

COMPARING THE SPECIES LISTS IN TWO RECENT BOOKS ON FLORIDA BIRDS

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Abstract.— We attempt to reconcile and explain the differences in the number of species assigned to various categories in two recent books on the birds of Florida, Robertson and Woolfenden (1992; R&W) and Stevenson and Anderson (1994; S&A). Authors of both books had the common goal of reporting on all bird species, native and exotic, that have occurred in the wild in Florida. The native species and established exotic species of Florida that were deemed “verified” (R&W) total 461; those deemed “accredited” (S&A) total 481. The difference of 20 species between the two books can be reconciled by altering the verified number as follows; (1) delete one exotic considered established only by R&W, (2) add ten exotics considered established only by S&A, (3) add one morph elevated by S&A to species status, (4) add two native species verified since the publication of R&W, and (5) add eight native species deemed accredited (S&A), but not verified (R&W).

Authors of two recent books on the birds of Florida, Robertson and Woolfenden (1992; R&W) and Stevenson and Anderson (1994; S&A), had the common goal of reporting on every bird species, native and exotic, cited with some authority as having occurred in the wild in Florida. Differences exist between the two books in the total number of species included and in the number of species assigned to various categories. Here we attempt to reconcile and explain the differences, emphasizing those that affect totals for the native species and established exotics, which comprise the bulk of the avifauna of Florida.

R&W undertook to include all species mentioned as occurring in Florida through 31 December 1991. S&A incorporated reports covering two additional years, and in an addendum (pp. 703-710) also mentioned several 1994 reports as late as late March.

THE CATEGORIES.—R&W (pp. 2-4) assign each species to one of four (not five, see p. 2) categories: verified species, unverified stragglers (Appendix A), probably unestablished exotics (Appendix B), and unestablished exotics (Appendix C). Within each category, the species are listed in taxonomic sequence. S&A include all species in one taxonomically arranged list. Within this list the accredited species are

shown without brackets. Most species of non-accredited status are listed separately and bracketed. Sometimes, but not always, the text for the non-accredited species distinguishes those thought capable of reaching Florida without human assistance (often using the word "hypothetical") from probable escapes.

The verified species of R&W (p. 2) include only those species whose occurrence in Florida was documented by verifiable evidence of unquestioned provenance that existed during the preparation of the book. For the established exotic species, inclusion in the list of verified species also required evidence of self-sustaining populations in Florida in 1991. The accredited species of S&A (pp. xiii, 703) include eight native species known in Florida only from sight reports or from sightings with evidence that R&W considered inconclusive, and four formerly established exotics that apparently now are extirpated.

VERIFIED AND ACCREDITED SPECIES.—The total number of verified species (R&W) is 461. The total number of accredited species (S&A) is 481 (not 483, p. xiii or 484, p. 703). Of the 481 accredited species, 480 are so indicated in the Species Accounts by lack of brackets surrounding their names (see p. 7). The Java Sparrow (*Padda oryzivora*) should be included in the total. S&A intended to list this species as an established exotic, but failed to remove the brackets surrounding the name (B. Anderson, *in litt.*, July 1995).

Last minute changes in S&A account for some of the differences between status of particular species and inclusion or exclusion from the total of 481. S&A decided to remove four species of parrots, the Red-masked Parakeet (*Aratinga erythrogastris*), Chestnut-fronted Macaw (*Ara severa*), Turquoise-fronted Parrot (*Amazona aestiva*), and Yellow-headed Parrot (*A. oratrix*) from their list of established exotics, but forgot to exclude them when they tallied accredited species (B. Anderson, *in litt.*, July 1995).

The number of species ranked as established exotics is 11 in R&W (pp. 15, 17) and 22 in S&A (pp. xiii, 703). The S&A total includes two species that R&W list as native to Florida, the Canada Goose (*Branta canadensis*) and White-winged Dove (*Zenaidura macroura*). Both species occur naturally in Florida, but breed in the state only because of introductions.

R&W and S&A agree on 10 exotic species as established in Florida, the Rock Dove (*Columba livia*), Eurasian Collared-Dove (*Streptopelia decaocto*), Budgerigar (*Melopsittacus undulatus*), Monk Parakeet (*Myiopsitta monachus*), Canary-winged Parakeet (*Brotogeris versicolurus*), Red-whiskered Bulbul (*Pycnonotus jocosus*), European Starling (*Sturnus vulgaris*), Spot-breasted Oriole (*Icterus pectoralis*), House Finch (*Carpodacus mexicanus*), and House Sparrow (*Passer domesticus*).

R&W list one additional species as an established exotic, the Muscovy Duck (*Cairina moschata*). S&A, while citing evidence of widespread breeding, conclude that “no established wild (wary) population” of the Muscovy Duck exists in Florida.

S&A list 10 additional species as established exotics, the Black Francolin (*Francolinus francolinus*), Ringed Turtle-Dove (*Streptopelia risoria*), Inca Dove (*Columbina inca*), Rose-ringed Parakeet (*Psittacula krameri*), Black-hooded Parakeet (*Nandayus nenday*), Red-crowned Parrot (*Amazona viridigenalis*), Common Myna (*Acridotheres tristis*), Hill Myna (*Gracula religiosa*), Blue-gray Tanager (*Thraupis episcopus*), and the aforementioned Java Sparrow. R&W list 9 of these 10 species in Appendix B and the other, the Inca Dove, in Appendix A. Both sets of authors agreed that the former breeding population of Inca Doves on Key West probably was introduced.

Four of these 10 exotics apparently are extirpated from the state. In addition to the Inca Dove, these are the Black Francolin, Blue-gray Tanager, and Java Sparrow. If indeed, these species are no longer present but are placed on the verified or accredited list, they attain the status of “extirpated established exotics.” To R&W, this situation seemed less preferable than to suggest that the earlier conclusions regarding their establishment in Florida were premature.

S&A include as a species the Great White Heron (*Ardea occidentalis*). R&W followed the A.O.U. Check-list (1983) treatment of the Great White Heron and considered it a morph of the Great Blue Heron (*Ardea herodias*). This “splitting” adds one more species to the S&A total.

S&A include 10 native species in their accredited list that R&W excluded from their verified list. Two of these are species for which verifiable evidence was obtained between the publication of R&W and S&A, the South Polar Skua (*Catharacta maccormicki*; held captive, photographed, and released; documentation at Florida Museum of Natural History, see S&A p. 706) and Thick-billed Murre (*Uria lomvia*; specimen GEW 5872 at Archbold Biological Station, see S&A p. 315). Based on reports that preceded the definitive records, R&W listed both of these species in their Appendix A.

The remaining eight native species considered accredited by S&A but not verified by R&W are the Red-necked Grebe (*Podiceps grise-gena*), Rough-legged Hawk (*Buteo lagopus*), California Gull (*Larus californicus*), Blue-headed Quail-Dove (*Starioenas cyanocephala*), Vaux's Swift (*Chaetura vauxi*), Caribbean Elaenia (*Elaenia martinica*), Western Wood-Pewee (*Contopus sordidulus*), and Couch's Kingbird (*Tyrannus couchii*). Reports, often numerous, exist for the occurrence in Florida of all these species. However, at the time of writing the R&W book, verifiable evidence for their occurrence was either non-existent

or, in the opinion of R&W, inadequate to establish identity of the species. [Note: at the time of preparation of this article, early August 1995, two more of these species, the swift and pewee, have been verified.]

To reconcile the number of verified species (R&W total: 461) with the number of accredited species (S&A adjusted total: 481) subtract one exotic from the verified list ($461 - 1 = 460$), add 10 exotics from the accredited list ($460 + 10 = 470$), add one split native species ($470 + 1 = 471$), add two native species verified in the interim between the publication of the two books ($471 + 2 = 473$), and add 8 native species accredited (S&A) but not verified (R&W) ($473 + 8 = 481$).

UNVERIFIED AND NON-ACCREDITED SPECIES.—Appendix A in R&W lists 75 unverified stragglers, and Appendices B and C combined list 135 unestablished exotics. Note, however, that the King Vulture (*Sarcoramphus papa*) is listed in Appendices A and C, therefore the total number of unverified species in R&W is 209.

S&A arranged all species accounts taxonomically and did not categorize each species according to the criteria used by R&W. Based on the accounts, we were unable to place some species in the category of unverified, presumed stragglers or exotics. Furthermore, over a dozen species listed by R&W as unverified stragglers appear as “sub accounts” in S&A, which according to Bruce Anderson (*in litt.*, July 1995) should not be included in the total. For these reasons, we tallied all non-accredited species as one total, which is 185.

Comparing the total number of non-accredited species in the two books is further complicated because S&A include 11 species not found in R&W (all species listed by R&W appear in S&A). Of these 11 species, reports for seven, the White Spoonbill (*Platalea leucorodia*), White Stork (*Ciconia ciconia*), Coscoroba Swan (*Coscoroba coscoroba*), Gray Hawk (*Buteo nitidus*), Yellow-legged Gull (*Larus cachinnans*), Alexandrine Parakeet (*Psittacula eupatria*), and Northern Shrike (*Lanius excubitor*) post-date R&W. Reports for two more, the Barrow's Goldeneye (*Bucephala islandica*) and Ruffed Grouse (*Bonasa umbellus*) were known to R&W, but eventually were deemed unworthy of including in the book (as evidenced by their failure to delete the grouse from the R&W index). Reports from Florida of the remaining two, the Festive Parrot (*Amazona festiva*) and Yellow-shouldered Parrot (*Amazona barbadensis*), were overlooked by R&W. Further reconciling of totals between unverified and nonaccredited species does not seem possible.

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FLORIDA BIRD SPECIES: AN ANNOTATED LIST

BY

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Compare the DNA of the two groups. If their genes are different, they must be different species. Observe mating in the natural environment of the two groups. Bird guides once listed the myrtle warbler and Audubon's warbler as distinct species. Recently, these birds have been classified as eastern and western forms of a single species, the yellow-rumped warbler. However, recent books show them as eastern and western forms of a single species, the yellow-rumped warbler. Apparently, the myrtle warbler and Audubon's warbler successfully interbreed and produce fertile offspring are merging to form a single species are almost identical in appearance live in the same areas have undergone coevolution. Reasoning: Here's a causal reasoning in that dropping the hunting restriction would allow the other species [arctic birds] to recover. Thus, any other claim that disproves the relationship works. Look for: 1) alternative causes 2) no cause -> effect 3) cause -> no effect 4) reverse relationship 5) undermining data. Reptiles vs Birds Reptiles and birds are two important groups of animals. The morphology of these animals is very distinctive, but much of the physiology. Birds are warm-blooded vertebrates of the Class: Aves. There are about 10,000 extant bird species, and they have preferred the three-dimensional aerial environment with great adaptations. They have feathers covering the whole body with adapted forelimbs into wings. The interest about birds elevates because of some specializations seen in them viz. feather-covered body, beak with no teeth, high metabolic rate, and hard-shelled eggs. In addition, their lightweight but strong bony skeleton made up of air-filled bones make easy for the birds to be airborne.