Four-letter and Six-letter Alpha Codes for Birds Recorded from the American Ornithologists' Union Check-list Area

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ABSTRACT

Alphabetic ("alpha") codes, abbreviations of English or scientific bird names, have long been employed by ornithologists. They allow quicker data entry than filling out the entire English or scientific name of a species, and they can also serve to cross-check other recorded names or numeric data. The Bird Banding Laboratory (BBL) has long used alpha codes, which have become an integral part of large ornithological programs across North America. However, because of taxonomic and English-name changes and the application of different conflict-resolution strategies, the BBL alpha-code list has become increasingly inconsistent. Moreover, the BBL list excludes most resident species found in Mexico, Central America, and the Caribbean. Because current North American avian conservation efforts (e.g., NABCI - North American Bird Conservation Initiative) include resident species, expansion and revision of the BBL alpha-code list is appropriate. Here we propose two lists of alpha codes for use by North and Central American and Caribbean ornithologists. The first list contains four-letter codes, based on English names, broadly following the rules and strategies adopted by the BBL. This list differs from that of the BBL in that: 1) all 2030 species recorded from the American Ornithologists' Union (AOU 2002) area are included, as well as 91 non-species forms, many of which were recognized by the BBL; 2) standardized, species-categorization definitions and conflict-resolution formulae have been derived and strictly adhered to; and 3) English names for subspecies, unidentified forms, hybrids, intergrades, morphs, and intermediate morphs, for which alpha codes have been assigned, have been standardized. Discrepancies between our list and that of the BBL are included in appendices. The second list follows the same basic principles except that it contains six-letter codes based on the scientific names (genus, species, and subspecies) of the species or form. We hope that this list will be useful for ornithologists, particularly those in Latin American countries, who would prefer using scientific rather than English names. These lists can be downloaded from http://www.birdpop.org/AlphaCodes.htm and will be updated every two years, following taxonomic and name changes adopted by the AOU in future biennial supplements.

INTRODUCTION

Bird banders and other ornithologists have long used alphabetic ("alpha") codes to record bird species on data sheets. Alpha codes allow more efficient and error-free data entry than filling out the entire English or scientific name of a species, and they can also serve to cross-check other recorded names or numeric data such as "AOU numbers" assigned to each species by the American Ornithologists' Union (AOU 1983; abandoned by the AOU 1998) or "S-M world numbers" listed by Sibley and Monroe (1990). Additionally, alpha codes can be used in computer databases, resulting in the substantial reduction in computer file sizes that omit fields or columns for the entire English and/or scientific names. Bird banders, in particular, have benefitted from using alpha codes to reduce the amount of handling time that a bird incurs during banding, and the U.S. Fish and Wildlife Service's (USFWS; now the U.S. Geological Service/Biological Resource Division) Bird Banding Laboratory (BBL) has adopted acceptable four-

letter alpha codes for banders to use when submitting their data (USFWS 1988). The codes are constructed such that they utilize the initial letters in the words of the English name (often providing somewhat phonetic abbreviations) and thus, are easier to remember than numeric codes.

The most widely used alpha codes in North America are four-letter codes based on English names, as originally proposed by Klimkiewicz and Robbins (1978). These authors established a set of five rules for assigning alpha codes, dependent on the number of words (including hyphenated words) in the English names of each species. When these rules resulted in two species having the same code (hereafter "conflicts"), Klimkiewicz and Robbins opted to give the code to the species that was "more common or widely distributed" and to define an alternate alpha code for the less-common species. They list 28 species for which alternate codes were suggested based on conflicts; no standardized rules appeared to exist for assigning alternate codes.

Since 1978, periodic corrections and suggested adaptations have been made to the four-letter alpha code system proposed by Klimkiewicz and Robbins (e.g., Hamel and Klimkiewicz 1981, Canadian Wildlife Service [CWS] and USFWS 1984, Pyle et al. 1987, USFWS 1988, Jones 1992). The CWS and USFWS (1984) included a new rule suggesting that, when conflicts arose, all species involved would be assigned alternate codes, as long as the species were "normally occurring" (*cf.* USFWS 1988) in North America north of Mexico. In addition, many new codes have been added to the list based on extralimital species, new hybrid combinations, and recognized subspecies subsequently banded with USFWS bands, and the alpha-code system has undergone necessary revisions based on taxonomic and English-name changes endorsed biennially by the AOU (e.g., AOU 1998, 2000, 2002). The result of these changes and additions is a BBL alpha-code list that has become complex and inconsistent based on many revisions by different BBL personnel, varying rules for assigning alternate codes during conflicts, different interpretations of what constitutes a "normally occurring" species, changes in the distributions or status of species, and inconsistent naming of unidentified forms, subspecies, hybrids, intergrades, morphs, and intermediate morphs. Moreover, the BBL list excludes most resident species found in Mexico, Central America, and the Caribbean.

The BBL alpha codes have become an integral part of large ornithological programs across North America such as The Institute for Bird Population's (IBP) Monitoring Avian Productivity and Survivorship (MAPS) program (DeSante et al. 2002). Because current North American avian conservation efforts (e.g., NABCI - North American Bird Conservation Initiative) include resident Neotropical species for which no codes exist, expansion as well as revision of the BBL alpha-code list is appropriate. Here we present two lists of alpha codes for use by North and Central American ornithologists. The first list contains four-letter codes, based on English names, broadly following the rules and strategies adopted by the BBL (USFWS 1988). Our list of four-letter codes differs from that of the BBL in that: 1) all 2030 species recorded from the AOU area (AOU 2002) are included, as well as 91 non-species forms, many of which were recognized by the BBL; 2) standardized, species-categorization definitions and conflict-resolution formulae have been derived and strictly adhered to; and 3) English names for subspecies, unidentified forms, hybrids, intergrades, morphs, and intermediate morphs, for which alpha codes have been assigned, have been standardized. Discrepancies between our list and that of the BBL are included in appendices.

The second list follows the same basic principles except that it contains six-letter codes based on the scientific names (genus, species, and subspecies) of the species or form. We hope that this list will be useful for ornithologists, particularly those in Latin American countries, who would prefer using scientific rather than English names. These lists can be downloaded from http://www.birdpop.org/AlphaCodes.htm, and will be updated every two years, following taxonomic and name changes adopted by the AOU in future biennial supplements.

METHODS AND RESULTS

Note that, for conciseness and clarity, we do not include scientific names for all species mentioned in text; we refer readers to http://www.birdpop.org/AlphaCodes.htm for a full list of species and their scientific names.

FOUR-LETTER ALPHA CODES BASED ON ENGLISH NAMES

Coding Rules, Species Categorization, and Conflict-Resolution Strategies - Because ornithologists have become familiar with many of the alpha codes currently recognized by the BBL, our four-letter coding system adheres closely to the original BBL coding rules, as derived by Klimkiewicz and Robbins (1978) and updated (to include seven rules) by the BBL (USFWS 1988). These seven rules (USFWS 1988) were as follow:

1. "If the English name is a single word, use the first four letters; e.g., Canvasback, CANV."

2. "If the English name consists of two words, use the first two letters of the first word, followed by the first two letters of the second word; e.g., Common Loon, COLO."

3. "If the English name consists of three words, use the first letter of the first word, the first letter of the second word, and the first two letters of the third word; e.g., American Tree Sparrow, ATSP."

4. "If the English name consists of three words and the first two are hyphenated, use rule three; e.g., Pied-billed Grebe, PBGR."

5. "If the English name consists of three words and the last two are hyphenated, use the reverse of rule three; e.g., Eastern Screech-Owl, EASO." [In other words, use the first two letters of the first word, the first letter of the second word, and the first letter of the third word:]

6. "If the English name consists of four words (with or without hyphens), use the first letter of each word; e.g., Great Black-backed Gull, GBBG."

7. "If the English name consists of five words, treat it as four words [eliminating the fourth word first]; e.g., Puget Sound White-crowned Sparrow, PSWS."

Conflict resolution subsequently entailed several rules depending on the word count and occurrence category of the species or form (USFWS 1988). We have adhered to these principles as closely as possible, with slight modifications to conflict-resolution strategies for clarity, consistency, and better phonetic matching in a small number of cases (see below).

Our four-letter alpha coding system depends on the definition of four occurrence categories of species or forms, based generally on the intentions of the BBL (USFWS 1988). These four categories, from highest to lowest priority, are:

Category 1. Extant species and forms occurring in the AOU (1998) area that breed in North America north of Mexico, not including the Hawaiian Islands, with the exception of 25 resident upland gamebird species (primarily in the order Galliformes) that have been given lower priority (due to differing banding status) by the BBL.

Category 2. Species or forms occurring in the AOU (1998) area that 1) have occurred but have not bred in North America north of Mexico, 2) are resident or have occurred in the Hawaiian Islands but not in North America north of Mexico, 3) had occurred and bred in North America north of Mexico or in Hawaii but are now extinct, or 4) are resident upland gamebird species that were given lower priority (due to differing banding status) by the BBL.

Category 3. Extant or extinct species that have occurred in the AOU (1998) area (south through Panama and Grenada) but not in North America north of Mexico or in Hawaii.

Category 4. Species that have not occurred in the AOU (1998) area but had been assigned BBL codes. These 75 species are not further considered here, except to point out cases in which our system results in conflicts with codes previously assigned by the BBL, in which case we suggest alternate codes for the Category-4 species (see Appendix 1).

For all species and forms, our four-letter coding system begins with the seven basic rules assigned by the BBL (USFWS 1988; see above), depending on how many "words" the species' name contains. Entities separated by hyphens are considered words (i.e., hyphens are considered spaces between words), and separate rules exist for names in which the final or group name does or does not have a hyphen (e.g., coding for Pacific Golden-Plover and Common Ringed Plover follow different rules; see below). We also consider "Mac" or "Mc," found in names such as "MacGillivray's" and "McKay's," to be words.

"First-order" codes are those for which the seven first-order code-assignment rules, defined here and by the BBL, which differ for each word-count group, can be used without conflict. Conflicts arise when first-order codes are the same for two or more species within a category; e.g., the first-order code for both Barn Swallow and Bank Swallow is "BASW." When a first-order conflict arises within a category, neither species or form receives the first-order code; rather, both receive "second-order" codes, unless these also conflict, either with each other's second-order codes or with other first-order or necessary second-order codes, in which case "third-order" codes are examined, and so on. In the above example, Barn Swallow is assigned the second-order code "BARS," Bank Swallow is assigned the second-order code "BANS," and no species or form has the first-order code "BASW."

Conflict resolution within each category and word-count group follows a standard order until a code is identified that does not conflict with a first-order or necessary higher-order code in that category group or in a higher-category group. For each word-count group, coding and conflict-resolution rules, along with examples, are given below. Letters refer to the words: A and a = the first word, B and b = the second word, C and c = the third word, etc., with upper-case letters representing the first letter of the word, and lower-case letters the next consecutive letters in the word. Lower-case letters with asterisks (*) represent the next unconflicting consonant or, if no unconflicting consonants are present, the next unconflicting vowel in the word that will resolve a conflict. Prioritization of consonants over vowels results in a closer phonetic correspondence between the English name and the alpha code.

(1) **One Word** (e.g., Ovenbird, OVEN; Sapayoa, SAPA):

1st order: Aaaa. Bushtit (BUSH), Oilbird (OILB); or Aa for Ou (OU).

2nd order: Aaaa*. Snowcap (SNOC), Wrenthrush (WRET).

(2) **Two Words** (e.g., Harpy Eagle, HAEA; Northern Cardinal, NOCA).

1st order: AaBb. Dusky Flycatcher (DUFL), Yucatan Jay (YUJA).

2nd order: AaaB. Herring Gull (HERG), Stygian Owl (STYO), Cactus Wren (CACW).

3rd order: ABbb. Northern Shoveler (NSHO), Common Potoo (CPOT).

4th order: Aaa*B. Harris's Hawk (HASH), Blackpoll Warbler (BLPW)

Nth order: Next available combination in order ABbb*, Aa*Bb, AaBb*. Cuban Parakeet (CPAK), Cuban Parrot (CPAT).

(3a) **Three Words without group-name hyphen** (e.g., White-rumped Sandpiper, WRSA; Lesser Antillean Swift, LASW)

1st order: ABCc. Little Blue Heron (LBHE), Long-tailed Hermit (LTHE).

2nd order: ABbC. Broad-billed Sandpiper (BBIS), Bushy-crested Jay (BCRJ).

3rd order: AaBC. Short-tailed Nighthawk (SHTN), Spot-crowned Antvireo (SPCA).

4th order: ABb*C. Black-banded Woodcreeper (BBNW), Rufous-browed Wren (RBWW).

Nth order: Next available combination in order Aa*BC, ABCc*, AaaC, ACcc. Short-tailed Shearwater (SRTS), Black-tailed Godwit (BTGD), Blue-black Grassquit (BGRA), Blue-black Grosbeak (BGRO).

(3b) **Three Words with group-name hyphen** (e.g., Rufescent Tiger-Heron, RUTH; Eastern Screech-Owl, EASO; Western Wood-Pewee, WEWP).

1st order: AaBC. Fulvous Whistling-Duck (FUWD), Blue Ground-Dove (BLGD).

2nd order: ABbC. Colima Pygmy-Owl (CPYO), Western Slaty-Antshrike (WSLA).

3rd order: ABCc. If needed; no current examples.

4th order: ABb*C. If needed; no current examples.

Nth order: Next available combination in order Aa*BC, ABCc*, AaaC, ACcc. If needed; no current examples.

(4a) **Four Words without group-name hyphen** (e.g., Double-striped Thick Knee, DSTK; Lesser Yellow-headed Vulture, LYHV).

1st order: ABCD. Greater White-fronted Goose (GWFG), Black-and-white Warbler (BAWW).

2nd order: ABbD. If needed; no current examples

3rd order: AaBD. Black-and-white Owl (BLWO)

4th order: AaCD. If needed; no current examples

Nth order: Next available combination in order ACcD, ABb*D, Aa*BD, Aa*CD, ABc*D. Black-throated Gray Warbler (BTYW), Black-throated Green Warbler (BTNW). [Note that we make an exception to our overall strategy, prioritizing ABc*D over ACc*D, to maintain these two long-standing BBL codes of commonly banded species.]

(4b) **Four Words with group-name hyphen** (e.g., Black-crowned Night-Heron, BCNH; Bare-throated Tiger-Heron, BTTH)

1st order: ABCD. West Indian Whistling-Duck (WIWD).

2nd order: AaCD. Rufous-necked Wood-Rail (RUWR).

3rd order: ACcD. Band-rumped Storm-Petrel (BSTP), Black-crowned Pygmy-Tyrant (BPYT).

4th order: ACDd. If needed; no current examples.

Nth order: Next available combination in order Aa*CD, ACc*D, ACDd*. If needed; no current examples.

(5a) **Five words without hyphenated group name** (e.g., Puget Sound White-crowned Sparrow, PSWS; Western X Glaucous-winged Gull Hybrid, WGWH).

1st order: ABCE. Laysan X Black-footed Albatross Hybrid (LBFH).

2nd order: ABDE. If needed; no current examples.

3rd order: ACDE. If needed; no current examples.

4th-order: ABCD. Carolina X Black-capped Chickadee Hybrid (CBCC).

(5b) **Five words with hyphenated group name** (e.g., Black-and-white Hawk-Eagle, BAWH).

1st order: ABCD. Black-and-yellow Silky-flycatcher (BAYS), Lesser Snow Goose White-morph (LSGW).

2nd order: ACDE. If needed; no current examples.

3rd order: ABDE. If needed; no current examples.

4th-order: ABCE. If needed; no current examples.

(6) **Six words**. (e.g., Red-naped X Red-breasted Sapsucker Hybrid, RRSH).

1st order: ACEF (omitting second word of hyphenated words first). White-crowned X Golden-crowned Sparrow Hybrid (WGSH).

Conflict resolution occurs on a category-by-category basis. Thus, within Category 1, the above rules are applied until all species and forms have acceptable codes. Once Category-1 birds have acceptable codes the same process is completed with Category-2 birds, and so on until Category-4 birds all have assigned codes. Alpha-code conflicts between categories result in changes code of the lower-priority category but not that of the higher-priority category. For example, Ruby-topaz Hummingbird, a Category-3 bird, receives the second-order code "RTOH" whereas Ruby-throated Hummingbird, a Category-1 bird keeps its first-order code, "RTHU." Little Curlew, a Category-2 bird, keeps its first-order code, "LICU," whereas Little Cuckoo, a Category-3 bird, receives the second-order code "LITC." In this way we preserve the majority of long-established four-letter codes.

No species will have a code that conflicts with a first-order code of a higher-priority category, even if that first-order code is not used because of

conflicts. For example, Bahama Swallow, a Category-2 bird, does not receive "BASW," because it is a first-order code for Category-1 birds (Barn and Bank swallows), even though "BASW" is not used. Bahama Swallow receives its second-order code "BAHS." It is acceptable, however, to have codes that may conflict with second- or higher-order codes of a higher-priority category group, as long as that code was never used or considered for use. For example, Common Redshank, a Category-2 bird, receives "COMR," even though the second-order code for Common Redpoll, a Category-1 bird, would have conflicted had it been considered (Common Redpoll receives the first-order code CORE). The same applies with "LITC" in the Little Cuckoo vs. Little Curlew example noted above. However, if a second-order code is considered but not used, it is unavailable for lower-category use. Thus, Stub-tailed Spadebill (Category 3) receives "STTS" (third-order) rather than "STAS" (second-order) because the latter was considered (but could not be used) as the second-order code for the Category-2 species Short-tailed Shearwater and Sharp-tailed Sandpiper.

When new species are added to the list during biennial updates by the AOU, this process is repeated for each new addition. Given the above system, only 337 of 2196 (15.3%) species or forms had conflicts and of these, 227 (67.4%) were resolved with second-order codes.

The system departs in only minor ways from that of the BBL (USFWS 1988). We have adopted a slightly different conflict-resolution strategy regarding three-word names (both with and without group-name hyphens): the BBL strategy generally used AaaC for second-order codes and was inconsistent when a second-order code could not be used; whereas, we assign ABbC for second-order codes, and follow a consistent strategy when second-order codes could not be used (see above). A similar approach was adopted here for conflict resolution of four-word and five-word names that lacked group-name hyphens. During conflict resolution of tropical species we found this strategy much preferable, both in terms of the many fewer second-order conflicts, and because the codes were better phonetic matches for the species names. We have also been consistent with conflict resolution for fourth-order and Nth-order codes, resulting in a few discrepancies with BBL codes. For example, the BBL prioritized Aaa*B over Aa*Bb when resolving codes for Blackburnian Warbler (BLBW) and Blackpoll Warbler (BLPW) but followed the reverse when resolving codes for Barn Owl (BNOW) and Barred Owl (BDOW). Because the warblers are more commonly banded than the owls, we chose the former prioritization strategy (see above), resulting in differing codes for the owls (BANO and BADO, respectively).

A list of 103 discrepancies (six of which are Category-4 species and 41 of which were based on taxonomic revisions or name changes by the AOU) between our species/subspecies list and those of the BBL (taken on 2 Dec 2002 from www.pwrc.usgs.gov/bbl/manual/speclist.htm#100 for non-gamebirds and www.pwrc.usgs.gov/bbl/manual/gallaou.htm for resident upland gamebirds), based on changes in names, differences in species categorization, or differences in conflict resolution, is presented in Appendix 1. Only ten species with discrepancies due to differing conflict-resolution strategies (Leach's Storm-Petrel; California Condor; Harlequin Duck; Harris's Hawk; Barn and Barred owls; and Broad-billed, Buff-bellied, Blue-throated, and Broad-tailed hummingbirds) likely have significant numbers of records in the BBL database.

Rules for Naming Non-Species Forms - The BBL has defined 73 names and codes for "non-species forms," including subspecies, unidentified species, unidentified subspecies, hybrids, intergrades, morphs, and intermediate-morphs. For the sake of consistency and because the identification of these forms provides valuable information, we maintain these forms in our lists. However, there is currently no consistency within the BBL list in assigning or naming non-species forms. For example, the naming of unidentified forms fall into six categories:

1. unidentified between-species codes with current "unidentified" BBL codes (e.g., "Unidentified Teal," "Unknown Rufous-sided Towhee," "Unknown Redpoll");

2. unidentified between-species codes with-out current "unidentified" BBL codes ("Western Flycatcher," "Gray-cheeked/Bicknell's Thrush");

3. unidentified between-subspecies codes with current "unidentified" BBL codes ("Unknown Yellow-rumped Warbler," "Unidentified Dark-eyed Junco");

4. unidentified between-subspecies codes without current "unidentified" BBL codes ("White-crowned Sparrow");

5. species without acceptable BBL codes that could be used as unidentified between-subspecies codes ("Snow Goose," "Green-winged Teal," "Northern Flicker," "Palm Warbler"); and

6. species in which one (or more), but not all, subspecies within a species have been given acceptable names and codes by the BBL, but for which it is unclear if the species names include unidentified forms or not ("Canada Goose," "Willow Flycatcher," "Savannah Sparrow"); see below.

We use the following rules to standardize these unidentified-form names (and subsequent alpha-code assignment) in our list:

1) We use a former or group name when one exists; e.g., Traill's Flycatcher, TRFL; Western Flycatcher, WEFL; Solitary Vireo, SOVI; Rufous-sided Towhee, RSTO; rather than using corresponding "unidentified" between-species codes.

2) We define "species-pairs" when no unique former name exists; e.g., Gray-cheeked/Bicknell's Thrush, GCBT; Common/Hoary Redpoll, CHRE (instead of "Unknown Redpoll").

3) We use "Unidentified" instead of "Unknown" for all other between-species codes; e.g., Unidentified Hummingbird, UNHU.

4) All "unidentified" between-subspecies codes are subsumed into their species codes; e.g., White-crowned Sparrow, WCSP; Yellow-rumped Warbler, YRWA; Dark-eyed Junco, DEJU. We adopt eight species codes of this type that the BBL currently does not accept (Appendix 2).

We have chosen not to define additional names and codes to clarify cases for which one (or more), but not all, subspecies or groups of subspecies within a species have been given acceptable names and codes by the BBL. For example, Large Canada Goose (LCGO), Small Canada Goose (SCGO), Aleutian Canada Goose (ACGO), and Cackling Canada Goose (CCGO), all have defined names and acceptable BBL codes. It is presently unclear whether the use of "Canada Goose" is restricted to other subspecies or if it denotes "Unidentified Canada Goose" including all subspecies. One solution could be to add other names, e.g., "Hutchinson's Canada Goose" (HCGO), to cover other subspecies and leave "Canada Goose" for unknown forms. But we believe that this would result in too many changes to long-standing codes of common species (e.g., "Red-tailed Hawk" would have to be given a new name because "Harlan's Hawk" is recognized). Other species in this category include Townsend's Shearwater, Great Blue Heron, Mallard, Common Moorhen, Black-necked Stilt, Willow Flycatcher, Bell's Vireo, Savannah Sparrow, Grasshopper Sparrow, and Seaside Sparrow. Banders and other ornithologists should recognize the potential for confusion when using these codes; i.e., the name and code could be restricted to all subspecies without subspecific codes and/or it could represent unidentified subspecies, including those with recognized names and codes, within the species as a whole.

We have changed the name and alpha codes of one subspecies from the BBL list, "Southern House Wren, SHWR" to "Southern House-Wren, SOHW," the name given in a note by the AOU (1998); but we have opted not to change several other similary constructed subspecies names (e.g., "Least Bell's Vireo, LBVI" to "Least Bell's-Vireo, LEBV") currently employed by the BBL but not clarified by the AOU (1998).

Likewise, there are no rules in the BBL list governing the naming of hybrids (between species; e.g., "Hybrid Gull," HYGU; "Other Hybrid Goose," OHGO; "Bullock's X Baltimore Oriole Hybrid," BBOH; "Brewster's Warbler," BRWA; "*Zonotrichia* Sparrow Hybrid," ZSHY), intergrades (between subspecies; e.g., "Black X Atlantic Brant Intergrade," BABI; "Flicker Intergrade," FLIN), or morphs and intermediate morphs (e.g., "Lesser Snow Goose (Intermediate phase)," SBGI; "Blue Greater Snow Goose," BGSG). For hybrids, we follow the BBL in using the accepted hybrid names

"Brewster's," "Lawrence's," and "Sutton's" warblers. We have not used general hybrid names such as "Hybrid Gull," "Other Hybrid Goose," "Hybrid Bluebird," and "Hybrid Nonpasserine"; the use of these names adds confusion as it is unknown whether or not the code refers to a hybrid of known parental species (without an acceptable code) or of unknown parental species. In some cases we have replaced these with specific names of common hybrid forms, e.g., "Western X Glaucous-winged Gull Hybrid," or "Eastern X Mountain Bluebird Hybrid," in each case following the species names with the word "Hybrid." We also standardize the order of hybrid names to the phylogenetic order found in the AOU Checklist; e.g., the BBL name "Indigo X Lazuli Bunting Hybrid" (ILBH) becomes "Lazuli X Indigo Bunting Hybrid" (LIBH) under our system, because Lazuli Bunting precedes Indigo Bunting in the AOU sequence. We have omitted from our list the four general hybrid names "Other Hybrid Goose," "Other Hybrid Duck," "Hybrid Nonpasserine," and "Hybrid Passerine." Rather than using such names, we recommend the use of unidentified-species names and codes for hybrids of unknown parentage, and additions to the list for new hybrid combinations of known parentage.

For intergrades, morphs, and intermediate morphs, we use the species or subspecies name followed by "Intergrade," "morph" (e.g. "White-morph"), or "Intermediate-morph" and use the same alpha coding rules applied to species; thus, "Flicker Intergrade, FLIN" becomes "Northern Flicker Intergrade, NFIN," "Black X Atlantic Brant Intergrade" becomes "Brant Intergrade, BRIN," "Lesser Snow Goose, LSGO" becomes "Lesser Snow Goose White-morph, LSGW," "Blue Greater Snow Goose, BGSG" becomes "Greater Snow Goose Blue-morph, GSGB," and "Lesser Snow Goose (Intermediate phase), SBGI" becomes "Lesser Snow Goose Intermediate-morph, LSGI."

For coding of all non-species forms, we use the same rules applied to multi-word names as outlined above, omitting the "X" in the names of hybrids and intergrades (see examples above).

Differences between our list and that of the BBL in the names and codes of unidentified forms, subspecies, hybrids, intergrades, morphs, and intermediate morphs are included in Appendix 2. There are many other such non-species codes that could be employed. In addition to those recognized by the BBL, we have added to our list 18 names and codes (17 unidentified between-species codes that have been used by IBP and one intermediate-morph code for nomenclatural consistency). A list of these names and codes can be found in Appendix 3. Note that in virtually all cases, these unidentified between-species codes have been used within IBP point-count rather than banding data.

We are confident that users of the list will be able to derive additional hybrid, intergrade, and unidentified names and codes easily, as needed, using the above naming and coding guidelines.

SIX-LETTER ALPHA CODES BASED ON SCIENTIFIC NAMES

Coding Rules and Conflict-Resolution Strategies - Because we anticipate that many users of six-letter alpha codes will be working in Latin America, we do not prioritize the species into categories based on status in North America north of Mexico. Also, we have not assigned six-letter codes to Category-4 species. Our first-order rule for six-letter alpha codes, based on scientific names, is to use the first three letters of the genus name followed by the first three letters of the species name. Resolution strategies for conflicts between species are given below. Letters refer to the words: A, a, and a* = Genus and B, b, and b* = species, with upper-case letters representing the first letters in the words, lower-case letters without asterisks representing the second and third letters of the words, and lower-case letters with asterisks (*) representing the next unconflicting consonant or, if no unconflicting consonants are present, the next unconflicting vowel, that will resolve a conflict.

1st order: AaaBbb *Gavia stellata* (Gavste), *Piranga flava* (Pirfla).

2nd order: AaaBbb* *Aimophila ruficauda* (Aimrud) *Aimophila ruficeps* (Aimrup)

3rd order: Aaa*Bbb *Picoides nuttallii* (Pidnut), *Pica nuttalli* (Pianut).

In alignment with the use of upper and lower cases in scientific names, we use an upper-case letter for the first word of the genus but a lower-case letter for

that of the species; e.g., the code for *Turdus migratorius* is "Turmig." In conflict resolution, once a letter has been identified for use in one of the codes, all subsequent letters in that species name become eligible for use in the other code. For instance, *Larus glaucoides* and *Larus glaucescens* conflict ("Largla"). The code for *Larus glaucoides* becomes Largld and, because the 's' comes after the 'd' in *glaucoides*, it becomes acceptable to have Largls be the code for *Larus glaucescens*. When applying this strategy, consonants are considered before vowels. For example, *Cathartes aura* and *Catharus aurantiirostris* have the conflicting code "Cataur." Because each consonant in *aurantiirostris* is considered before each vowel, the code for this species becomes "Cataun" and that for *Cathartes aura* can become "Cataua," despite the fact that the second 'a' precedes the 'n' in *aurantiirostris*.

Rules for Naming Non-Species Forms - We have used the following rules to define six-letter codes for the 91 non-species forms found within the list.

1) For subspecies, we use the first three letters of the genus name, followed by the first letter of the species name, followed by the first two letters of the subspecies name; for example, the six-letter code for Newell's Shearwater, *Puffinus auricularis newelli* is "Pufane."

2) For unidentified-species forms within a genus, we use the first three letters of the genus followed by "spe" for species; for example, the code for "Unidentified Gull," *Larus sp.*, is "Larspe."

3) For unidentified-species forms that could involve more than one genera, we use the first three letters of the family name followed by "gsp" (for "genus, species"); for example, the six-letter code for "Unidentified Flycatcher," Tyrannidae gen. sp. is "Tyrgsp."

4) For species-pairs, we use the first three letters of the genus followed by the first two letters of the first species followed by the first letter of the second species ; for example, the six-letter code for "Hammond's/Dusky Flycatcher," *Empidonax hammondii/oberholseri*, is "Emphao."

5) For intrageneric hybrids, we use the first three letters of the genus followed by the first two letters of the first species followed by the first letter of the second species; e.g., the six-letter code for Spotted X Barred Owl, *Strix occidentalis* x *varia*, is "Strocv."

6) For intergeneric hybrids, we use the first letter of the genus and first two letters of the species for the first species, followed by the same for the second species; for example, the six-letter code for Sutton's Warbler, *Parula americana* x *Dendroica dominica*, is "Pamddo" (note that, for consistency, we use the lower-case letter for the genus of the second species in these cases).

7) For intermediates between subspecies, we use the first three letters of the genus followed by the first letter of the species followed by the first letter of each of the subspecies; for example, the six-letter code for "Brant Intergrade," *Branta bernicula bernicula* x *nigricans* is "Brabbn."

Finally, we do not assign separate six-letter codes for morphs or intermediate morphs (all among the Snow Goose complex), following conventional taxonomic opinion in not assigning scientific names to morphs. Thus, all Lesser Snow Goose (*Chen caerulescens caerulescens*) morphs receive the six-letter code "Checca," and all Greater Snow Goose (*Chen c. atlantica*) morphs receive the six-letter code "Checat."

Conflict resolution (involving only three of 91 non-species forms) follows the same strategies (detailed above) employed for species forms.

Using these formulae, we found only 117 conflicts (5.6%) among first-order six-letter codes of the 2121 non-Category-4 entries found within our list. Of these, 105 (89.7%) were resolved with second-order codes and 12 were resolved with third-order codes. A list of all 117 species, their conflict-resolved six-letter codes, and their code order, is given in Appendix 4.

THE LIST

Our full list of 2121 entries, 2030 species recognized by the AOU (2002), and 91 non-species forms can be viewed and downloaded in electronic form from the IBP website, http://www.birdpop.org/AlphaCodes.htm. We hope that this list will prove useful to ornithologists working throughout North and Central America and the Caribbean with banding, point-count, and other data sets.

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APPENDIX 1

Discrepancies between our list and that of the BBL in four-letter alpha codes for species or subspecies.

A. Species or subspecies for which discrepancies are based on taxonomic or name changes by the AOU (1998, 2000, 2002).

English Name	BBL Code	Our Code	Species Category	Code Order
Light-mantled Albatross	LMSA	LMAL	2	1
Antarctic Giant-Petrel	SGPE	ANGP	4	1
Northern Giant-Petrel	NGPE	NOGP	4	1
Galapagos Petrel	DRPE	GAPE	3	1
Hawaiian Petrel	DRPE	HAPE	2	1
Western Reef-Heron	REHE	WERH	2	1
Common Black-Hawk	CBHA	COBH	1	1
Greater Sage-Grouse	SAGR[1]	GRSG	2	1
Gunnison Sage-Grouse	SAGR[1]	GUSG	2	1
Greater Prairie-Chicken	GPCH[1]	GRPC	2	1
Lesser Prairie-Chicken	LPCH[1]	LEPC	2	1
Black Oystercatcher	ABOY	BLOY	1	1
Wilson's Snipe	COSN	WISN	1	1
Great Crested Tern	CRTE	GCTE	2	1
Eurasian Collared-Dove	ECDO	EUCD	1	1
Caribbean Dove	WBDO	CADO	3	1
Brown-throated Parakeet	CAPA	BTPA	3	1
Common Pauraque	PAUR	COPA	1	1
Mariana Swiftlet	GUSW	MASW	2	1
Eared Quetzal	EATR	EAQU	1	1
Arizona Woodpecker	STWO	ARWO	1	1
Northern Beardless-Tyrannulet	NBTY	NOBT	1	1
Jamaican Vireo	JWEV	JAVI	3	1
Gray-headed Chickadee	SITI	GHCH	1	1
Tufted Titmouse	ETTI	TUTI	1	1
Southern House-Wren	SHWR	SOHW	3	1
Greater Necklaced Laughingthrush	GNLT	GNLA	2	1
Hwamei	MELT	HWAM	2	1
Brown Trembler	TREM	BRTR	3	1
Hill Myna	IHMY	HIMY	3	1
Olive-backed Pipit	OTPI	OBPI	2	1
Western Spindalis	SHTA	WESP	2	1
Akikiki	KACR	AKIK	2	1
Oahu Alauahio	OACR	OAAL	2	1
Kakawahie	MOCR	KAKA	2	1
Maui Alauahio	MACR	MAAL	2	1
Akohekohe	CRHO	AKOH	2	1
Yellow-crowned Bishop	GOBI	YCBI	3	1
Indian Silverbill	WASI	INSI	2	1
African Silverbill	WASI	AFSI	2	1
Chestnut Munia	CHMA	CHMU	2	1

B. Species or subspecies for which discrepancies are based on different coding or conflict-resolution strategies:

English Name	BBL Code	Our Code	Species Category	Code Order
Kerguelen Petrel	KEPE	KERP	4	2
Cook's Petrel	COPE	COOP	2	2
Short-tailed Shearwater	SHOS	SRTS	2	N
Leach's Storm-Petrel	LHSP	LESP	1	1
Band-rumped Storm-Petrel	BANP	BSTP	2	3
Least Storm-Petrel	LTSP	LSTP	2	2
Gray-backed Storm-Petrel	GBSP	GSTP	4	3
Great Frigatebird	GRFR	GFRI	2	3
California Condor	CALC	CACO	1	1
Greater Flamingo	GREF	GFLA	2	3
Barnacle Goose	BRNG	BARG	2	2
Laysan Duck	LADU	LAYD	2	2
White-cheeked Pintail	WHIP	WCHP	2	2
Harlequin Duck	HARD	HADU	1	1
Harris's Hawk	HRSH	HASH	1	4
Hawaiian Hawk	HWHA	HAWH	2	2
Harlan's Hawk	HRLH	HALH	1	4
Gray Partridge	GHPA[1]	GRAP	2	2
Ring-necked Pheasant	RPHE[1]	RNEP	2	2
Common Peafowl	COMP[1]	CPEA	2	3
Blue Grouse	BGSE[1]	BLUG	2	2
Montezuma Quail	MTZQ[1]	MONQ	2	2
Black-tailed Godwit	BLAG	BTGD	2	N
Bar-tailed Godwit	BARG	BTGO	1	1
Sharp-tailed Sandpiper	SHAS	SPTS	2	N
Band-tailed Gull	BTGU	BATG	2	3
Gray-backed Tern	GRAT	GBAT	2	2
White Tern	WHTE	WHTT	2	4
Pacific Pigeon	PAPI	PPIG	4	3
Black-headed Parakeet	BHPA	BLHP	4	3
Hispaniolan Parakeet	HPKT	HPAK	3	N
Hispaniolan Parrot	HPRT	HPAT	3	N
Barn Owl	BNOW	BANO	1	4
Barred Owl	BDOW	BADO	1	4
Green-breasted Mango	GREM	GNBM	2	N
Green Mango	GRMA	GMAG	3	N
Antillean Crested Hummingbird	ACHU	ANCH	3	3
Broad-billed Hummingbird	BBLH	BBIH	1	2
Streamertail	STTL	STRM	3	2
Rufous-tailed Hummingbird	RUFH	RTAH	2	2
Buff-bellied Hummingbird	BUFH	BBEH	1	2
Blue-throated Hummingbird	BLUH	BTHH	1	2
Broad-tailed Hummingbird	BTLH	BTAH	1	2
La Sagra's Flycatcher	LASF	LSFL	2	1
Lesser Antillean Flycatcher	LESF	LAFL	3	1
Gray-breasted Martin	GBMA	GYBM	2	N
Eyebrowed Thrush	EBTH	EYTH	2	1
Black-backed Wagtail	BWAG	BBAW	2	2
Olive-capped Warbler	OLIW	OCAW	3	2
Arrowhead Warbler	AHWA	ARRW	3	2

English Name	BBL Code	Our Code	Species Category	Code Order
Slate-throated Redstart	SLAR	STRE	2	1
Golden-crowned Warbler	GOLW	GCRW	2	2
Blue-black Grassquit	BBGR	BGRA	3	N
Puerto Rican Bullfinch	PUEB	PRBU	3	1
Lesser Antillean Bullfinch	LESB	LANB	3	2
Rufous-collared Sparrow	RUFS	RCOS	3	2
Streak-backed Oriole	STRO	SBAO	2	2
Spot-breasted Oriole	SPOO	SBOR	1	1
Greater Akialoa	GREA	GAKI	2	3
Akiapolaau	AKIP	AKIA	2	1
Orange-cheeked Waxbill	ORAW	OCHW	2	2
Black-rumped Waxbill	BRWX	BRUW	2	2

[1] Gamebirds with recommended rather than official BBL alpha codes.

APPENDIX 2

Discrepancies between our list and that of the BBL due to differences in the naming of unidentified forms, hybrids, intergrades, morphs, and intermediate morphs.

BBL Name (Alpha Code)	Our Name (Alpha Code)
Hybrid Albatross (HYAL)	Laysan X Black-footed Albatross Hybrid (LBFH)
No Acceptable Code	Tundra Swan (TUSW)
No Acceptable Code	Snow Goose (SNGO)
Lesser Snow Goose (LSGO)	Lesser Snow Goose White-morph (LSGW)
Lesser Snow Goose Intermediate (SBGI)	Lesser Snow Goose Intermediate-morph (LSGI)
Blue Goose (BLGO)	Lesser Snow Goose Blue-morph (LSGB)
Greater Snow Goose (GSGO)	Greater Snow Goose White-morph (GSGW)
Blue Greater Snow Goose (BGSG)	Greater Snow Goose Blue-morph (GSGB)
Cackling Goose (CACG)	Cackling Canada Goose (CCGO)
Black X Atlantic Brant Intermediate (BABI)	Brant Integrade (BRIN)
Mallard X Black Duck Hybrid (MBDH)	American Black Duck X Mallard Hybrid (ABMH)
No Acceptable Code	Brant (BRAN)
No Acceptable Code	Green-winged Teal (GWTE)
Hybrid Gull (HYGU)	Western X Glaucous-winged Gull Hybrid (WGGH)
Hybrid Sapsucker (HYSA)	Red-naped X Red-breasted Sapsucker Hybrid (RRSH)
No Acceptable Code	Northern Flicker (NOFL)
Flicker Intergrade (FLIN)	Northern Flicker Intergrade (NFIN)
Hybrid Chickadee (HYCH)	Carolina X Black-capped Chickadee Hybrid (CBCC)
Hybrid Bluebird (HYBL)	Eastern X Mountain Bluebird Hybrid (EMBH)
Unknown Yellow-rumped Warbler (UYRW)	Yellow-rumped Warbler (YRWA)
No Acceptable Code	Palm Warbler (PAWA)
Unknown Rufous-sided Towhee (URST)	Rufous-sided Towhee (RSTO)
Zonotrichia Sparrow Hybrid (ZSHY)	White-cr. X Golden-cr. Sparrow Hybrid (WGSH)
Unidentified Dark-eyed Junco (UDEJ)	Dark-eyed Junco (DEJU)
Indigo X Lazuli Bunting Hybrid (ILBH)	Lazuli X Indigo Bunting Hybrid (LIBH)
Baltimore X Bullock's Oriole Hybrid (BBOH)	Bullock's X Balt. Oriole Hybrid (BBOH)
Unknown Redpoll (UNRE)	Common/Hoary Redpoll (CHRE)

APPENDIX 3

Seventeen unidentified-species codes and one intermediate-morph code without BBL codes that we ~~included in~~ our list:

Greater Snow Goose Intermediate-morph (GSGI)
Unidentified Dowitcher (UNDO)
Unidentified *Selasphorus* Hummingbird (USHU)
Unidentified Sapsucker (UNSA)
Unidentified Woodpecker (UNWO)
Hammond's/Dusky Flycatcher (HDFL)
Unidentified *Empidonax* Flycatcher (UEFL)
Unidentified Flycatcher (UNFL)
Unidentified Crow (UNCR)
Unidentified Swallow (UNSW)
Unidentified Wren (UNWR)
Unidentified Thrush (UNTH)
Unidentified Warbler (UNWA)
Unidentified *Piranga* Tanager (UPTA)
Unidentified Sparrow (UNSP)
Unidentified Blackbird (UNBL)
Unidentified *Carpodacus* Finch (UCFI)
Unidentified Bird (UNBI)

APPENDIX 4

Species and forms (n=117) with 2nd-order and 3rd-order six-letter alpha codes due to conflicts in 1st-order codes with other species and forms. See text.

English Name	Scientific Name	Alpha Code	Order
Double-crested Cormorant	*Phalacrocorax auritus*	Phaaut	2
Boat-billed Heron	*Cochlearius cochlearius*	Coccoh	2
Turkey Vulture	*Cathartes aura*	Cataua	2
Black Scoter	*Melanitta nigra*	Mennig	3
Semiplumbeous Hawk	*Leucopternis semiplumbea*	Leusel	2
White-tailed Hawk	*Buteo albicaudatus*	Butalc	2
Zone-tailed Hawk	*Buteo albonotatus*	Butaln	2
Red Junglefowl	*Gallus gallus*	Galgas	2
Black-throated Bobwhite	*Colinus nigrogularis*	Colnil	2
Uniform Crake	*Amaurolimnas concolor*	Amlcon	3
Yellow-breasted Crake	*Porzana flaviventer*	Porfln	2
Spotted Rail	*Pardirallus maculatus*	Parmas	2
Azure Gallinule	*Porphyrio flavirostris*	Porflr	2
Mongolian Plover	*Charadrius mongolus*	Chamog	2
Mountain Plover	*Charadrius montanus*	Chamot	2
Little Stint	*Calidris minuta*	Calmia	2
Least Sandpiper	*Calidris minutilla*	Calmil	2
Pectoral Sandpiper	*Calidris melanotos*	Calmet	2
Common Snipe	*Gallinago gallinago*	Galgan	2
Red Phalarope	*Phalaropus fulicaria*	Phafuc	2
Parasitic Jaeger	*Stercorarius parasiticus*	Stepas	2

English Name	Scientific Name	Alpha Code	Order
Iceland Gull	*Larus glaucoides*	Largld	2
Glaucous-winged Gull	*Larus glaucescens*	Largls	2
Ross's Gull	*Rhodostethia rosea*	Rhsros	3
Arctic Tern	*Sterna paradisaea*	Stepad	2
Short-billed Pigeon	*Columba nigrirostris*	Colnit	2
Zenaida Dove	*Zenaida aurita*	Zenaut	2
Eared Dove	*Zenaida auriculata*	Zenauc	2
Olive-backed Quail-Dove	*Geotrygon veraguensis*	Geoveg	2
Crested Quail-Dove	*Geotrygon versicolor*	Geoves	2
Carolina Parakeet	*Conuropsis carolinensis*	Concal	2
Hispaniolan Parakeet	*Aratinga chloroptera*	Aracha	2
Red-and-green Macaw	*Ara chloropterus*	Arachs	2
Red-crowned Parrot	*Amazona viridigenalis*	Amavig	2
Spot-tailed Nightjar	*Caprimulgus maculicaudus*	Capmad	2
Rufous Sabrewing	*Campylopterus rufus*	Camrus	2
Canivet's Emerald	*Chlorostilbon canivetii*	Chlcav	2
Blue-chested Hummingbird	*Amazilia amabilis*	Amaamb	2
Azure-crowned Hummingbird	*Amazilia cyanocephala*	Amacyc	2
Blue-tailed Hummingbird	*Amazilia cyanura*	Amacyr	2
Green-fronted Hummingbird	*Amazilia viridifrons*	Amavif	2
Blue-capped Hummingbird	*Eupherusa cyanophrys*	Eupcyp	2
Unidentified *Selasphorus* Hummingbird	*Selasphorus sp.*	Selsps	2
Unidentified Hummingbird	Trochilidae gen. sp.	Trcgsp	3
Black-headed Trogon	*Trogon melanocephalus*	Tromec	2
Black-throated Trogon	*Trogon rufus*	Trorus	2
Black-tailed Trogon	*Trogon melanurus*	Tromer	2
Golden-headed Quetzal	*Pharomachrus auriceps*	Phaauc	2
Spot-crowned Barbet	*Capito maculicoronatus*	Capmar	2
Yellow-eared Toucanet	*Selenidera spectabilis*	Selspt	2
Golden-naped Woodpecker	*Melanerpes chrysauchen*	Melchc	2
Golden-cheeked Woodpecker	*Melanerpes chrysogenys*	Melchg	2
Gray-breasted Woodpecker	*Melanerpes hypopolius*	Melhyi	2
Nuttall's Woodpecker	*Picoides nuttallii*	Pidnut	3
Double-banded Graytail	*Xenerpestes minlosi*	Xenmil	2
Streak-breasted Treehunter	*Thripadectes rufobrunneus*	Thrrub	2
Plain Xenops	*Xenops minutus*	Xenmit	2
Black-capped Pygmy-Tyrant	*Myiornis atricapillus*	Myiatp	2
Scale-crested Pygmy-Tyrant	*Lophotriccus pileatus*	Loppit	2
Pale-eyed Pygmy-Tyrant	*Lophotriccus pilaris*	Loppir	2
Black-tailed Flycatcher	*Myiobius atricaudus*	Myiatd	2
Cuban Pewee	*Contopus caribaeus*	Concab	2
Yellow-bellied Flycatcher	*Empidonax flaviventris*	Empfln	2
Yellowish Flycatcher	*Empidonax flavescens*	Empfls	2
Golden-headed Manakin	*Pipra erythrocephala*	Piperc	2
St. Andrew Vireo	*Vireo caribaeus*	Vircab	2
Yellow-throated Vireo	*Vireo flavifrons*	Virflf	2
Yellow-winged Vireo	*Vireo carmioli*	Vircam	2
Yellow-green Vireo	*Vireo flavoviridis*	Virflv	2
Yellow-billed Magpie	*Pica nuttalli*	Pianut	3
Rufous-naped Wren	*Campylorhynchus rufinucha*	Camrun	2
Canyon Wren	*Catherpes mexicanus*	Capmex	3
Stripe-throated Wren	*Thryothorus leucopogon*	Thrlep	2

English Name	Scientific Name	Alpha Code	Order
Rufous-and-white Wren	*Thryothorus rufalbus*	Thrrul	2
Buff-breasted Wren	*Thryothorus leucotis*	Thrlet	2
Rufous-browed Wren	*Troglodytes rufociliatus*	Troruc	2
White-breasted Wood-Wren	*Henicorhina leucosticta*	Henles	2
Gray-breasted Wood-Wren	*Henicorhina leucophrys*	Henlep	2
Unidentified Wren	Troglodytidae gen. sp.	Trggsp	3
Orange-billed Nightingale-Thrush	*Catharus aurantiirostris*	Cataun	2
Slaty-backed Nightingale-Thrush	*Catharus fuscater*	Catfut	2
Black-headed Nightingale-Thrush	*Catharus mexicanus*	Casmex	3
Veery	*Catharus fuscescens*	Catfun	2
Eyebrowed Thrush	*Turdus obscurus*	Turobc	2
Pale-vented Thrush	*Turdus obsoletus*	Turobl	2
Rufous-backed Robin	*Turdus rufopalliatus*	Turrup	2
Rufous-collared Robin	*Turdus rufitorques*	Turrut	2
Blue-and-white Mockingbird	*Melanotis hypoleucus*	Melhyc	2
Semper's Warbler	*Leucopeza semperi*	Leuser	2
Buff-rumped Warbler	*Phaeothlypis fulvicauda*	Phafuv	2
Yellow-throated Bush-Tanager	*Chlorospingus flavigularis*	Chlflg	2
Ashy-throated Bush-Tanager	*Chlorospingus canigularis*	Chlcag	2
Yellow-backed Tanager	*Hemithraupis flavicollis*	Hemflc	2
Rosy Thrush-Tanager	*Rhodinocichla rosea*	Rhnros	3
Yellow-collared Chlorophonia	*Chlorophonia flavirostris*	Chlflr	2
Red-legged Honeycreeper	*Cyanerpes cyaneus*	Cyacyu	2
Blue Seedeater	*Amaurospiza concolor*	Amscon	3
Cuban Bullfinch	*Melopyrrha nigra*	Mepnig	3
Eastern Towhee	*Pipilo erythrophthalmus*	Piperp	2
Stripe-headed Sparrow	*Aimophila ruficauda*	Aimrud	2
Rufous-crowned Sparrow	*Aimophila ruficeps*	Aimrup	2
Rusty Sparrow	*Aimophila rufescens*	Aimrus	2
Lark Bunting	*Calamospiza melanocorys*	Calmec	2
Northern Cardinal	*Cardinalis cardinalis*	Carcai	2
Pyrrhuloxia	*Cardinalis sinuatus*	Carsit	2
Blue-black Grosbeak	*Cyanocompsa cyanoides*	Cyacyd	2
Brewer's Blackbird	*Euphagus cyanocephalus*	Eupcyc	2
Orange-crowned Oriole	*Icterus auricapillus*	Ictauc	2
Orange Oriole	*Icterus auratus*	Ictaut	2
European Goldfinch	*Carduelis carduelis*	Carcau	2
Oriental Greenfinch	*Carduelis sinica*	Carsic	2
Hawfinch	*Coccothraustes coccothraustes*	Coccot	2
Oahu Amakihi	*Hemignathus flavus*	Hemfls	2
Oahu Alauahio	*Paroreomyza maculata*	Parmaa	2
Red Avadavat	*Amandava amandava*	Amaamn	2
Indian Silverbill	*Lonchura malabarica*	Lonmab	2
Tricolored Munia	*Lonchura malacca*	Lonmac	2