# AN ALTERNATIVE SPECIES TAXONOMY OF THE BIRDS OF MEXICO

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## Abstract

Extensive debate has surrounded the application of alternative species concepts in Ornithology. The biological species concept (BSC) and phylogenetic species concept (PSC) have typically been set in opposition, with extensive debate on the relative merits of each. An alternative is the evolutionary species concept (ESC), which offers a perspective similar to that of the PSC, yet with several significant differences. To date, no major avifauna has been examined and compared among taxonomic viewpoints. Herein, we develop an alternative phylogenetic/evolutionary species taxonomy to the current BSC treatment for the more than 1000 bird species of Mexico. A total of 135 biological species was divided to produce a total of 323 phylogenetic/evolutionary species, 122 of which represent "new" endemic forms in Mexico.

***Key words:*** *Species concepts, avifauna, Mexico*

## Resumen

Gran debate ha rodeado la aplicación de conceptos de especie alternativos en la Ornitología. El concepto biológico de especie (CBE) y el concepto filogenético de especie (CFE) han estado típicamente en contraposición, existiendo mucha discusión acerca de las ventajas relativas de cada uno. Una alternativa es el concepto evolutivo de especie (CEE), que ofrece una perspectiva similar a la del CFE, aunque con algunas diferencias importantes. A la fecha, no se ha examinado y comparado alguna avifauna regional desde el punto de vista del CBE y de los conceptos alternativos. En este trabajo desarrollamos una taxonomía alternativa a la existente en la actualidad bajo el CBE para las más de 1000 especies de aves de México. Un total de 135 especies biológicas fue dividido hasta producir un total de 323 especies filogenético/evolutivas, 122 de las cuales son "nuevas" formas endémicas al país.

***Palabras-claves:*** *Conceptos de especie, avifauna, México.*

AFTER MANY DECADES of dominance by the biological species concept (BSC) (e.g. Mayr 1942; Mayr and Short 1970; AOU 1983, 1998), alternative species concepts have been introduced to avian taxonomy only relatively recently (Cracraft 1983). Specifically, the phylogenetic species concept (PSC) was introduced to ornithology in a series of controversial papers (Cracraft 1983, McKitrick and Zink 1988, Zink and McKitrick 1995), sparking acrimonious discussion and debate (e.g. Amadon and Short 1992). In contrast to the BSC's emphasis on reproductive isolation, the PSC identifies as species taxa those populations that are monophyletic lineages made diagnosable by the presence of unique characters or character combinations.

An alternative concept that has been all but ignored in ornithology (see Prum 1994) is the evolutionary species concept (ESC). Originally proposed by Simpson (1961), this concept was revisited by Wiley (1978), and discussed in detail in more recent contributions (Wiley and Mayden 2000). The ESC focuses on broad issues of theoretical importance: lineage independence, "identity," and evolutionary tendencies. These issues relate to those on which the BSC and PSC focus—lineage independence refers loosely to reproductive isolation, and identity to diagnosability. Evolutionary tendencies focus on the true Grail of an understanding of species—an evolutionary future independent of that of other such species. The ESC differs, however, in that its practical application does not specify a discovery method, leaving the definition of "evolutionary independence" to respond to the particulars of the evolutionary mechanisms and patterns of each major taxon. For avian applications, the PSC and ESC arrive at operational implementations that are quite similar (Zink and McKitrick 1995).

A special problem for the penetration of such alternative ideas into avian taxonomy is the paucity of real examples to which they have been applied. Although applied to single clades as systematic treatments have appeared (e.g. Cracraft 1992; Escalante-Pliego and Peterson 1992; Zink 1988, 1994), alternative species concepts have yet to be applied across any regional avifauna. The only region-wide avian taxonomic treatments remain the large-scale BSC efforts such as AOU (1983, 1998), Peters (1931-1987), and Sibley and Monroe (1990). For this reason, alternative species lists have not been integrated into comparative studies that cross significant taxonomic diversity, and such studies have been limited to traditional BSC lists.

The purpose of the present paper is to develop a first regional treatment of bird diversity under alternative species concepts. Mexico is considered a megadiverse country (Mittermeier 1988), and its birds number more than 1000 biological species (Escalante-Pliego et al. 1993, Navarro and Benítez 1993). This extraordinary diversity makes Mexico both a fertile testing ground and a challenge for such a trial effort.

## Alternative Species Concepts and Discovery Methods

We consider that the ESC and PSC can be implemented similarly for avian applications, as has been concluded by PSC proponents (Zink and McKitrick 1995). The focus on diagnosability of the PSC can be reconciled with that of the ESC on evolutionary independence—an independently evolving lineage will likely have evolved characteristics that distinguish it from other lineages. Clearly, the detailed phylogenetic, molecular, and phenotypic studies that would best elucidate these phenomena are lacking for most of the species in a large and complex avifauna such as that of Mexico, making necessary use of less direct evidence—in particular, phenotypic variation such as plumage coloration, size, and shape. Hence, our development of an evolutionary species taxonomy for the birds of Mexico used an operational criterion of diagnosability, which we feel satisfies the theoretical bases of both the ESC and the PSC.

## Methods

Over the course of 1989-1998, we reviewed extensive scientific literature and specimens relevant to Mexican birds, with special focus on potential species-level breaks. Bibliographic material consulted is summarized in Rodríguez-Yáñez et al. (1994). An especially important source was Howell and Webb (1995), who suggested many species-level changes, although largely without documentation (Peterson and Navarro 1996). Specimens were consulted in museums throughout North America and Europe, including the Academy of Natural Sciences of Philadelphia, American Museum of Natural History, Bell Museum of Natural History, California Academy of Sciences, Carnegie Museum of Natural History, Cornell University, Delaware Museum of Natural History, ECOSUR-Chetumal, Field Museum of Natural History, Instituto de Biología of the Universidad Nacional Autónoma de México (UNAM), Los Angeles County Museum of Natural History, Louisiana State University Museum of Natural Science, Moore Laboratory of Zoology, Museo de Zoología of the Facultad de Ciencias (UNAM), Muséum Nationale de'Histoire Naturelle of Paris, Museum of Comparative Zoology of Harvard University, Museum of Vertebrate Zoology, Museum of Zoology of the University of California at Los Angeles, Natural History Museum (Tring) (BMNH), Natuurhistorische Museum of Leiden, Royal Ontario Museum, Southwestern College, Texas Cooperative Wildlife Collections, U.S. National Museum of Natural History, Universidad Autónoma del Estado de Morelos, Universidad Michoacana San Nicolás de Hidalgo, University of Kansas Natural History Museum, University of Michigan Museum of Zoology, University of Oxford Zoological Collections, Naturhistorisches Museum of Vienna, Western Foundation of Vertebrate Zoology, and Yale

Peabody Museum.

Biological species (sensu AOU 1983, 1998, and supplements by Banks et al. 2000 and 2002) constituting multiple evolutionary species were compiled, and characters and citations detailed. We used as a working, operational definition ("discovery method") of evolutionary species that they represent essentially 100% diagnosable assemblages of populations for which reproductive continuity is at least credible. Characters on which our decisions were based were principally of external morphology, although molecular genetic and vocalization data were incorporated when available. Size and shape variation were inspected carefully in order to avoid the confusion produced by clinal and/or ecological variation. Examples were divided into those affecting species diversity and endemism of the Mexican avifauna, those only affecting names of Mexican birds, and those for which available specimen material and/or other sources of evidence were insufficient to determine whether geographic differences were at the level of species. Each group, after initial inclusion, was checked for veracity in at least one additional scientific collection based on different specimen material. We present general lists of described subspecies from the BSC treatments that would be subsumed in each evolutionary species; these data are not intended to constitute an authoritative list of synonyms, but rather to avoid introducing confusion into the literature by imprecise definition of geographic distributions (see Zink 2004).

## Results and Discussion

In all, 135 biological species were found to hold multiple evolutionary species units (Appendix); 29 species were likely additional candidates, but sufficient specimen material was lacking for definitive decisions (Table 1). At least 42 additional species were involved in splits outside of Mexico, affecting nomenclature but not species diversity or patterns in the country, and are not considered further herein (Table 2). The 135 species for which information was sufficient were divisible into 323 evolutionary species, revising numbers of species known to occur in Mexico upwards by 188 (about 18%), and numbers of endemic species from 100 to 222 species (about 125%). Most biological species were simply divided into two evolutionary species, but several groups were more complex, divisible into as many as six evolutionary species (*Colinus virginianus*, Fig. 1).

*Case studies.*—We present three examples of species that would be subdivided using the ESC. These examples are provided to illustrate the diversity of situations in which our decisions were made.

*1. Ergaticus ruber*.— The BSC authorities treat all populations of this species together. However, populations of the northern Sierra Madre Occidental (*melanauris*=, have a distinct leaden gray ear patch, as opposed to the pearly silver ear patch of the populations to the east and south (*ruber*). The two groups are disjunct from one another.

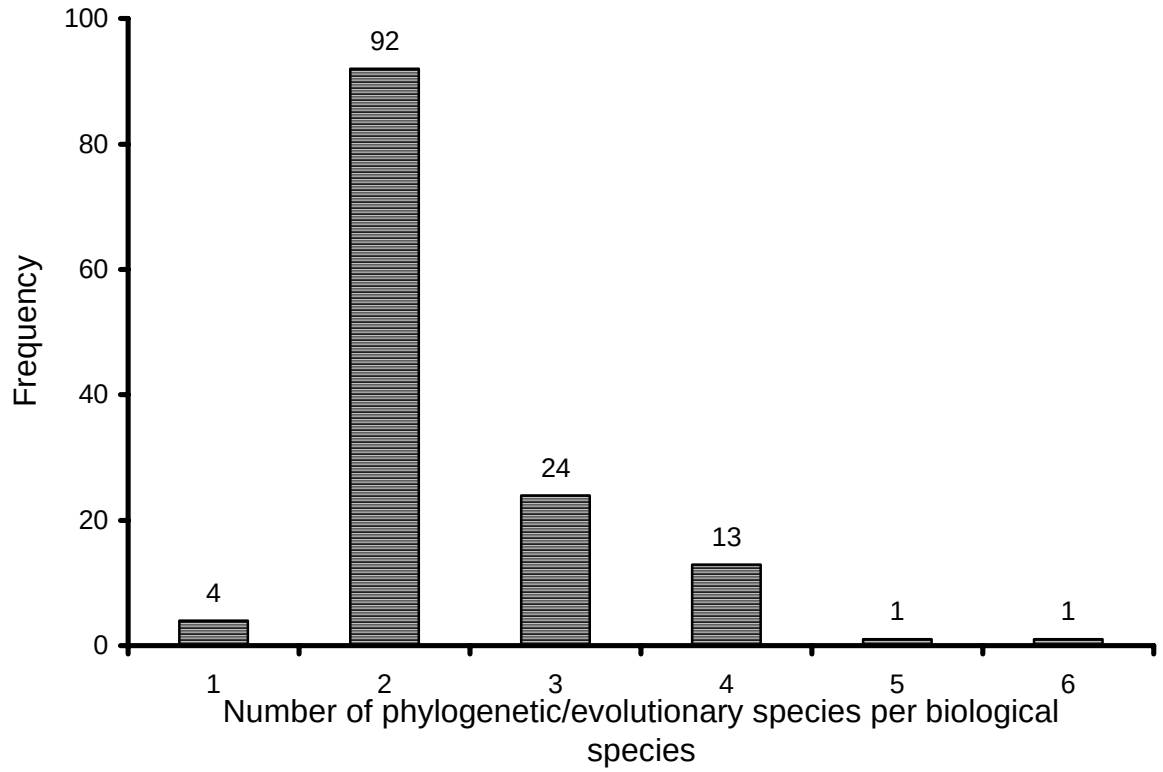


*Figure 1. Frequency histogram showing numbers of phylogenetic/evolutionary species (Appendix) per biological species for the birds of Mexico.*

*Table 1. List of biological species likely including multiple evolutionary species, but in need of further study. In most cases, patterns of variation are very complex and paucity of specimens prevented a decision. However, for all cases, information from several suites of characters (both phenotypic and genotypic) are needed to clarify the taxonomic status of the forms.*

| Species | Geographic situation |
|---|---|
| *Crypturellus cinnamomeus* | E Mexico vs. Chiapas and Central America |
| *Oceanodroma leucorhoa* | Isla Guadalupe (2 distinct breeding populations) (Ainley 1980, AOU 1998) |
| *Rallus elegans* and *R. longirostris* | Yucatan Peninsula vs. mainland Mexico vs. extreme NW Mexico; very complex variation (Olson 1998) |
| *Dactylortyx thoracicus* | W Mexico vs. E Mexico vs. Chiapas (Banks 1987) |
| *Zenaida aurita* | N Yucatan Peninsula vs. Caribbean |
| *Otus guatemalae* | W vs. E Mexico and Central America (Marshall 1967) |
| *Crotophaga sulcirostris* | Mainland Mexico vs. extinct populations of southern Baja California |
| *Picoides scalaris* | Yucatán Peninsula vs. E Mexico vs. W Mexico, complex variation |
| *Veniliornis fumigatus* | E Mexico vs. W Mexico vs. Central America |
| *Lepidocolaptes souleyetii* | E Mexico vs. W Mexico |
| *Rhynchocyclus brevirostris* | E Mexico vs. SW Mexico |
| *Empidonax affinis* | N and S of the Isthmus of Tehuantepec |
| *Tyrannus melancholicus* | W vs. E Mexico and Central America (AOU 1998) |
| *Pachyramphus major* | E Mexico vs. Yucatan Peninsula vs. Chiapas |
| *Corvus corax* | Clarión Island vs. mainland |
| *Cistothorus palustris* | E vs. W United States vs. C Mexico |
| *Salpinctes obsoletus* | Isla Guadalupe vs. Mainland (Omland et al. 2000) |
| *Uropsila leucogastra* | Yucatan Peninsula vs. E Mexico |
| *Regulus satrapa* | N Mexico vs. S Mexico and Central America |
| *Catharus frantzii* | Mexico vs. Central America, east vs west slopes (Phillips 1969) |
| *Myioborus miniatus* | Complex variation, Mexico vs. Central and South America |
| *Spindalis zena* | Isla Cozumel population vs. disjunct populations in Bahamas (Garrido et al. 1997) |
| *Saltator grandis* | E Mexico and Central America vs. Pacific slope of Chiapas |
| *Passerina versicolor* | USA and Mexico vs. Baja California vs. Central America |
| *Passerina ciris* | E vs. C United States, one population wintering in Mexico (Thompson 1991) |
| *Haplospiza rustica* | Oaxaca and Veracruz vs. Central America (Barajas and Phillips 1993) |
| *Aimophila rufescens* | W vs E Mexico vs. Central America |
| *Buarremon brunneinucha* | W vs E Mexico vs. Central America vs South America |

*TABLE 2. List of biological species for which splits outside of Mexico affect only nomenclature, but do not change status or species diversity within Mexico. Based partly on "groups" recognized by AOU (1998) and Banks et al. (2000, 2002).*

| Biological species | Phylogenetic species | References |
|---|---|---|
| *Cochlearius cochlearius* | *C. zeledoni* (Ridgway 1885) | |
| *Branta bernicla* | *B. nigricans* (Lawrence 1846) | |
| *Anas crecca* | *A. carolinensis* Gmelin 1789 | |
| *Melanita fusca* | *M. deglandi* (Bonaparte 1850) | |
| *M. nigra* | *M. americana* (Swainson 1832) | |
| *Circus cyaneus* | *C. hudsonius* (Linnaeus 1766) | |
| *Accipiter gentilis* | *A. atricapillus* (Wilson 1812) | Thiollay (1994) |
| *Geranospiza caerulescens* | *G. nigra* (Du Bus 1847) | |
| *Asturina nitida* | *A. plagiata* (Schlegel 1862) | |
| *Vanellus chilensis* | *V. cayennensis* (Gmelin 1789) | |
| *Charadrius alexandrinus* | *C. nivosus* (Cassin 1858) | |
| *Numenius phaeopus* | *N. hudsonicus* Latham 1790 | Zink et al. (1995) |
| *Larus canus* | *L. brachyrhynchus* Richardson 1831 | |
| *Gygys alba* | *G. candida* (Gmelin 1789) | |
| *Leptotila rufaxilla* | *L. plumbeiceps* Sclater and Salvin 1868 | |
| *Glaucidium brasilianum* | *G. ridgwayi* Sharpe 1875 | König et al. (1999) |
| *Phaethornis striigularis* | *P. adolphi* Gould 1857 | |
| *Amazilia cyanura* | *A. guatemalae* Dearborn 1907 | |
| *Trogon collaris* | *T. puella* Gould 1845 | |
| *Galbula ruficauda* | *G. melanogenia* Sclater 1852 | |
| *Formicarius analis* | *F. moniliger* Sclater 1856 | |
| *Mionectes oleagineus* | *M. assimilis* Sclater 1859 | |
| *Onychorhynchus coronatus* | *O. mexicanus* (Sclater 1857) | |
| *Contopus cinereus* | *C. brachytarsus* (Sclater 1859) | |
| *Myiarchus tyrannulus* | *M. magister* Ridgway 1884 | |
| *Myiozetetes similis* | *M. texensis* (Giraud 1841) | |
| *Schiffornis turdinus* | *S. veraepacis* (Sclater & Salvin 1860) | |
| *Vireo leucophrys* | *V. amauronotus* Salvin and Godman 1881 | |
| *Hirundo rustica* | *H. erythrogaster* Boddaert 1783 | Zink et al. (1995) |
| *Baeolophus bicolor* | *B. atricristatus* Cassin 1850 | |
| *Henicorhina leucosticta* | *H. prostheleuca* (Sclater 1857) | |
| *Nannus troglodytes* | *N. hiemalis* (Vieillot 1819) | |
| *Ramphocaenus melanurus* | *R. rufiventris* (Bonaparte 1837) | |
| *Polioptila plumbea* | *P. bilineata* (Bonaparte 1850) | |
| *Thraupis episcopus* | *T. cana* (Swainson 1836) | |
| *Eucometis penicillata* | *E. spodocephala* (Bonaparte 1854) | |
| *Habia fuscicauda* | *H. salvini* (Berlepsch 1883) | |
| *Cyanocompsa cyanoides* | *C. concreta* (DuBus 1855) | |
| *Melozone leucotis* | *M. occipitalis* (Salvin 1878) | |
| *Sporophila americana* | *S. corvina* (Sclater 1860) | |
| *Haplospiza rustica* | *H. uniformis* (Sclater & Salvin 1873) | |
| *Sicalis luteola* | *S. chrysops* Sclater 1862 | |

*2. Chlorospingus ophthalmicus*.—The populationsof this species are disjunctly distributed in isolated patches of montane forests. Morphological variation is very complex, with each major mountain mass having a population essentially completely distinguishable from the others in terms of morphometrics, plumage coloration, and vocalizations. Recent studies using genetic characters (Garcia-Moreno et al. 2004) support this extreme differentiation, identifying genetically distinct lineages in the Sierra Madre Oriental, Sierra Madre del Sur, Sierra de Los Tuxtlas, and Chiapas highlands. Thus, the BSC treatment of a single species appears quite clearly over-lumped, and we recognize a total of 5 species just within Mexico.

*3. Piaya cayana.* —Populations of this cuckoo are distributed almost continuously from southern Sonora and northern Tamaulipas south through Central and South America. Populations along the Pacific lowlands from Sonora to the Isthmus of Tehuantepec are long-tailed, pale in coloration of the underparts, whereas the forms of eastern Mexico and Central America are shorter-tailed and darker in color. Although a narrow contact zone is present in eastern Oaxaca between the two forms, only one "hybrid" specimen is known and the differences are maintained even in close parapatry.

*Comparison of concepts*.—One aim of the present paper is to present a comparison of different species concepts in a real-world, regional-fauna application. The BSC presents an attractive theoretical basis (reproductive isolation), but is plagued by biases well-known even to its proponents (e.g. Mayr 1963) and subjects of extensive discussion (Cracraft 1983, McKitrick and Zink 1988, Zink and McKitrick 1995, Zink 2004). Especially apparent in our development of an evolutionary species' list was the BSC's problem with allopatric taxa, which we found to have been treated in distinct manners in different taxa (e.g. *Geotrygon carrikeri* was split from *G. lawrencii*, but the similarly distinct *Columba vioscae* not split from *C. fasciata*). Although the "evolution" of the BSC in recent years towards a more split taxonomy (e.g. AOU 1998 and supplements, Pitman and Jehl 1998) eliminates some of these inconsistencies, the concept's inability to deal with disjunct populations effectively and consistently presents a serious and ongoing problem.

The evolutionary/phylogenetic species concepts, in contrast, are both operational, and so present fewer problems with application to complex situations (Zink and McKitrick 1995)—variation and diagnosable units in most complexes were easily delineated once sufficient series of specimens were assembled and compared. The monophyly criterion under the PSC is clearly more difficult to apply on a fauna-wide basis, given the paucity of phylogenetic and phylogeographic studies of birds. Nevertheless, given the extensive discussion of the application of monophyly criteria to species questions (e.g. Wiley 1981, De Queiroz and Donoghue 1990, Davis and Nixon 1992, Graybeal 1995, Wiley and Mayden 2000), as well as the complications that they introduce into real-world applications, we were less concerned about their exclusion. The ESC, which does not specify a criterion of monophyly, avoids this complication, but otherwise coincides fairly closely with the PSC .

*Data types*.—The lists presented herein are intended as a preliminary summary of phylogenetic/evolutionary species taxa of Mexican birds. They are presented as a starting point, rather than as a final answer. Our extensive museum studies led us to appreciate the depth of the task—many additional taxa will be found to be distinct as additional specimens become available, and as other character sets (e.g., song characteristics and molecular characters), are considered. These increasingly detailed views of population differentiation will certainly spark further debate regarding the relative merits of different species concepts. Hence, we view this contribution as an ongoing one, which will be updated and revised based on further studies by us, as well as by others.

An important consideration is that of which types of data are necessary for such a revision. Ideally, one would have information on geographic distributions, ecological distributions, morphology, coloration, vocalizations, genetic differentiation, and phylogenetic position, for each group under examination. Practically speaking, though, such complete information is never available—even if specimens in scientific collections are adequate, which is rarely the case (Peterson et al. 1998), time, logistics, and expenses often prevent such exhaustive study.

Considering in more detail two character sets that were not included extensively or at all in older taxonomic efforts, it is interesting to note the relative rarity of truly cryptic species of birds in Mexico. Thirteen biological species were split up with the help of molecular characters; of these, however, six were easily distinguishable without the independent confirmation of the molecular data. The exceptions—e.g., Wetmore's Bush-Tanager of the Los Tuxtlas massif of southeastern Mexico (*Chlorospingus wetmorei*)—are not strikingly different from other populations, and likely would not have been distinguished had genetic data not been available (Peterson et al. 1992, García-Moreno et al. 2004).

Considering the importance of vocal characteristics, twelve biological species were split up with the help of vocal characteristics; of these, only three (*Crypturellus cinnamomeus*, *Caprimulgus vociferus*, possibly *Uropsila leucogastra*) would have been identifiable without this character set. Interestingly, two of the remaining species are nocturnal (*Glaucidium gnoma*, *Otus cooperi*). In this instance, then, vocal characters may indeed play an important role in recognizing species limits of difficult taxa (Peterson 1998).

*Prospects for a world list*.—Preparation of this work has provided interesting lessons about the process of preparing large-scale taxonomic revisions. Our interest in Mexican bird taxonomy began with ten years of more traditional, species-by-species efforts, usually presenting both BSC and PSC opinions regarding species limits. These efforts, although not unproductive (Benítez-Díaz 1993; Escalante-Pliego and Peterson 1992; Escalona-Segura and Peterson 1996; Navarro et al. 1992a, b; Peterson 1992, 1993; Peterson et al. 1992; Navarro et al. 2001; Ortíz-Pulido et al. 2002), treated 18 biological species complexes, for a rate of 1.8 per year. Given the summary of evolutionary species concept changes presented herein, which affects 135 biological species, at our present rate of productivity, revision of Mexican bird taxonomy would take another 75 years! Expansion to a world scale would make the challenge more than prohibitive. Addition of work of others, although likely to introduce heterogeneity of taxonomic viewpoints, would reduce the time span somewhat, but not likely to an acceptable 2-5 years. This rate of advance would clearly not arrive at a synthetic, fauna-wide view of Mexico (much less for the world!) in anything approaching a timely fashion. In addition, this species-by-species approach would serve to produce a long-term imbalance among groups that would cause many biases and confusions. For this reason, we decided to attack the challenge on the broader-scale, rapid approach presented herein.

We argue that such regional treatments are important to providing a uniform set of species criteria across avian taxonomy worldwide. The most recent attempt at a world bird taxonomy (Sibley and Monroe 1990), in spite of systemic problems compromising seriously its usefulness (Peterson and Stotz 1992), has been widely incorporated into avian biodiversity studies simply because a recent world list exists! We suggest that a world list under new criteria and species concepts—on the scale of Peters' check-list—is feasible by means of regional committees working in coordination with one another.

*Implications*.—The value of sweeping taxonomic revisions such as this one, however, is great, with implications in diverse fields. First, for evolutionary studies, recasting the taxonomy in terms of diagnosable units provides a much clearer view of interesting questions. For example, species diversity in the genus *Colinus* under the BSC differs little from other quail genera (e.g. *Dendrortyx, Cyrtonyx, Callipepla*); under the alternative species concepts, however, the rapid diversification and speciation of *Colinus virginianus* into six distinct phylogenetic/evolutionary species in Mexico alone is apparent. In this way, interesting and appropriate questions are much more available to those investigators not intimately familiar with the fauna.

Considering broader issues related to biodiversity, revising the Mexican avifauna from an evolutionary species concept viewpoint made clear that patterns of diversity and endemism are far from independent of species concepts. It is tempting to assume that the alternative concept species, representing subsets of biological species, will produce identical geographic patterns, just with more detail (Amadon and Short 1992). Nevertheless, careful analyses of species lists presented herein demonstrated clear shifts in geographic foci of endemism between species concepts (Peterson and Navarro 1999), suggesting that evaluation of the systematic basis for taxonomic authority lists used in biodiversity analyses is critical.

Perhaps most importantly, the alternative taxonomy of Mexican birds changes dramatically the geographic view of avian diversity in Mexico (Peterson and Navarro 1999). Several areas depauperate of BSC endemic forms under the alternative concepts emerge as concentrations of narrowly endemic species. The Islas Tres Marías lack endemic biological species entirely, but hold nine endemic phylogenetic/evolutionary species. Whereas the Cape Region of Baja California Sur (Rojas-Soto et al. 2003) and Cozumel Island hold two endemic biological species each, each holds six phylogenetic/evolutionary species, emphasizing their importance as foci of endemism. Hence, under the alternative viewpoints, geographic patterns of endemism change, reflecting zones of isolation and historical separation. Thus, our taxonomic proposal represents a working list that will help future research and conservation efforts in the study of Mexico's avian diversity.

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Appendix. A working list of biological species that are divisible into multiple evolutionary species. Status column is coded as: E endemic to Mexico, and Q quasiendemic to Mexico (i. e., with northern or southern limits of range more or less coincident with Mexico's borders). Subspecies with question marks indicate that not enough specimens were available for definite allocation into a given species. References are given when available, though only when they add critical details to the understanding of variation in a particular species complex. NA= North America, SA= South America, CA= Central America.

| Biological species | Evolutionary species | Author | Distribution | Status | Characters | Mexican subspecies included | References and comments |
|---|---|---|---|---|---|---|---|
| *Crypturellus cinnamomeus* | *C. cinnamomeus* | (Lesson 1842) | E Mexico to Costa Rica | - | rufous, both sexes barred above, vocal characters | *cinnamomeus*, *goldmani*, *sallaei*, *mexicanus*, *soconuscensis*, *vicinior*, *intermedius* | Howell and Webb (1995) |
| | *C. occidentalis* | (Salvadori 1895) | W Mexico, S Sonora to C Guerrero | E | grayish, male not barred above, vocal characters | *occidentalis* | |
| *Puffinus auricularis* | *P. auricularis* | C. H. Townsend 1890 | Islas Revillagigedo | E | black extends farther down behind eye than in Hawaiian populations | *auricularis* | Excludes *newelli* of Hawaii (Jehl 1982) |
| *Oceanodroma leucorhoa* | *O. leucorhoa* | (Vieillot 1818) | Pacific and Atlantic oceans | - | large size, white rump | *willeti*, *chapmani*, *cheimomnestes* | Ainley (1980) |
| | *O. socorroensis* | C. H. Townsend 1890 | Isla Guadalupe | E | small size, dark rump | *socorroensis* | |
| *Ardea herodias* | *A. herodias* | Linnaeus 1758 | Continental NA, Galapagos | - | gray coloration | *hyperonca*, *herodias*, *treganzai*, *wardi*, *sanctilucae*, *lessonii* | The form *wurdemannii* is considered to be either an hybrid of *A. herodias* x *A. occidentalis,* or a naturally occurring color morph of *A. herodias* (Holt 1928) |
| | *A. occidentalis* | Audubon 1835 | Caribbean, Quintana Roo, and Florida, S to Venezuela | - | white coloration | *occidentalis* | |
| *Chen caerulesens* | *C. caerulescens* | (Linnaeus 1758) | E arctic America, winter to N Mexico | - | blue coloration | *caerulescens* | Although both forms are diagnosable, the current genetic exchange may prove that they are not longer evolving as independent lineages. If so, just one species should be recognized (see Mundy et al. 2004) |
| | *C. hyperborea* | (Pallas 1769) | W arctic America, winter to N Mexico | - | black and white coloration | *hyperborea* | |
| *Branta canadensis* | *B. canadensis* | (Linnaeus 1758) | NA, wintering to Mexico | - | very large size, breast gray to base of throat, bill relatively long | *parvipes*, *moffitti* | Dickson (2000) |
| | *B. hutchinsii* | (Richardson 1832) | E arctic Canada, wintering to Mexico | - | relatively large size, breast gray to base of throat, bill long | *hutchinsii* | |
| | *B. leucopareia* | (Brandt 1836) | NW NA, wintering to Mexico | - | relatively small, white ring at base of neck | *leucopareia* | |
| | *B. minima* | Ridgway 1885 | NW Alaska, wintering to Mexico | - | extremely small, breast gray to base of throat | *minima* | |

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| *Anas platyrhynchos* | *A. platyrhynchos* | Linnaeus 1758 | N Hemisphere | - | brightly colored male plumage | *platyrhynchos* | Hubbard (1977) |
| | *A. diazi* | Ridgway 1886 | SW USA to C Mexico | Q | female-like male plumage | *diazi*, *novimexicana* | |
| *Accipiter striatus* | *A. striatus* | Vieillot 1808 | Breeds Alaska to Oaxaca, winters to Panama | - | slate-blue back, reddish breast | *striatus*, *velox*, *suttoni*, *madrensis* | Storer (1952) |
| | *A. chionogaster* | (Kaup 1852) | Highlands, Chiapas to Nicaragua | - | blackish back, white breast | *chionogaster* | |
| *Buteo magnirostris* | *B. magnirostris* | (Gmelin 1788) | Lowlands, Mexico S to SA | - | large size, gray mantle | *direptor*, *petersi*, *griseocauda*, *conspectus*, *xantusi* | Peters and Griscom (1929) |
| | *B. gracilis* | (Ridgway 1885) | Islas Cozumel and Holbox | E | small size, brown mantle | *gracilis* | |
| *Buteo lineatus* | *B. lineatus* | (Gmelin 1788) | Canada and E USA S to C Mexico | - | underparts pale and streaked rusty, wings less boldly patterned | *lineatus*, *texanus*, *alleni* | |
| | *B. elegans* | Cassin 1855 | W NA S to Baja California and Sinaloa | - | underparts rich and almost solid rusty | *elegans* | |
| *Falco sparverius* | *F. sparverius* | Linnaeus 1758 | Breeds N NA to Guerrero, winters to Panama | - | rufous crown patch, underparts rusty | *sparverius*, *peninsularis* | South American forms may also represent a species complex given extreme variation in coloration (Hilty and Brown 1986) |
| | *F. tropicalis* | (Griscom 1930) | Breeds Chiapas and Guatemala S to SA | - | no rufous in crown, male whitish underneath | *tropicalis* | |
| *Cyrtonyx montezumae* | *C. montezumae* | (Vigors 1830) | SW USA to TV Belt and N Oaxaca | Q | sides and flanks spotted white, ground color of sides blackish | *mearnsi*, *montezumae*, *merriami* | |
| | *C. sallei* | J. Verreaux 1859 | Sierra Madre del Sur, Michoacán to Oaxaca | E | posterior flanks spotted rufous, ground color of sides medium gray | *sallei, rowleyi* | |
| *Colinus virginianus* | *C. ridgwayi* | Brewster 1885 | Arizona (formerly) and Sonora | E | head and throat black, forehead and crown brick, belly rusty | *ridgwayi* | Gordillo-Martínez (2000) |
| | *C. coyolcos* | (P. L. S. Müller 1776) | Pacific slope, Guerrero to Chiapas | E | head black, forehead and crown brick, throat white, belly rusty | *coyolcos*, *atriceps*, *insignis*, *salvini* | |
| | *C. virginianus* | (Linnaeus 1758) | USA S to NE Mexico | - | head brown and black, with white eyeline, belly barred black and white | *texanus*, *maculatus*, *aridus* | |
| | *C. pectoralis* | (Gould 1843) | Foothills, C Veracruz | E | head black, white eyeline, throat white, breast black, belly rusty | *pectoralis*, *nigripectus* | |
| | *C. graysoni* | (Lawrence 1867) | C N Mexico and Balsas Basin | E | head black, white eyeline, throat white, upper breast black, belly rusty | *nigripectus*, *graysoni* | |
| | *C. godmani* | Nelson 1897 | Extreme S Veracruz to interior Chiapas | E | head black, white eyeline, throat white, breast and belly black or rusty heavily streaked with black | *godmani*, *minor* | |

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| *Coturnicops noveboracensis* | *C. goldmani* | (Nelson 1904) | C Mexico, Transvolcanic Belt | E | large size compared with northern populations | *goldmani* | Population in C Mexico disjunct from NA populations. |
| *Synthliboramphus hypoleucus* | *S. hypoleucus* | (Xántus de Vesey 1860) | Isla Guadalupe (breeding) | E | white of throat reaches around front of eye, bill shape | *hypoleucus* | Jehl and Bond (1975) |
| | *S. scrippsi* | (Green and Arnold 1939) | Islands off California and Baja California (breeding) | Q | black crown includes eye, bill shape | *scrippsi* | |
| *Columba fasciata* | *C. fasciata* | Say 1823 | W NA to Guatemala | - | tail with black subterminal band dorsally, and marked broad white tips | *monilis*, *fasciata* | |
| | *C. vioscae* | Brewster 1888 | Sierra de la Laguna, Baja California Sur | E | tail band and definition of white tips greatly reduced | *vioscae* | |
| *Aratinga holochlora* | *A. brewsteri* | Nelson 1928 | NW Mexico, Sonora, Sinaloa and Chihuahua | E | bill small, tail shorter, slightly bluish crown | *brewsteri* | Rodríguez Estrella et al. (1992). Related populations in CA have been referred to *A. rubritorques* and *A. strenua* (AOU 1998). |
| | *A. holochlora* | (Sclater 1859) | Tamaulipas to Veracruz; E Oaxaca and Chiapas | E | smaller body size, bill large, tail shorter | *holochlora* | |
| | *A. brevipes* | (Lawrence 1871) | Isla Socorro | E | very large bill relative to body size, tail long | *brevipes* | |
| *Forpus cyanopygius* | *F. cyanopygius* | (Souancé 1856) | Sonora to Colima | E | yellow-green overall, bill small | *pallidus*, *cyanopygius* | |
| | *F. insularis* | (Ridgway 1888) | Islas Tres Marias | E | yellow-green washed glaucous overall, bill large | *insularis* | |
| *Amazona oratrix* | *A. oratrix* | Ridgway 1887 | C and S Mexico on both slopes to Belize | Q | small yellow hood extends to throat and nape, averages smaller | *oratrix* | Monroe and Howell (1966), Lousada and Howell (1996) |
| | *A. tresmariae* | Nelson 1900 | Islas Tres Marias | E | broad yellow hood extends to chest, averages larger | *tresmariae* | |
| *Piaya cayana* | *P. mexicana* | (Swainson 1827) | W Mexico, Sonora to Oaxaca | E | paler, underside of tail, rufous, black subterminal band, white tips | *mexicana* | Binford (1989) |
| | *P. thermophila* | Sclater 1859 | E Mexico to Panama | - | darker, underside of tail black, white tips | *thermophila* | |
| *Strix occidentalis* | *S. occidentalis* | (Xantus 1860) | British Columbia to N Baja California | - | molecular characters | *occidentalis* | Barrowclough and Gutiérrez (1990), Dickerman (1997) |
| | *S. lucida* | (Nelson 1903) | Utah and Colorado S to C Mexico | - | molecular characters | *lucida, huachucae, juanaphillipsae* | |
| *Otus kennicottii* | *O. kennicottii* | (Elliot 1867) | W NA S to Transvolcanic Belt in highlands | - | voice, less reddish coloration | *quercinus, cardonensis, xantusi, gilmani, suttoni, yumanensis* | König et al. (1999), AOU (1998) |
| | *O. vinaceus* | (Brewster 1888) | Lowlands S Sonora and W Chihuahua S to N Sinaloa | E | voice, red-wine base coloration, habitat | *vinaceus, sinaloensis* | |
| *Otus cooperii* | *O. cooperii* | (Ridgway 1878) | Pacific coast, Chiapas to Costa Rica | - | voice, larger size, light crown | *chiapensis, cooperi* | Binford (1989), König et al. (1999), Moore and Marshall (1959) |

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| | *O. lambi* | (Moore and Marshall 1959) | Pacific coast, Oaxaca | E | voice, , smaller size, dark crown | *lambi* | |
| *Glaucidium gnoma* | *G. hoskinsii* | Brewster 1888 | Cape Region, Baja California Sur | E | slow, doubled song | *hoskinsii* | Robbins and Howell (1995), König et al. (1999) |
| | *G. gnoma* | Wagler 1832 | S Arizona to Oaxaca | Q | fast, doubled song | *gnoma* | |
| | *G. californicum* | Sclater 1857 | Alaska to N Sonora and N Chihuahua | - | vocalizations, molecular characters, ecology | *grinnelli, californicum, swarthi, pinicola* | |
| | *G. cobanense* | Sharpe 1875 | Chiapas to Honduras | - | vocalizations, molecular characters | *cobanense* | |
| *Glaucidium palmarum* | *G. palmarum* | Nelson 1901 | W Mexico | E | small size | *palmarum*, *oberholseri* | Howell and Robbins (1995), M. B. Robbins (pers. comm.) |
| | *G. griscomi* | Moore 1947 | Upper Balsas Basin, Morelos and Guerrero | E | large size | *griscomi* | |
| *Caprimulgus vociferus* | *C. vociferus* | Wilson 1812 | Breeds USA, winters E Mexico to Honduras | - | faster song, more white in tail, eggs heavily marked | *vociferus* | Phillips et al. (1964) |
| | *C. arizonae* | (Brewster 1881) | Mexico to Honduras | - | slower, simpler song, reduced white in tail on average, eggs unmarked | *arizonae*, *oaxacae*, *chiapensis* | |
| *Chaetura vauxi* | *C. vauxi* | (Townsend 1839) | Breeds N America, winters to Guatemala | - | large size, back brownish, tail rachises protrude, pale chest and belly | *vauxi*, *tamaulipensis* | Marín (1997) |
| | *C. richmondi* | Ridgway 1910 | S Mexico S to Panama | - | large size, back brownish with blue-black cast, tail rachises protrude, dusky chest | *richmondi* | |
| | *C. gaumeri* | Lawrence 1882 | Yucatan Peninsula | E | small size, back brownish with blue-black cast, tail rachises do not protrude, dusky chest | *gaumeri* | |
| *Phaethornis longirostris* | *P. longirostris* | (DeLattre 1843) | E Mexico to Honduras | - | small size, bill relatively short and curved, short tail, contrasting plumage | *veraecrucis*, *longirostris* | Phillips (1962), Hinkelmann and Schuchmann (1997) |
| | *P. mexicanus* | Hartert 1897 | Guerrero and Oaxaca | E | large size, bill long and straight, tail long, plumage dusky, crown dusky | *mexicanus* | |
| | *P. griseoventer* | Phillips 1962 | W Mexico, Nayarit to Jalisco | E | Coloration paler overall, crown greenish | *griseoventer* | |
| *Campylopterus curvipennis* | *C. curvipennis* | (Lichtenstein 1830) | E Mexico, San Luis Potosí to to N Oaxaca | E | long bill, coloration duller | *curvipennis* | |
| | *C. pampa* | (Lesson 1832) | Yucatan Peninsula S to Guatemala,disjunctly in NE Honduras | - | short bill, coloration deeper | *pampa* | |
| *Chlorostilbon canivetii* | *C. canivetii* | (Lesson 1832) | E Mexico | E | Medium-length tail, tail pattern | *canivetii* | Howell (1993) |

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| | *C. salvini* | Cabanis and Heine 1860 | Chiapas and CA | - | short tail, tail pattern | *salvini* | |
| *Cynanthus latirostris* | *C. latirostris* | Swainson 1827 | SW USA to C Mexico | Q | throat blue-violet, crown green, throat green, molecular characters | *magicus*, *propinquus*, *latirostris, toroi* | Navarro and Peterson (1999), García-Deras (2003) |
| | *C. lawrencei* | (Berlepsch 1887) | Islas Tres Marias | E | throat turquoise green, crown green | *lawrencei* | |
| | *C. doubledayi* | (Bourcier 1847) | Coastal lowlands, Colima and Guerrero to Oaxaca | E | crown turquoise blue, throat violet blue, molecular characters | *doubledayi*, *nitida* | |
| *Amazilia beryllina* | *A. beryllina* | (Lichtenstein 1830) | Sonora to Oaxaca | E | tail rufous, belly buffy gray | *viola*, *beryllina* | Weller (1997) |
| | *A. devillei* | (Bourcier and Mulsant 1848) | Chiapas to Nicaragua | - | tail bronzy purplish, belly green | *devillei*, *lichtensteini, sumichrasti* | |
| *Amazilia rutila* | *A. graysoni* | Lawrence 1866 | Islas Tres Marias | E | very large size, dark bronzy upperparts, tail long | *graysoni* | |
| | *A. rutila* | (DeLattre 1843) | W Mexico to Honduras | - | Small size, tail shorter | *rutila* | |
| *Amazilia viridifrons* | *A. viridifrons* | (Elliott 1871) | SW Mexico, Guerrero-Oaxaca | E | green sides of neck and flanks, small size | *viridifrons* | Howell and Webb (1995), Phillips (1965), Howell (1993), Peterson and Navarro (1998). Subspecies *rowleyi* considered invalid (Peterson and Navarro 1998). |
| | *A. wagneri* | Phillips 1964 | SW Oaxaca, Miahuatlán | E | cinnamon sides of neck and flanks, small size | *wagneri* | |
| | *A. villadai* | Peterson and Navarro 2000 | E Oaxaca to Chiapas-Guatemala border | Q | large size, green sides of neck and flanks | *villadai* | |
| *Lampornis amethystinus* | *L. margaritae* | (Salvin and Godman 1889) | Sierra Madre del Sur Guerrero and Oaxaca | E | blue-violet gorget, molecular characters | *margaritae*, *circumventus*? | Cortés-Rodríguez (2003) |
| | *L. amethystinus* | Swainson 1827 | E Mexico, Tamaulipas to N Oaxaca; Transvolcanic Belt | E | pink gorget, molecular characters | *amethystinus*, *brevirostris* | |
| | *L. salvini* | (Ridgway 1908) | Chiapas to El Salvador | - | pink gorget, molecular characters | *salvini* | |
| *Eugenes fulgens* | *E. fulgens* | Swainson 1827 | SW USA to Oaxaca | Q | breast blackish below gorget | *fulgens* | |
| | *E. viridiceps* | Boucard 1878 | Chiapas to Nicaragua | - | breast green below gorget | *viridiceps* | |
| *Trogon elegans* | *T. ambiguus* | Gould 1835 | SW USA and Mexico S to Oaxaca | Q | tail pattern | *canescens*, *ambiguus*, *goldmani* | |
| *Momotus momota* | *M. coeruliceps* | (Gould 1836) | NE Mexico, Tamaulipas to N Veracruz | E | crown blue, forehead green | *coeruliceps* | Ibañez-Hernández (2000) |
| | *M. lessonii* | Lesson 1842 | E Mexico from C Veracruz to Panama | - | crown and forehead black, edged blue | *lessonnii*, *exiguus* | |

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| *Aulacorhynchus prasinus* | *A. wagleri* | (Sturm 1841) | Sierra Madre del Sur: Guerrero and Oaxaca | E | base of maxilla black | *wagleri* | Navarro et al. (2001) |
| | *A. prasinus* | (Gould 1834) | E Mexico to Nicaragua | - | base of maxilla yellow | *prasinus*, *stenorhabdus, chiapensis, warneri* | |
| *Melanerpes formicivorus* | *M. bairdi* | (Ridgway 1881) | Oregon to N Baja California | - | broad chest band, white irides | *martirensis* | Benítez-Díaz (1993), Honey-Escandón (2002) |
| | *M. angustifrons* | Baird 1870 | Baja California Sur | E | brown irides | *angustifrons* | |
| | *M. formicivorus* | (Swainson 1827) | SW USA to Nicaragua | - | narrow chest band, white irides | *formicivorus*, *lineatus*, *albeolus* | |
| *Melanerpes aurifrons* | *M. aurifrons* | (Wagler 1829) | Texas to NE and C Mexico | – | nasal tufts and nape yellow, nape separated from back by gray band, belly yellow, white bars on back wide, rectrices black | *aurifrons*, *incanescens* | Selander and Giller (1963) |
| | *M. grateloupensis* | (Lesson 1839) | SE Mexico and Yucatan Peninsula to N Chiapas | E | nasal tufts and nape red, belly red, white bands on back narrow, central rectrices black, lateral rectrices with white bands | *dubius*, *leei*, *veraecrucis*, *grateloupensis* | |
| | *M. santacruzi* | (Bonaparte 1837) | Extreme SE Chiapas to Nicaragua | - | nasal tufts yellow, nape red, belly yellow, white bands on back narrow, all rectrices black | *frontalis*, *santacruzi* | |
| | *M. polygrammus* | (Cabanis 1862) | Pacific slope, E Oaxaca to S Chiapas | E | nasal tufts and belly yellow, nape yellow and separated from back by thin gray band, white bars on back wide, rectrices with wide white bands | *polygrammus* | |
| *Picoides villosus* | *P. villosus* | (Linnaeus 1766) | W NA to N Baja California | - | large, contrasting black and white plumage | *hyloscopus, scrippsae*, | north-south cline in size, variation complex; Winkler et al. (1995) |
| | *P. jardinii* | (Malherbe 1845) | SW USA to Oaxaca | Q | small, short bill, underparts sooty | *intermedius*, *jardínii, icastus* | |
| | *P. sanctorum* | (Nelson 1897) | Chiapas to Panama | - | small, short bill, underparts brown, pale flanks | *sanctorum* | |
| *Piculus rubiginosus* | *P. yucatanensis* | (Cabot 1844) | E Mexico from C Veracruz to Nicaragua | - | supercilium red, underparts barred | *yucatanensis*, *maximus* | Baptista (1978), Winkler et al. (1995) |
| | *P. aeruginosus* | (Malherbe 1862) | NE Mexico | E | supercilium gray, underparts scalloped | *aeruginosus* | |
| *Colaptes auratus* | *C. cafer* | (Gmelin 1788) | W NA to C and S Mexico | - | crown and nape gray-brown, remiges red | *collaris*, *martirensis*, *nanus*, *mexicanus* | Winkler et al. (1995), Sweet et al. (2001) |
| | *C. auratus* | (Linnaeus 1758) | E NA to NE Mexico | - | crown and nape gray, remiges yellow | *luteus*? | |
| | *C. mexicanoides* | Lafresnaye 1844 | Mountains, Chiapas and N Central America | - | crown and nape cinnamon, remiges red | *mexicanoides* | |

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| | *C. rufipileus* | Ridgway 1876 | Isla Guadalupe | E | crown and nape cinnamon-brown, short wing and tail, rufous crown | *rufipileus* | |
| *Synallaxis erythrothorax* | *S. erythrothorax* | Sclater 1855 | E Mexico to N Honduras | - | blackish patch at border between throat and breast | *furtiva*, *erythrothorax* | |
| | *S. pacifica* | Griscom 1930 | Pacific coast, Chiapas to Honduras | - | throat gray, black patch lacking | *pacifica* | |
| *Xiphocolaptes propmeropirhynchus* | *X. omiltemensis* | Nelson 1903 | Sierra Madre del Sur, Guerrero | E | bill large | *omiltemensis* | |
| | *X. emigrans* | Sclater and Salvin 1859 | San Luis Potosí to Nicaragua | - | bill small | *sclateri*, *emigrans* | |
| *Dendrocolaptes sanctithomae* | *D. sheffleri* | Binford 1965 | Sierra Madre del Sur, Guerrero and Oaxaca | E | barring in throat and chest mottled black, bill flesh | *sheffleri* | Binford (1965), Marantz (1997) |
| | *D. sanctithomae* | (Lafresnaye 1852) | E Mexico to Ecuador | - | no black mottling in chest, bill black | *sanctithomae, legtersi* | |
| *Grallaria guatimalensis* | *G. binfordi* | Dickerman 1990 | C Mexico S to interior Oaxaca | E | pronounced collar pattern, dull coloration | *binfordi* | Dickerman (1990) |
| | *G. ochraceiventris* | Nelson 1898 | W Mexico, Jalisco to Oaxaca | E | large bill, ochre coloration | *ochraceiventris* | |
| | *G. guatimalensis* | Prévost and Des Murs 1846 | E Mexico S to Nicaragua | - | small bill, reddish coloration | *mexicana*, *guatimalensis* | |
| *Sayornis nigricans* | *S. nigricans* | (Swainson 1827) | SW USA to Oaxaca | - | white across entire belly | *semiatra*, *nigricans* | |
| | *S. aquatica* | Sclater and Salvin 1859 | Chiapas to Panama | - | white restricted to median belly and vent | *aquatica* | |
| *Attila spadiceus* | *A. flammulatus* | Lafresnaye 1848 | E Mexico to Nicaragua | - | tail cinnamon-brown, brown on back and breast more pronounced, crown and back dark brown | *flammulatus*, *gaumeri* | Leger and Mountjoy (2003) |
| | *A. pacificus* | Hellmayr 1929 | W Mexico, Sinaloa to Oaxaca | E | tail bright orange, brown on back and breast lighter | *pacificus* | |
| | *A. cozumelae* | Ridgway 1885 | Isla Cozumel | E | tail cinnamon-brown, crown and back light brown | *cozumelae* | |
| *Pachyramphus major* | *P. major* | (Cabanis 1847) | Tamaulipas to N Oaxaca S to Nicaragua | - | female crown blackish | *major*, *australis*, *itzensis*, *matudai* | |
| | *P. uropygialis* | Nelson 1899 | W Mexico, Sinaloa to Oaxaca | E | female crown cinnamon, black eyestripe | *uropygialis* | |
| *Pachyramphus aglaiae* | *P. aglaiae* | (Lafresnaye 1839) | S Texas and E Mexico S to Costa Rica | - | belly dull gray | *gravis*, *sumichrasti,hypophaeus, aglaiae* (part) | Webster (1963) descibes very complex variation in the nominal |

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| | *P. albiventris* | (Lawrence 1867) | W Mexico, Arizona to Oaxaca | Q | belly whitish tan | *albiventris*, *richmondi*, *insularis, aglaiae* (part) | subspecies |
| *Tityra semifasciata* | *T. griseiceps* | Ridgway 1888 | W Mexico, Sonora to SW Oaxaca | E | female crown medium gray | *griseiceps*, *hannumi* | |
| | *T. personata* | Jardine and Selby 1827 | E Mexico to Nicaragua | - | female crown dusky gray-brown | *personata* | |
| *Stelgidopteryx serripennis* | *S. serripennis* | (Audubon 1838) | Breeds Canada and USA, winters to Panama | - | lighter, no supraloral spots, undertail coverts creamy white, shallow tail cleft | *serripennis*, *aphractus*, *fulvipennis*, *psammochrous* | Phillips (1986) |
| | *S. ridgwayi* | Nelson 1901 | Yucatan Peninsula and Guatemala | Q | dark overall coloration, pale forehead spots, blackish distal undertail coverts | *ridgwayi*, *stuarti* | |
| *Petrochelidon pyrrhonota* | *P. pyrrhonota* | (Vieillot 1817) | USA and Canada, winters Mexico to SA | - | cream-colored forehead and rump | *pyrrhonota*, *tachina* | |
| | *P. melanogaster* | (Swainson 1827) | Extreme SW USA S through Mexico | Q | brick forehead and rump | *melanogaster, swainsoni* | |
| *Petrochelidon fulva* | *P. fulva* | (Vieillot 1808) | Caribbean, Yucatan Peninsula, Chiapas | - | dark brown coloration, small size | *poeciloma*, *puertoricensis*, *fulva* | Garrido et al. (1998) |
| | *P. pelodoma* | (Brooke 1974) | Texas, N Mexico, winters CA | Q | pale coloration, large size | *pelodoma* | |
| *Cyanocitta stelleri* | *C. frontalis* | (Ridgway 1873) | NW NA S irregularly to N Baja California | - | no white eyebrow, crest dull bluish, crest long | *frontalis* | Aldrich (1944), Phillips (1986) |
| | *C. diademata* | (Bonaparte 1850) | Rocky Mountains to Zacatecas | - | white eyebrow, crest dull bluish, crest long | *macrolopha*, *diademata* | |
| | *C. coronata* | (Swainson 1827) | San Luis Potosi to Isthmus of Tehuantepec | E | white eyebrow, crest blue, crest long | *purpurea*, *coronata*, *teotepecensis*, *azteca* | |
| | *C. ridgwayi* | (Miller and Griscom 1925) | Chiapas to Nicaragua | - | white eyebrow, crest blue, throat white, crest short | *ridgwayi* | |
| *Cyanocorax yncas* | *C. luxuosa* | (Lesson 1839) | E Mexico to Honduras | - | black border to throat, eyebrow white | *luxuosa*, *centralis*, *maya*, *cozumelae, confusus* | |
| | *C. speciosa* | (Ridgway 1900) | W Mexico, Nayarit to W Oaxaca | E | yellow border to throat, no white above eye | *speciosa*, *vivida* | |
| *Cyanocorax morio* | *C. mexicanus* | (Rüppel 1837) | S Veracruz and Chiapas S to Panama | - | tips of tail and belly white | *mexicanus*, *cyanogenys*, *vociferus* | Selander (1959), (Binford 1989) |
| | *C. morio* | (Wagler 1829) | NE Mexico S to Chiapas | Q | overall dark dusky brown | *morio*, *fuliginosus* | |
| *Aphelocoma coerulescens* | *A. californica* | (Vigors 1839) | Washington S to Baja California | - | contrasting blue and white coloration, molecular characters | *obscura*, *cana*, *hypoleuca* | Peterson (1990, 1992) |
| | *A. sumichrasti* | (Baird and Ridgway 1873) | S Mexico | E | white underparts, reduced blue collar, molecular characters | *sumichrasti*, *remota* | |

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| | *A. woodhouseii* | (Baird 1858) | Interior W NA S to Jalisco and San Luis Potosi | - | all-over suffused with blue-gray | *grisea*, *cyanotis* | |
| *Aphelocoma ultramarina* | *A. potosina* | (Nelson 1899) | W Texas S through Sierra Madre Oriental to Hidalgo | Q | small size, rapid color maturation, molecular characters | *couchii*, *potosina* | Peterson (1990, 1992) |
| | *A. ultramarina* | (Bonaparte 1825) | Transvolcanic Belt | E | large size, delayed color maturation, molecular characters | *ultramarina*, *colimae* | |
| | *A. wollweberi* | Kaup 1854 | SE Arizona S through Sierra Madre Occidental to Nayarit and Aguascalientes | Q | small size, delayed color maturation, molecular characters | *arizonae*, *wollweberi*, *gracilis* | |
| *Aphelocoma unicolor* | *A. unicolor* | (DuBus 1847) | E Mexico to Nicaragua | - | coloration, short tail, molecular characters | *unicolor*, *griscomi*, *oaxacae*, *concolor* | Pitelka (1951), Peterson (1990, 1992) |
| | *A. guerrerensis* | Nelson 1903 | Sierra Madre del Sur, Guerrero | E | coloration darker, long tail, molecular characters | *guerrerensis* | |
| *Corvus corax* | *C. sinuatus* | Wagler 1829 | W USA south to Central America | - | molecular characters | *sinuatus, clarionensis* | Omland et al. (2000) |
| | *C. corax* | Linnaeus 1758 | Accidental in N and W Mexico | - | molecular characters | *principalis* | |
| *Psaltriparus minimus* | *P. minimus* | (J. K. Townsend 1837) | California and Baja California | - | brownish crown | *grindae*, *melanurus* | Raitt (1967) |
| | *P. plumbeus* | (Baird 1854) | Interior W USA S to extreme N Mexico | - | gray crown and brownish auriculars | *plumbeus*, *cecaumenorum* | |
| | *P. melanotis* | (Hartlaub 1844) | SW USA S to Oaxaca, Chiapas, and Guatemala | Q | black ear patch | *melanotis*, *lloydi*, *iulus* | |
| *Campylorhynchus rufinucha* | *C. rufinucha* | (Lesson 1838) | C Veracruz | E | light spotting on breast and belly | *rufinucha* | Selander (1964) |
| | *C. humilus* | Sclater 1856 | SW Mexico | E | small, pale, underparts white | *humilus* | |
| | *C. capistratus* | (Lesson 1842) | Chiapas to Costa Rica | – | large, bold rufous back, underparts white | *nigricaudatus* | |
| *Campylorhynchus brunneicapillus* | *C. affinis* | Xantus 1859 | C and S Baja California | E | no orange wash on belly, breast spots large | *affinis*, *purus*, *bryanti* | Selander (1964) |
| | *C. brunneicapillus* | (Lafresnaye 1835) | SW USA to C Mexico | - | warm orange wash on belly, breast spots small | *couesi*, *seri*, *brunneicapillus*, *guttatus* | |
| *Campylorhynchus megalopterus* | *C. megalopterus* | Lafresnaye 1845 | Transvolcanic Belt, Jalisco to Veracruz | E | darker coloration, behavior, vocalizations | *megalopterus,* | Selander (1964) |
| | *C. nelsoni* | (Ridgway 1903) | SW Veracruz S to C Oaxaca | E | lighter plumage coloration, behavior, vocalizations | *nelsoni* | |
| *Salpinctes obsoletus* | *S. obsoletus* | (Say 1823) | NA S to Isthmus of Tehuantepec | - | belly washed beige, breast lightly spotted | *obsoletus*, *guadeloupensis*, *tenuirostris*, *exsul* | |

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| | *S. neglectus* | (Nelson 1897) | Isthmus of Tehuantepec S to Nicaragua | - | belly white, breast heavily spotted | *sollicitus*, *neglectus* | |
| *Thryothorus ludovicianus* | *T. ludovicianus* | (Latham 1790) | E USA to NE Mexico | - | underparts cinnamon | *lomitensis*, *tropicalis* | Phillips (1986) |
| | *T. albinucha* | (Cabot 1847) | Yucatan Pen S to N Guatemala and Nicaragua | - | underparts whitish, sides of neck barred black and whitish | *albinucha*, *tabascensis* | |
| *Troglodytes aedon* | *T. aedon* | Vieillot 1807 | Breeds NA, S to NW Mexico | - | underparts pale gray | *aedon*, *parkmanii* | Phillips (1986), Rice et al. (1999) |
| | *T. musculus* | Naumann 1823 | S Mexico to Argentina | - | warmer brown above, underparts pale buff | *intermedius*, *peninsularis* | |
| | *T. brunneicollis* | Sclater 1858 | Highlands SW USA to Oaxaca | Q | distinct superciliary line, underparts buff-brown | *brunneicollis*, *guerrerensis*, *compositus*, *cahooni* | |
| | *T. beani* | Ridgway 1885 | Isla Cozumel | E | large, whiter gray below | *beani* | |
| *Cistothorus platensis* | *C. stellaris* | (Naumann 1823) | Breeds NA, winters to NE Mexico | - | streaks on back to rump | *stellaris* | Phillips (1986) |
| | *C. elegans* | Sclater and Salvin 1859 | Nayarit, San Luis Potosí and SE Veracruz to Nicaragua | - | rump and lower back solid brown | *elegans*, *tinnulus, warneri, jalapensis, potosinus* | |
| *C. palustris* | *C. paludicola* | (Baird 1864) | Breeds W Canada S to Baja California and Sonora, winters to Oaxaca and Veracruz | - | vocalizations, rump reddish, crown brown with black supercilium | *paludicola, aestuarinus, browningi* | Phillips (1986), AOU (1998) |
| | *C. palustris* | (Wilson 1810) | Breeds E NA, locally S to State of Mexico | - | vocalizations, rump dark rufous, crown dark | *tolucensis, pulverius,plesius, laingi, iliacus, cryphius, dissaeptus* | |
| *Uropsila leucogastra* | *U. pacifica* | (Nelson 1897) | Pacific lowlands, Jalisco to C Guerrero | E | song, legs dark | *pacifica* | |
| | *U. leucogastra* | (Gould 1836) | E Mexico to N Guatemala | Q | song, legs light | *leucogastra*, *musica*, *brachyura* | |
| *Regulus calendula* | *R. calendula* | (Linnaeus 1766) | Breeds NA, winters throughout Mexico S to Guatemala | - | bill thin and fine, back light | *calendula*, *cineraceus* | |
| | *R. obscurus* | Ridgway 1876 | Isla Guadalupe | E | bill stout, back dark | *obscurus* | |
| *Polioptila caerulea* | *P. caerulea* | (Linnaeus 1766) | NA to Honduras | - | throat and underparts lighter, bill small and light | *amoenissima*, *obscura*, *deppei*, *gracilis*, *caerulea*, *nelsonim, comiteca* | Phillips (1991) |
| | *P. cozumelae* | Griscom 1926 | Isla Cozumel | E | throat and underparts dusky, bill large and black, wing shorter | *cozumelae* | |
| *Polioptila albiloris* | *P. albiloris* | Sclater and Salvin 1860 | Michoacán to Costa Rica | | coloration darker | *albiloris, vanrossemi* | |

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| | *P. albiventris* | Lawrence 1885 | N Yucatán Peninsula and Isla Cozumel | E | upperparts duller, belly white | *albiventris* | |
| *Catharus occidentalis* | *C. olivascens* | Nelson 1899 | NW Mexico, Chihuahua, Durango, and Sonora | E | crown, nape, upperparts paler, grayish-olive brown, wingbar and cheek whitish, tarsus short | *olivascens* | Phillips (1969, 1991) |
| | *C. occidentalis* | Sclater 1859 | C and NE Mexico to Oaxaca | E | crown, nape, upperparts rich brown, wingbar and cheek beige, tarsus long | *fulvescens*, *occidentalis, lambi, durangensis* | |
| *Catharus ustulatus* | *C. swainsonii* | (Tschudi 1845) | Breeds W NA, migrates through Baja California and NW Mexico | - | upperparts grayish, heavy chest spotting, migration pattern, genetics | *swainsonii, incanus, appalachiensis* | Phillips (1991), Rueggs and Smith (2002) |
| | *C. ustulatus* | (Nuttall 1840) | Breeds E NA, winters Mexico S to Panama | - | upperparts reddish, light breast spotting, migration pattern, genetics | *ustulatus, phillipsii, oedicus* | |
| *Turdus assimilis* | *T. leucachen* | Sclater 1858 | Chiapas and SE Veracruz to Honduras | - | upperparts slate blackish | *leucachen* | |
| | *T. assimilis* | Cabanis 1850 | Mexico S to Oaxaca | E | upperparts olive | *assimilis*, *lygrus*, *calliphthongus* | |
| *Turdus rufopalliatus* | *T. rufopalliatus* | Lafresnaye 1840 | W Mexico, Sonora to Oaxaca, casual SW USA | E | bright coloration, sharp contrast between head and back | *rufopalliatus*, *interior*, *grisior* | Phillips (1981) |
| | *T. graysoni* | (Ridgway 1882) | Islas Tres Marias and coastal Nayarit | E | washed out coloration, back only slightly brighter than head | *graysoni* | |
| *Turdus migratorius* | *T. migratorius* | Linnaeus 1766 | NA to Oaxaca and Yucatan Peninsula | - | underparts rufous, eyebrow rufous, head darker than back, sexual dichromatism | *migratorius*, *propinquus*, *phillipsi*, *permixtus*, *achrusterus* | Aldrich and James (1991) |
| | *T. confinis* | Baird 1864 | Cape Region, Baja California Sur | E | underparts buffy, eyebrow whitish, head same color as back, no sexual dichromatism | *confinis* | |
| *Toxostoma curvirostre* | *T. palmeri* | (Coues 1872) | Pacific slope, Sonora to Nayarit | E | generally faded and subtle markings | *palmeri*, *insularum*, *maculatum*, *occidentale* | Rojas-Soto (2003) |
| | *T. curvirostre* | (Swainson 1827) | SW USA through interior Mexico to Oaxaca | - | distinct markings | *celsum*, *curvirostre*, *oberholseri* | |
| *Toxostoma lecontei* | *T. lecontei* | Lawrence 1851 | SW USA to Sonora and N Baja California | - | lighter, molecular characters | *lecontei* | Zink et al. (1998) |
| | *T. arenicola* | (Anthony 1897) | Vizcaino Desert, Baja California | E | darker, molecular characters | *arenicola* | |
| *Melanotis caerulescens* | *M. longirostris* | Nelson 1898 | Islas Tres Marias | E | large size, bill long | *longirostris* | |
| | *M. caerulescens* | (Swainson 1827) | Mainland Mexico S to Isthmus | E | smaller size, bill short | *caerulescens* | |

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| *Vireo griseus* | *V. griseus* | (Boddaert 1783) | S Canada to NE Mexico | - | head grayish, back gray-green, breast and underparts without green, spectacles yellow, face gray | *noveboracensis*, *griseus*, *micrus* | Phillips (1986) |
| | *V. perquisitor* | Nelson 1900 | San Luis Potosí and N Veracruz | E | head olive, back medium green, breast heavily infused with green, underparts lemon, yellow spectacles reduced to lores, green notable on face | *perquisitor* | |
| *Vireo gilvus* | *V. swainsonii* | Baird 1858 | Breeds from Alaska to Oaxaca. Winters SW USA and Mexico. | - | ecology, vocalizations, bill small, crown dark, sides pale yellow | *swainsoni, victoriae, leucopolius, brewsteri,connectens*? | Phillips (1986) |
| | *V. gilvus* | (Vieillot 1808) | Breeds Canada and E USA. Winters S Mexico to Honduras. | - | ecology, vocalizations, bill larger, crown light, sides bright yellow | *gilvus, eleanorae* | |
| *Vireo pallens* | *V. paluster* | Moore 1938 | Sonora to Nayarit | E | duller coloration, large size, eyes brown | *paluster* | *V. semiflavus* exhibits color morphs (Howell and Webb 1995) |
| | *V. semiflavus* | Salvin 1863 | E Mexico and Yucatan Peninsula to Costa Rica | - | brighter coloration, small size, eyes white, presence of color morphs | *semiflavus*, *salvini* | |
| | *V. pallens* | Salvin 1863 | Pacific coast: Oaxaca to El Salvador | - | dull white below, dull coloration, eyes white? | *pallens*, *ochraceus* | |
| *Vireo plumbeus* | *V. plumbeus* | Coues 1866 | N USA to Oaxaca | - | thicker bill, large size, song characters | *plumbeus*, *repetens*, *pinicolus*, *gravis* | Phillips (1991) |
| | *V. notius* | (Van Tyne 1933) | E Oaxaca to Honduras | - | smaller, thicker bill, plumage like *cassinii*, song characters | *montanus* | |
| *Cyclarhis gujanensis* | *C. flaviventris* | Lafresnaye 1842 | E Mexico to Honduras | - | underparts yellow, small size | *flaviventris*, *yucatanensis* | |
| | *C. insularis* | Ridgway 1885 | Isla Cozumel | E | underparts white, large size, duller coloration | *insularis* | |
| *Parula pitiayumi* | *P. insularis* | Lawrence 1871 | Islas Tres Marías | E | duller gray-blue, some white in tail, no black in face, breast spot vague orangish | *insularis* | Lovette and Bermingham (2001) |
| | *P. nigrilora* | Coues 1878 | NE Mexico, S Texas to N Oaxaca | Q | face black, with blackish lores blending into dark mask | *nigrilora*, *pulchra* | |
| | *P. inornata* | Baird 1864 | S Veracruz to Guatemala | Q | like *nigrilora*, but duller, mask less contrasting, wingbars reduced, underparts not washed strongly with orange | *inornata* | |
| | *P. graysoni* | (Ridgway 1887) | Isla Socorro | E | no white in tail, no black in face, belly yellow, with orange patch greatly reduced | *graysoni* | |
| *Dendroica petechia* | *D. aestiva* | (Gmelin 1789) | N NA to C Mexico | - | head yellow | *morcomi*, *sonorana*, *dugesi*, *aestiva*, *rubiginosa*, *amnicola* | Klein and Brown (1994), Mennill (2001) |

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| | *D. petechia* | (Linnaeus 1766) | West Indies, N SA, Isla Cozumel | - | crown rusty | *rufivertex* | |
| | *D. erithachorides* | Baird 1858 | Coasts, E and W Mexico S into Central America | - | head rusty | *bryanti*, *rhizophorae*, *castaneiceps* | |
| *Dendroica coronata* | *D. coronata* | (Linnaeus 1766) | Breeds E Canada and USA | - | small size, head gray, throat white | *coronata*, *hooveri* | Barrowclough (1980) |
| | *D. auduboni* | (Townsend 1837) | Breeds W Canada and USA to Durango | - | small size, head gray, throat yellow | *auduboni*, *memorabilis*, *nigrifrons* | |
| | *D. goldmani* | Nelson 1897 | E Chiapas and W Guatemala | Q | large size, head and chest mostly black, yellow throat | *goldmani* | |
| *Geothlypis trichas* | *G. trichas* | (Linnaeus 1766) | Breeds NA and N Mexico | - | belly whitish | *occidentalis*, *scirpicola*, *chryseola*, *brachydactyla*, *trichas*, *typhicola*, *insperata* | |
| | *G. modesta* | (Nelson 1900) | NW Mexico | E | flanks washed brownish, underparts all yellow | *modesta* | |
| | *G. chapalensis* | Nelson 1903 | Lake Chapala, Jalisco | E | like *melanops* but caudal border of mask lemon, not whitish | *chapalensis* | |
| | *G. melanops* | Baird 1865 | Zacatecas S to Veracruz and Oaxaca | E | underparts all yellow, brown flanks, mask border white | *melanops* | |
| *Oporonis tolmiei* | *O. tolmiei* | (Townsend 1839) | Breeds NA, Winters Mexico S to Panama | - | molecular characters, tail shorter | *monticola, tolmie* | Milá et al. (2000) |
| | *O.* sp. nov. | -- | Breeds Coahuila and Nuevo León | E | molecular characters, tail longer | -- | |
| *Ergaticus ruber* | *E. melanauris* | Moore 1937 | NW Mexico, Chihuahua to Sinaloa and N Nayarit | E | ear patch leaden gray | *melanauris* | |
| | *E. ruber* | (Swainson 1827) | Mountains, C and S Mexico | E | ear patch pearly white | *ruber* | |
| *Basileuterus rufifrons* | *B. rufifrons* | (Swainson 1838) | Sonora and Tamaulipas S to Isthmus of Tehuantepec | E | belly white, white auriculars | *rufifrons*, *caudatus*, *jouyi*, *dugesi* | Miller et al. (1957) |
| | *B. salvini* | Cherrie 1891 | S Veracruz to N Guatemala and Belize | - | belly yellowish, white auriculars | *salvini* | |
| | *B. delattrii* | Bonaparte 1854 | E Chiapas to Costa Rica? | - | belly yellowish, no white auriculars | *delatrii* | |
| *Granatellus venustus* | *G. venustus* | DuBus 1849 | W Mexico, Sonora to Chiapas | E | black chest band, small size | *venustus* | |
| | *G. francescae* | Baird 1865 | Islas Tres Marias | E | no chest band, large size | *francescae* | |
| *Coereba flaveola* | *C. caboti* | (Ridgway 1873) | Isla Cozumel and E Quintana Roo | E | larger, upperparts blackish, brighter yellow rump, throat and chest white | *caboti* | Lowe (1912), Seutin et al. (1994) |

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| | *C. mexicana* | (Sclater 1856) | E Mexico to Colombia | - | smaller, upperparts gray, rump dull yellow, throat gray | *mexicana*, *intermedia*, *columbiana* | |
| *Euphonia affinis* | *E. affinis* | (Lesson 1842) | E Mexico S to Costa Rica | - | undertail coverts yellow | *affinis* | Dickerman (1981) |
| | *E. godmani* | Brewster 1889 | W Mexico, Sonora to C Guerrero | E | undertail coverts white | *godmani* | |
| *Habia rubica* | *H. affinis* | (Nelson 1897) | W Mexico, Nayarit to C Oaxaca | E | head and throat pink-red, female crown patch indistinct, bill light brown | *rosea*, *affinis* | |
| | *H. rubicoides* | (Lafresnaye 1844) | E Mexico S to Nicaragua | - | head dark red, throat dusky red, female crown patch distinct, bill black | *holobrunnea*, *nelsoni*, *rubicoides*, *confinis* | |
| *Piranga flava* | *P. hepatica* | (Swainson 1827) | SW USA S to Chiapas | Q | male bright red, cheeks red, upperparts dusky grayish, auriculars dusky | *hepatica*, *dextra* | Burns (1998) |
| | *P. figlina* | (Salvin and Godman 1883) | E Chiapas S to CA | - | male upperparts dark reddish, auriculars dusky flecked white | *figlina*, *albifacies*? | |
| *Piranga bidentata* | *P. bidentata* | (Swainson 1827) | W Mexico, Sonora to Guerrero | E | head and underparts flaming orange | *bidentata*, *flammea* | |
| | *P. sanguinolenta* | (Lafresnaye 1839) | E Mexico to CA | - | head and underparts red-orange | *sanguinolenta* | |
| *Rhodinocichla rosea* | *R. schistacea* | Ridgway 1878 | W Mexico, Sinaloa to Guerrero | E | pallid gray and pink coloration, large size | *schistacea* | Peterson et al. (in press) |
| *Chlorospingus ophthalmicus* | *C. albifrons* | Salvin and Godman 1889 | Sierra Madre del Sur: Guerrero and Oaxaca | E | throat buff, head brown, vocalizations | *albifrons*, *persimilis* | Peterson et al. (1992), Sánchez-González (2001), García-Moreno et al. (2004), Sosa (2004) |
| | *C. ophthalmicus* | (DuBus 1847) | E Mexico S to Oaxaca | E | throat white, head brown, vocalizations | *ophthalmicus* | |
| | *C. wetmorei* | Lowery and Newman 1949 | Los Tuxtlas, Veracruz | E | molecular characters, vocalizations | *wetmorei* | |
| | *C. postocularis* | Cabanis 1866 | Pacific slope, SE Chiapas to Guatemala | - | throat white, head gray, blackish lateral crown stripe, vocalizations | *postocularis* | |
| | *C. dwighti* | Underdown 1931 | E Oaxaca and N Chiapas to N Guatemala | - | molecular characters, vocalizations | *dwighti* | |
| *Saltator coerulescens* | *S. vigorsii* | G. R. Gray 1844 | W Mexico, Sinaloa to Oaxaca | E | head gray, face pattern | *vigorsii*, *plumbeiceps, richardsoni* | Van Rossem (1931) |
| | *S. grandis* | (W. Deppe 1830) | E Mexico S to Nicaragua | - | head olive-gray, face pattern | *grandis*, *yucatanensis*, *hesperis* | |
| *Cardinalis cardinalis* | *C. cardinalis* | (Linnaeus 1758) | NA to C Mexico and Yucatan Peninsula | - | short crest with soft feathers, coloration darker | *seftoni, igneus, superbus, townsendi, affinis, canicaudus, coccineus, littoralis, saturatus, flammigerus, yucatanicus, phillipsii, mariae*? | Parkes (1997) |

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| | *C. carneus* | (Lesson 1842) | Pacific coast, Jalisco to Oaxaca | E | long crest with stiff feathers, coloration lighter | *carneus* | |
| *Pheucticus chrysopeplus* | *P. aurantiacus* | Salvin and Godman 1891 | Chiapas and Guatemala | - | orange-yellow coloration | *aurantiacus* | One specimen from Chietla, Puebla (BNHM 92.1.32) is colored orange as *P. aurantiacus*, and was described as *P. c. rarissimus* |
| | *P. chrysopeplus* | (Vigors 1832) | NW Mexico to W Oaxaca | E | yellow coloration | *chrysopeplus*, *dilutus* | |
| *Cyanocompsa parellina* | *C. parellina* | (Bonaparte 1850) | E Mexico to Honduras | - | plumage blue, small size, female warmly colored | *parellina*, *beneplacita* | |
| | *C. indigotica* | (Ridgway 1887) | W Mexico, Sinaloa to Oaxaca | E | plumage paler, back less blue, large size, female duller, with lighter throat and belly | *indigotica* | |
| *Buarremon brunneinucha* | *B. brunneinucha* | (Lafresnaye 1839) | E and SW Mexico S to SA | - | prominent black chest band, tawny supercilium | *brunneinucha* | Parkes (1954), Peterson et al. (1992) |
| | *B. apertus* | Wetmore 1942 | Los Tuxtlas, Veracruz | E | lacks black chest band, lacks tawny supercilium | *apertus* | |
| *Atlapetes albinucha* | *A. albinucha* | (d'Orbigny and Lafresnaye 1838) | E Mexico S to N Chiapas | E | breast yellow | *albinucha* | |
| | *A. gutturalis* | (Lafresnaye 1843) | S Chiapas to SA | - | breast gray | *gutturalis* | |
| *Arremonops rufivirgatus* | *A. rufivirgatus* | (Lawrence 1851) | S Texas S to S Veracruz | Q | underparts dull brown, head stripes very dull | *rufivirgatus*, *ridgwayi*, *crassirostris* | Name of *A. sumichrasti* could change to *A. superciliosus* if Costa Rican populations are considered conespecific |
| | *A. sumichrasti* | (Sharpe 1888) | W Mexico, Sinaloa to Oaxaca; disjuncltly in interior Chiapas | E | underparts dull brown, head stripes pronounced and brown | *sumichrasti*, *sinaloae*, *chiapensis* | |
| | *A. verticalis* | (Ridgway 1878) | Yucatan Peninsula, Tabasco, Belize and N Guatemala | Q | underparts grayish, head stripes pronounced and reddish brown, sometimes edged with black | *verticalis* | |
| *Pipilo ocai* | *P. nigrescens* | (Salvin and Godman 1889) | Jalisco and Michoacán | E | head black, throat occasionally white, no crown stripe | *nigrescens* | |
| | *P. ocai* | (Lawrence 1867) | C and S Mexico in highlands | E | head black, white median crown stripe, throat white | *brunnescens*, *ocai*, *alticola*, *guerrerensis*, *sympatricus* | |
| *Pipilo maculatus* | *P. maculatus* | Swainson 1827 | W NA S to C Mexico | - | upperparts green or dark brown, with white spots on back and wings, small size | *curtatus*, *montanus*, *arcticus*, *gaigei*, *orientalis*, *maculatus*, *megalonyx*, *umbraticola*, *cosobrinus*, *magnirostris* | Sibley (1950, 1954), Sibley and West (1958) |
| | *P. macronyx* | Swainson 1827 | C and S Mexico | E | upperparts green, with dark stripes, large size | *macronyx*, *vulcanorum*, *oaxacae*, *chiapensis*, *repetens* | |
| | *P. socorroensis* | Grayson 1867 | Isla Socorro | E | upperparts dark brownish black, small size, head and chest brownish | *socorroensis* | |
| *Pipilo crissalis* | *P. crissalis* | (Vigors 1839) | W USA to C Baja California | - | belly brownish, large size, throat cinnamon, | *senicula*, *aripolius* | Zink (1988) |

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| | *P. albigula* | Baird 1860 | Cape region, Baja California Sur | E | belly whitish, small size, throat brown with white band | *albigula* | |
| *Sporophila torqueola* | *S. torqueola* | (Bonaparte 1850) | W and interior Mexico, Sinaloa S to Oaxaca | E | no wing bars, upperparts black | *atriceps*, *torqueola* | Ouellet (1992) |
| | *S. moreletti* | (Bonaparte 1850) | C Veracruz S to Panama | - | whitish wing bars, upperparts black | *moreletti*, *mutanda* | |
| | *S. sharpei* | Lawrence 1889 | S Texas S to N Veracruz | Q | whitish wing bars, upperparts brownish | *sharpei* | |
| *Amaurospiza concolor* | *A. concolor* | Cabanis 1861 | Chiapas to Panama | - | male dark blue | *concolor* | Griscom (1934), Orr and Ray (1945). |
| | *A. relicta* | (Griscom 1934) | Guerrero, Morelos, and Oaxaca | E | male slaty blue | *relicta* | |
| *Tiaris olivacea* | *T. pusilla* | Swainson 1827 | E Mexico to Venezuela | - | head black, large black chest patch | *pusilla* | |
| | *T. olivacea* | (Linnaeus 1766) | Caribbean, Isla Cozumel | - | head green edged black, black on chest more restricted | *intermedia* | |
| *Aimophila ruficauda* | *A. acuminata* | (Salvin and Godman 1886) | W Mexico, Durango to C Oaxaca | E | small size, underparts whitish | *acuminata* | |
| | *A. ruficauda* | (Salvin and Godman 1886) | Isthmus of Tehuantepec S to Costa Rica | - | large size, grayish band on chest | *lawrencii* | |
| *Aimophila botterii* | *A. botterii* | (Sclater 1858) | SW USA to W Guatemala | Q | lighter overall, rump feathers brown with dark shaft | *texana*, *mexicana*, *goldmani*, *botterii*, *arizonae*, *vantynei*? | |
| | *A. petenica* | (Salvin 1863) | S Veracruz to NW Costa Rica | - | darker and grayer overall, rump feathers black | *petenica, tabascensis* | |
| *Amphispiza belli* | *A. belli* | (Cassin 1850) | Coastal California and Baja California | - | tail black, head dark gray, broad throat stripe, morphometrics, molecular characters | *belli, canescens, cinerea* | Rising (1996), Johnson and Marten (1992) |
| | *A. nevadensis* | (Ridgway 1873) | Winters to N Baja California, Sonora and Chihuahua | - | tail white-tipped, head pale gray, narrow throat stripe, morphometrics, molecular characters | *nevadensis* | |
| *Passerculus sandwichensis* | *P. sandwichensis* | (Gmelin 1789) | NA, wintering to Guatemala | - | belly white, chest streaks slender, median crown stripe white, bill slender, darker outer rectrices | *savanna*, *crassus*, *brooksi*, *anthinus*, *nevadensis*, *oblitus*, *brunnescens*, *rufofuscus*? | Huey (1930), Rising (2001) |
| | *P. rostratus* | (Cassin 1852) | Colorado River mouth, Sonora and Sinaloa | E | belly white, chest streaks slender, bill heavy, darker outer rectrices | *rostratus*, *sanctorum*, *halophilus*, *atratus*? | |
| | *P. beldingi* | Ridgway 1885 | S California and NW Baja California | - | belly yellowish, chest streaks bold, median crown stripe gray or absent, bill slender, darker outer rectrices | *beldingi* | |
| | *P. brunnescens* | (Butler 1888) | NW and C Mexico in highlands | E | pale outer rectrices | *brunnescens*, *rufofuscus*? | |

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| *Passerella iliaca* | *P. unalaschensis* | (Gmelin 1789) | breeds Alaska S to Pacific NW USA; winters N Baja California | - | coloration brown overall, breast spotted brown, bill small, molecular characters | *unalaschcensis*, *sinuosa* | Zink (1994), Rising (1996) |
| | *P. schistacea* | Baird 1858 | breeds Rocky Mountains Canada and USA ; winters N Baja California | - | coloration grayish, wings and tail reddish, breast spotting dark, molecular characters | *schistacea*, *olivacea, canescens* | |
| | *P. iliaca* | (Merrem 1786) | breeds E NA; winters SE USA, occasionally to N Baja California and N Sonora? | - | coloration reddish overall, streaked back, rufous brst spots, molecular characters | *zaboria,altivagans*? | |
| | *P. megarhyncha* | Baird 1858 | Breeds California and Oregon, winters California S to N Baja California | - | coloration grayish, wings and tail reddish, breast spots small, bill very massive, molecular characters | *megarhyncha*, *monoensis, fulva* | |
| *Melospiza melodia* | *M. mexicana* | Ridgway 1874 | Highlands, Transvolcanic Belt | E | dark coloration, chest streaks large and dark brown | *mexicana*, *azteca*, *villai*, *yuriria*, *adusta*, *zacapu* | Aldrich (1984), Zink and Ditman (1993) |
| | *M. rivularis* | W. E. Bryant 1888 | SC Baja California | E | pale coloration, chest streaks slender and light brown | *rivularis*, *saltonis*? | |
| | *M. goldmani* | Nelson 1899 | Sierra Madre Occidental | E | small size | *goldmani*, *niceae* | |
| *Junco hyemalis* | *J. hyemalis* | (Linnaeus 1758) | Breeds N NA, winters N Mexico | - | coloration slate overall, no contrasting , bill pink | *hyemalis, cismontanus* | complex of several recognizable forms, meriting detailed study; bill pink, contrasting plumage; Miller (1941), Miller et al. (1957), Rising (1996) |
| | *J. oreganus* | (Townsend 1837) | Breeds W NA south to Baja California, winters W USA S to NW Mexico | - | head black, back reddish, brown flanks, bill pink | *oreganus, montanus, mearnsi, shufeldti, thurberi, pontilis, townsendi* | |
| | *J. caniceps* | (Woodhouse 1852) | Breeds W NA, winters SW USA S to NW Mexico | - | head bluish, back brown, pink flanks, bill pink | *caniceps* | |
| | *J. insularis* | Ridgway 1876 | Isla Guadalupe | E | bill blue-gray, dull plumage | *insularis* | |
| *Junco phaeonotus* | *J. bairdi* | Ridgway 1883 | Sierra de la Laguna, Baja California Sur | E | very small size, bill small, coloration grayish | *bairdi* | Miller (1941), Miller et al. (1957), Rising (1996) |
| | *J. phaeonotus* | Wagler 1831 | SW USA S to Oaxaca | Q | small size, bill small, back reddish | *palliatus*, *phaeonotus* | |
| | *J. fulvescens* | Nelson 1897 | N Chiapas highlands | E | small size, bill large, coloration duller and browner | *fulvescens* | |
| | *J. alticola* | Salvin 1863 | Extreme SE Chiapas and Guatemala | Q | large size, bill stout, back reddish | *alticola* | |
| *Agelaius phoeniceus* | *A. phoeniceus* | (Linnaeus 1766) | NA S to N Costa Rica | - | male black with red and yellow epaulets, female brown and white streaked | *neutralis*, *nyaritensis*, *richmondi*, *megapotamos* | Dickerman (1965), Jaramillo and Burke (1999) |
| | *A. gubernator* | (Wagler 1832) | C Mexico | E | male black with red epaulets, female dusky brown flecked with white | *gubernator*, *grandis*, *nelsoni*? | |

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| *Sturnella magna* | *S. magna* | (Linnaeus 1758) | E USA S through C and S Mexico into Central America | - | less white in tail, molecular characters | *hoopesi*, *alticola*, *mexicana*, *griscomi, saundersi*, *auropectoralis*? | J. C. Barlow and J. A. Dick (pers. comm.); placement of Mexican subspecies *auropectoralis* uncertain (Dickerman and Phillips 1970); Jaramillo and Burke (1999) |
| | *S. lilianae* | Oberholser 1930 | SW USA to Sonora and Chihuahua | - | extensive white in tail, molecular characters, song | *lilianae, auropectoralis*? | |
| *Icterus spurius* | *I. spurius* | (Linnaeus 1766) | Breeds Canada to NE Mexico | - | brick red color, large size | *spurius* | Jaramillo and Burke (1999), Baker et al. (2003) |
| | *I. fuertesi* | Chapman 1911 | Breeds Tamaulipas to S Veracruz, winters to Guerrero | E | reddish yellow color, small size | *fuertesi* | |
| *Icterus cucullatus* | *I. californicus* | (Lesson 1844) | Breeds California and Baja California S to Sonora and Sinaloa | - | pallid yellow head and breast | *nelsoni*, *trochiloides, californicus* | Jaramillo and Burke (1999) |
| | *I. cucullatus* | Swainson 1827 | S Texas and NE Mexico S to N Belize | Q | orange head and breast | *cucullatus*, *sennetti*, *igneus*, *masoni*, *duplexus*, *cozumelae, yucatanenis* | |
| *Icterus pustulatus* | *I. pustulatus* | (Wagler 1829) | W Mexico, Sonora to Chiapas | E | back with small spots, bill slender | *microstictus*, *pustulatus*, | Phillips (1995), Jaramillo and Burke (1999) |
| | *I. sclateri* | Cassin 1867 | Pacific coast, Chiapas to Honduras | - | back with large spots, or all black, bill slender | *formosus* | |
| | *I. graysonii* | Cassin 1867 | Islas Tres Marías | E | back without distinct spots, bill massive | *graysonii* | |
| *Icterus graduacauda* | *I. graduacauda* | Lesson 1839 | S Texas to C Veracruz | Q | secondaries edged white | *graduacauda*, *audubonii* | Jaramillo and Burke (1999) |
| | *I. dickeyae* | van Rossem 1938 | SW Mexico, Guerrero and Oaxaca | E | wings black | *dickeyae*, *nayaritensis* | |
| *Carpodacus mexicanus* | *C. mexicanus* | (P. L. S. Müller 1776) | Chihuahua and Sinaloa S to Oaxaca | E | small size, slender bill, red limited to upper breast | *altitudinis*, *rhodopnus*, *coccineus*, *mexicanus*, *potosinus*, *centralis*, *griscomi* | Moore (1939), Jehl (1971) ; *C. mcgregori* is considered extinct |
| | *C. frontalis* | (Say 1823) | SW Canada and W USA to Sonora, NW Chihuahua, Texas and Baja California | - | small size, slender bill, pinkish-red or red washed to lower breast | *frontalis*, *ruberrimus*, *clementis* | |
| | *C. mcgregori* | Anthony 1897 | Isla San Benito and Cedros | E extinct | large size, heavy bill, reduced red | *mcgregori* | |
| | *C. amplus* | Ridgway 1876 | Isla Guadalupe | E | large size, heavy bill, orange-red only on forehead and cheeks | *amplus* | |
| *Loxia curvirostra* | *L. stricklandi* | Ridgway 1885 | SW USA to Chiapas | Q | call note, morphometrics | *stricklandi, mesamericana*? | Extremely complex variation. Given known range, *L.stricklandi* is likely to range through mountains of at least N and C Mexico (Groth 1993) |
| | *L. bendirei* | Ridgway 1884 | W USA? S to N Baja California | - | call note, morphometrics | *bendirei* | |
| *Carduelis pinus* | *C. pinus* | (Wilson 1810) | Alaska to C Mexico | - | chest streaks well defined, secondary bar broad, superciliary line not apparent | *pinus*, *macropterus* | |

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| | *C. perplexus* | (van Rossem 1938) | Chiapas and W Guatemala | Q | chest streaks indistinct, secondary bar thin, grayish superciliary line | *perplexus* | |
| *Carduelis psaltria* | *C. psaltria* | (Say 1823) | SW USA and Mexico S to CA and Colombia | - | large, male head and upperparts black, white secondary patch not defined | *psaltria, columbianus* | Oberholser (1903) |
| | *C. hesperophilus* | (Oberholser 1903) | W USA S to Baja California Sur and Sinaloa | - | large, males olive back, black crown, white secondary patch not defined | *hesperophilus* | |
| | *C. jouyi* | (Ridgway 1898) | N Yucatan Peninsula | E | small, male head and upperparts black, white secondary patch well defined | *jouyi* | |