonomic rank of many taxa. In undertaking this work, BirdLife does not pretend to be an authority on the taxonomic status of the world’s birds (and indeed does not have the resources or aspiration to become this) but rather seeks to set a globally consistent taxonomic standard relevant to establishing conservation priorities through, for example, identifying globally threatened bird species, Endemic Bird Areas (EBAs) and Important Bird Areas (IBAs).

BirdLife’s guiding principles are:

* Application of the Biological Species Concept. BirdLife accepts that a considerable percentage of the global avifauna, notably in Asia, requires reassessment as a result of being ‘over lumped’, but does not adopt the Phylogenetic Species Concept (PSC). This is partly because there is no agreed, standard world list based on the PSC and it may be many years before there will be one, and partly because BirdLife is unpersuaded by some of the underlying concepts and arguments.
* A relatively conservative approach. BirdLife aims for consistent global treatment through its adoption of selected taxonomic sources, association with various taxonomic processes and committees, and through its own review process, and therefore is unlikely to adopt radical new arrangements if these use criteria inconsistent with treatments elsewhere in the world.
* A pragmatic approach. BirdLife accepts that its checklist will never be fully internally consistent because of regional differences in taxonomic efforts, and also because of the time and resources necessary to achieve this. Therefore BirdLife prioritises its taxonomic work by focusing on those taxa or regions where important conservation implications exist.

BirdLife uses its taxonomic checklist as the basis for much of its global, regional and national priority-setting work. However, some BirdLife Partners may also use other regional / national checklists and taxonomic sources that are particularly relevant in their context.

## The BirdLife Checklist

The [BirdLife Checklist](http://www.birdlife.info/docs/SpcChecklist/Checklist_v3_June10.zip) is based on:

1.       A small number of well-recognised and established taxonomic sources. These ‘main’ sources are periodically reviewed and, where appropriate, updated or revised (see table for the 2011 sources and ‘References’ below). In general, field guides are not included because of inadequate taxonomic justification.

2.       Peer-reviewed papers describing taxonomic revisions, published subsequent to the main sources, and which have been reviewed and adopted by the BirdLife Taxonomic Working Group (see ‘References’ below).

3.       Original taxonomic research conducted by BirdLife researchers and usually published in peer-reviewed papers or BirdLife's Red Data Books, notably concerning particularly controversial and complex taxa.

4.       Some deviations from the adopted sources where treatment is judged to be mistaken, premature, inconsistent and/or controversial.

5.       An attempt to combine these various sources and decisions in a globally consistent manner.

The BirdLife Checklist includes information on the scientific and common names used by BirdLife, the Authority (for the original description of the taxon), BirdLife’s taxonomic treatment (recognised, not recognised or under review), the latest [IUCN Red List category](http://www.birdlife.org/datazone/species/terms/index.html) (e.g. Extinct, Vulnerable, Least Concern), the (selected) sources that recognise the taxon, the scientific and common names used by these sources, where relevant, a taxonomic note, and a record ID number unique to the taxonomic entity. The BirdLife Checklist is a work in progress. Further updates and releases are planned on an annual basis. We hope we have provided adequate details here of the underlying decisions that shape the taxonomic checklist; further comments are invited at any time (contact [science@birdlife.org](mailto:science@birdlife.org)) but it may not be possible to respond to individual queries.

## The BirdLife Taxonomic Working Group (BTWG)

The BTWG sets the standards by which BirdLife takes and implements decisions on bird taxonomy and nomenclature. It aims to ensure that BirdLife's Checklist of the world's bird species evolves in a structured, documented, transparent and defensible way. The BTWG is in the process of developing a set of criteria by which species rank can be consistently assessed where this is necessary (e.g. for newly described or split species published subsequent to the main sources). As currently formulated, these criteria involve weighting morphological and acoustic differences as compared with the nearest believed relative, and are particularly intended to help make decisions involving allopatric taxa (as opposed to those in sympatric, parapatric or hybrid zones situations where the situation is generally clearer). These criteria are in the process of being tested and they will be published in due course.

## Taxonomic sources (2011)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Region/family** | **Source†** | **No. of taxa recognised as species by BirdLife** | **No. of taxa not recognised as species by BirdLife** | **No. of additional species recognised by BirdLife that occur in region (i.e. from other sources)** |
| Global | Sibley and Monroe (1990, 1993) | 9061 | 639 | 991 |
| Extinct species | Brooks (2000) | 121 | 25 | 11 |
| Albatrosses and petrels | Brooke (2004) updating Robertson and Nunn (1998) | 123 | 3 | 8 |
| North and Central America, and Caribbean | [AOU (1998 + supplements)](http://www.aou.org/checklist/index.php3" \t "_blank) | 2009 | 46 (9)\* | 139 (23)+ |
| South America | [SACC (2006 + updates to Jun11)](http://www.museum.lsu.edu/~Remsen/SACCBaseline.html) updating Stotz et al. (1996) | 3252 | 31 (12)\* | 69 (18)+ |
| Western Palearctic | [AERC (2003)](http://www.aerc.eu/aerc_tac.htm) updating Cramp et al. (1977-1994) | 871 | 53 (3)\* | 46 (16)+ |
| Africa | Dowsett and Forbes-Watson (1993) | 2073 | 118 (82)\* | 360 (198)+ |
| Australia | Christidis and Boles (2008) | 838 | 37 (5)\* | 33 (15)+ |
| New Zealand | Turbott (1990) | 301 | 27 (5)\* | 35 (14)+ |
| All regions/families | 472 'other' sources, the majority peer-reviewed papers published subsequent to the sources above | 396 | 159 | n/a |

\* numbers in brackets refer to the number of taxa which are endemic to the region. + numbers in brackets refer to the number of species which are endemic to the region. † see references for full details.

In total, 10,052 bird species are recognised, the majority (90%) based on Sibley and Monroe (1990, 1993), with a small proportion (10%; 991 species) coming from 460 additional extinct, family, regional, national and ‘other’ sources. A total of 1,039 taxa are not recognised from these combined sources. Of these, 400 taxa are from regional sources, the majority owing to the rules of precedence (see below). Overall, over 25,000 taxonomic records from these sources have been examined and their relationships determined and databased. A further 81 potential additional species are currently under taxonomic review (see ‘Under review taxa’ below).

**Global sources** Sibley and Monroe (1990, 1993) has been chosen as the only global source because it was adopted in 1990 as the basis for BirdLife’s Endemic Bird Area project, and subsequently for BirdLife’s Important Bird Areas programme. It has not yet been superseded by Dickinson (2003) because of inconsistencies with Sibley and Monroe which will take time to resolve, although we anticipate this switch may be made in due course for the Old World (e.g. in the fourth edition scheduled for publication in 2010). Moreover, the BTWG intends to review recent volumes of del Hoyo et al. (1992–2009) for non-Americas species, given that they contain important changes in what is increasingly recognised as a serious forum for taxonomic update.

**Extinct sources** Brooks (2000) is used as the main source for species evaluated as ‘Extinct’ (since AD1500), updated by peer-reviewed papers published subsequently. Brooks in turn follows Sibley and Monroe (1990, 1993) for species that have become extinct since 1800, updated by more recent published sources where possible.

**Family sources** The only family source used so far, for albatrosses and petrels (Brooke 2004), reflects the fact that it is, in essence, a global review of a specific ’geographical’ area inasmuch as it deals primarily with oceanic habitats. Other recent family sources, such as for cuckoos (Payne 2005), may be considered where they include major authoritative taxonomic revisions.

**Regional sources** Regional sources are followed for the New World, Western Palearctic and Afrotropical regions except in those cases where the BTWG feels that judgements involve criteria and result in arrangements that are inconsistent with bird lists elsewhere. The AOU (American Ornithologists’ Union) and SACC (South American Checklist Committee) checklists are selected because they are clearly the most up-to-date and best-considered avifaunal assessments for their respective regions. The AERC TAC (Association of European Rarities Committees Taxonomic Advisory Committee) Checklist is also followed. Dowsett and Forbes-Watson (1993) is followed because it is widely recognised as the single most authoritative and best-justified list for Africa, but we acknowledge that it is conservative and becoming out-dated. The BTWG intends to undertake a partial update of this source by reviewing Hockey et al. (2005) and taxonomic treatments in the later volumes (Fry et al. 2000, 2004) of the Birds of Africa. There is currently no source selected for the Asian region although BirdLife may review Rasmussen and Anderton (2005) partly to address this.

**National sources** National sources for Australia (Christidis and Boles 2008) and New Zealand (Turbott 1990) are followed because these are large land areas with high degrees of endemism, and the conservation authorities there use these lists, which are basically consistent with those used by BirdLife elsewhere. The latter is out-of-date and will be updated shortly by a new national checklist.

**Other sources** A further 460 ‘other’ sources have also been considered, the majority published after the relevant main source (see ‘Taxonomic References 2011 PDF or word document’). These include some Asian species/sources listed in Collar (2003) although not all of the (155) potential splits have been reviewed comprehensively as they are by no means confirmed (coming from a variety of peer-reviewed and non-peer-reviewed sources). For a small subset of species, more than one ‘other’ source is given because the species in question is recognised as a result of a revision of species limits following these combined taxonomies (but is not itself recognised by them). For some species, a regional source may be given as well as an ‘other’ source because the species is a vagrant to the region and thus an ‘other’ source is included as the main taxonomic reference. In a few complicated cases, ‘BirdLife International’ is given as the source because of the difficulty in assigning any ‘other’ source.

**Precedence** Sibley and Monroe (1990, 1993) is currently the default used by BirdLife for the recognition of species limits unless the species is treated by the additional sources, in which case the sources for albatrosses and petrels, and for Extinct species, usually take precedence over everything and the regional sources usually take precedence for regionally endemic species. In general, regional revisions involving widespread species are only adopted when all or most of the taxa of a complex have been assessed, even if such revisions result in additional split species endemic to region. Exceptions have been made where threatened and restricted-range species have been treated differently in previous BirdLife publications, notably Red Data Books, but these exceptions will be reviewed in due course against BirdLife guidelines in order to maintain the integrity of the list.

**Sequence** The names and sequence of orders and families follow Dickinson (2003). The sequence of genera also follows this source, with genera not recognised by Dickinson (2003) inserted appropriately. The species sequence largely follows Sibley and Monroe (1990, 1993). However, for albatrosses and petrels where the main source, Brooke (2004), includes detailed consideration of phylogenetic relationships, the taxonomic sequence has been adopted in its entirety.

**Under review taxa** All taxa that are ‘under review’ by the BTWG (i.e. largely splits proposed in peer-reviewed papers published subsequent to the relevant sources) at the time of release of the latest version of the Checklist are included in the Checklist as ‘under review’ and placed in the sequence appropriately. However, ‘under review’ taxa may be added to BirdLife’s working list at any time and thus the published list will always be somewhat out-of-date. Note, also, that some species/taxa which are included on the Checklist as ‘recognised’ or ‘not recognised’ may also subsequently be added to this ‘under review’ working list (their taxonomic status is, however, officially retained until a decision is reached and a new version of the Checklist is released; if no decision has been reached by this time, a taxonomic note may be added to explain the situation). Taxa which are ‘under review’ through the SACC process are not included as such on the Checklist, rather they are dealt with once a decision has been reached by SACC. Common names for ‘under review’ taxa are those given in the source but may be changed if the taxon is subsequently recognised as a species (for reasons of global consistency as outlined below).

**Species currently ‘under review’ by the BTWG** are shown within the taxonomic checklist.

**Documentation** Taxonomic notes are included for over 2,000 taxa, including: taxa not recognised as species by Sibley and Monroe (1990, 1993) but that are listed on one or more main family / regional source(s); newly described species and taxonomic revisions published subsequent to the main sources; and taxa listed on the main source species that have the same name as the recognised species but different species limits. Thus all main source species have been accounted for and documented where necessary.

**Contributing to BirdLife’s taxonomy** We encourage people who would like to see particular taxonomic revisions adopted by BirdLife on the checklist to send a proposal to SACC/AOU (for taxa in the Americas), or to draw our attention to peer-reviewed published papers proposing such revisions (for taxa in the rest of the world), so that these can be added as Under Review taxa for the BirdLife Taxonomic Working Group to assess.

### Scientific and common names

**Nomenclature** BirdLife aims to follow David and Gosselin (2002a,b) for consistent gender agreement of scientific names, which may be inconsistent with the taxonomic sources. Otherwise, scientific names usually follow the main sources, as above, although global consistency is taken into account where possible. Where species limits are recognised by more than one main source, but different nomenclature is used, global consistency is again taken into account.

**Synonyms** The scientific name officially adopted by BirdLife is taken from the main source for that species: if the species is recognised by more than one source, the Sibley and Munroe name is taken as the default or, if the species is not recognised by Sibley and Monroe, the name adopted is taken from the most relevant source. For each species, all scientific names using different generic names, different specific names, or different spellings from all the main sources or from BirdLife’s global lists of threatened species (1988–2008) are stored to facilitate searches.

**Common (English) names** For each species the common name officially adopted by BirdLife is taken from the main source used to determine the scientific name. Additional common names from the other sources are also stored, as are accented names. It should be noted that this work was undertaken parallel to that carried out by the IOC and recently published by [Gill and Wright (2006)](http://www.worldbirdnames.org/). We have not yet had time to consider their findings and proposals but we have also stored the common names from Gill and Wright (2006) where scientific names match electronically (c.90% taxa). In order to maintain global consistency, additional rules have been applied to the name officially adopted by BirdLife (but not to common names of taxa that are Under Review), as follows:

* Sibley and Monroe names are retained where the source name would result in large inconsistencies amongst related species from different taxonomic sources
* Duplicate names are assigned different names on a case-by-case basis as appropriate (e.g. Black Vulture Aegypius monachus from Asia becomes Cinereous Vulture to distinguish it from the Black Vulture Coragyps atratus from the New World)
* Some alternative names are retained because of precedence set in previous BirdLife publications (largely relating to a small number of globally threatened species)
* Descriptors are always included where there is more than one species in the group (e.g. Eurasian Spoonbill rather than just Spoonbill)
* English (rather than American) spelling is adopted (e.g. grey rather than gray)
* Spelling that is closer to the scientific name is generally preferred (e.g. Udzungwa rather than Uzungwa Forest-partridge for Xenoperdix udzungwensis)
* Apostrophe ‘s’ is applied to singular names ending in ‘s’ as appropriate (e.g. Forbes’s Blackbird)
* ‘Saint’ is always abbreviated to ‘St’ (e.g. St Lucia Amazon rather than Saint Lucia Amazon or St. Lucia Amazon)
* Accents are generally not included in global listings (e.g. Reunion Harrier), but are included in regional or species-specific outputs (e.g. Réunion Harrier)
* Hyphenation has been applied following sources, precedence and/or common sense
* Lower case is always used after hyphens (e.g. Slaty-backed Forest-falcon rather than Slaty-backed Forest-Falcon)
* Modern geographic names are generally preferred (e.g. Sri Lanka Magpie rather than Ceylon Magpie)
* Adjective or noun forms of geographic terms are used following the majority of sources (e.g. Javan Lapwing rather than Java Lapwing but Mauritius Kestrel rather than Mauritian Kestrel)
* Place names are generally preferred to patronymics (e.g. Madagascar Teal rather than Bernier’s Teal)
* The terms ‘Island’ or ‘Islands’ are excluded unless included by the majority of sources (e.g. Amsterdam Albatross rather than Amsterdam Island Albatross but Norfolk Island Parakeet rather than Norfolk Parakeet)
* The term ‘Islands’ is preferred for island groups (e.g. Auckland Islands Teal rather than Auckland Island Teal).

***(1) Main taxonomic sources (2011)***

AERC TAC (2003) AERC TAC Checklist of bird taxa occurring in Western Palearctic region, 15th Draft. Association of European Rarities Committees. Available from: [http://www.aerc.eu/DOCS/Bird\_taxa\_of \_the\_WP15.xls](http://www.aerc.eu/DOCS/Bird_taxa_of%20_the_WP15.xls).

AOU (1998 + supplements) *Check-list of North American birds*. Seventh edition. Washington, D.C.: American Ornithologists' Union.

Brooke, M. De L. (2004) *Albatrosses and petrels across the world*. Oxford: Oxford University Press.

Brooks, T. (2000) Extinct species. Pp. 701-708 in BirdLife International (2000) Threatened birds of the world. Barcelona and Cambridge, U.K.: Lynx Edicions and BirdLife International

Christidis, L. and Boles, W. E. (2008) *Systematics and taxonomy of Australian birds*. Collingwood, Australia: CSIRO Publishing.

Cramp, S. and Perrins, C. M. (1977-1994) *Handbook of the birds of Europe, the Middle East and Africa. The birds of the western Palearctic*. Oxford: Oxford University Press.

Dowsett, R. J. and Forbes-Watson, A. D. (1993) *Checklist of birds of the Afrotropical and Malagasy regions*. Liège, Belgium: Tauraco Press.

Robertson, C. J. R. and Nunn, G. B. (1998) Towards a new taxonomy for albatrosses. Pp. 13-19 in Robertson, G. and Gales, R., eds. *Albatross biology and conservation*. Chipping Norton, Australia: Surrey Beatty & Sons.

SACC (2011) A classification of the bird species of South America. American Ornithologists' Union. Available from: <http://www.museum.lsu.edu/~Remsen/SACCBaseline.html>.

Sibley, C. G. and Monroe, B. L. (1990, 1993) *Distribution and taxonomy of birds of the world*. New Haven, USA: Yale University Press.

Stotz, D. F., Fitzpatrick, J. W., Parker, T. A. and Moskovits, D. K. (1996) *Neotropical birds: ecology and conservation*. Chicago: University of Chicago Press.

Turbott, E. G. (1990) *Checklist of the birds of New Zealand*. Third edition. Wellington: Ornithological Society of New Zealand.