

FLORIDA FIELD NATURALIST

QUARTERLY PUBLICATION OF THE FLORIDA ORNITHOLOGICAL SOCIETY

VOL. 9, No. 2

MAY 1981

PAGES 21-33

SOME NOTEWORTHY CHANGES IN THE BIRDLIFE OF NORTHWESTERN FLORIDA (1965-1979)

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Francis M. Weston's invaluable work, *A Survey of the Birdlife of Northwestern Florida* (1965, Bull. Tall Timbers Research Station 5: 1-147) covered 48 years (1916-1964) of detailed record keeping and established a firm basis for future ornithological work in northwestern Florida. Fifteen years have elapsed since its publication and some substantial changes in the Region's avifauna have occurred. This review was undertaken because of a lack of concisely published material covering this period. It includes only those species whose status has undergone a significant change. A more comprehensive account covering all species should be undertaken after a longer period of time has elapsed.

METHODS, GAZETTEER AND ABBREVIATIONS

This review covers the westernmost three counties in extreme northwestern Florida—Escambia, Santa Rosa and Okaloosa—as described by Weston (1965). Published data were obtained by reviewing the Regional Reports and CBCs in *Audubon Field Notes/American Birds (AFN/AB)* and the *Florida Field Naturalist*. Unpublished material came from summaries of field trips conducted by the Francis M. Weston Audubon Society, USF&WS Breeding Bird Surveys and local observers. In addition, data from Gulf Breeze, a migrant trap where the author and Lucy Duncan reside, are drawn upon. I recorded the composition and relative abundance of migrants present since 1974 and I have less extensive notes dating back to 1969. Lucy Duncan has operated a bird-banding station in spring and fall since 1977. Gulf Breeze is also a hawk lookout station manned during fall migration for the Hawk Migration Association of North America. All references are of published sight records appearing in Regional Reports/Central-Southern Region of AFN/AB unless otherwise stated. Species with 12 records or less for the 15-year period are documented as to date, place and observer.

Gazetteer of localities appearing in the Species Accounts. ESCAMBIA COUNTY—Bronson Field, Ft. Pickens (GINS), Gonzalez, Inerarity Point, Little Sabine (Santa Rosa Is.), Pensacola, Pensacola Bay, Pensacola Bay Pass, Pensacola Beach, Pensacola CBC, Perdido Bay, Perdido Key, Santa Rosa Is. (west section); OKALOOSA COUNTY—Choctawhatchee, Choctawhatchee Bay, Choctawhatchee CBC, Crestview, Destin, Eglin Air Force Base, Ft. Walton Beach, Jack's Lake (EAFB), Prairie Ponds (EAFB), Santa Rosa Island (east section), Santa Rosa Sound (east section), Weekley Pond (EAFB); SANTA ROSA COUNTY—Air Products Sanctuary, Garcon Point, Gulf Breeze, Navarre, Santa Rosa Island (middle section), Santa Rosa Sound (west section).

List of abbreviations that appear in the Species Accounts. Air Prod. Sanc.-Air Products Sanctuary; AMNH-American Museum of Natural History; CBC-Christmas Bird Count; EAFB-Eglin Air Force Base; FMWAS-Francis M. Weston Audubon Society; GINS-Gulf Islands National Seashore; imm.-immature; m. ob.-many observers; Pt.-point; spec.-specimens; TTRS-Tall Timbers Research Station; unpubl.-unpublished; USFWS-U.S. Fish & Wildlife Service.

List of observers' initials whose names frequently appear in the Species Accounts. DB-Dick Ballman; JTB-Joyce T. Baxter; LC-Lloyd Clayton; LD-Lucy Duncan; RAD-Robert A. Duncan; SD-Scot Duncan; OEF-Owen E. Fang; AF-Amy Furnans; TF-Ted Furnans; AG-Agnes Gaither; HG-Harold Gaither; LEG-Lyman E. Goodnight; CJK-Charles J. Kahn; CLK-Curtis L. Kingsbery; EL-Eric Lefstad; SL-Sandra Lefstad; MLM-Mary Lou Mattis; CWM-C. William Milmore; TM-Tudy Milmore; DR-Don Richardson; BJS-Barbara Johnson Stedman; SJS-Stepher J. Stedman; DT-Dave Turpin; WHV-Wayne H. Valentine; AFW-A. Fred Wicke, Jr.; FMW-Francis M. Weston.

SPECIES ACCOUNTS

This review treats 57 species. In the following accounts "WESTON" refers to Weston 1965, Bull. Tall Timbers Res. Sta. 5: 1-147, and "1965-79" refers to the period of the present summary. Photographs, unless otherwise indicated, are in the possession of the photographer. County designations for localities are listed and abbreviations are explained in the METHODS section (see above).

RED-THROATED LOON (*Gavia stellata*).—WESTON, "casual in winter in the coastal area," four records.—1965-79, two records: 20 Jan. 76, Pensacola Bay, BJS; 5 Dec. 79, Santa Rosa Sound, RAD & LD.

RED-NECKED GREBE (*Podiceps grisegena*).—WESTON, no records.—1965-79, two records: 6-11 April 67, Pensacola area, FMW & CJK, first record for area; 13 March 79, Perdido Key, OEF & Roberta Ross.

EARED GREBE (*Podiceps nigricollis*).—WESTON, "accidental in the coastal area in winter." Four records.—1965-79, two records: 10 Dec. 66, Pensacola area, FMW; 28 Dec. 76, Choctawhatchee Bay, RAD.

WESTERN GREBE (*Aechmophorus occidentalis*).—WESTON, "accidental," one record.—1965-79, one record: 15 May 72, Perdido Bay, Fla.-Ala., two birds, Barbara Bodman, Ralph Bodman & Bill Clark.

CORY'S SHEARWATER (*Puffinus diomedea*).—WESTON, no records.—1965-79, one record, 24 July 77, Pensacola Beach, 5 birds, Charles W. Saunders, Jr., Charles Duncan.

GREATER SHEARWATER (*Puffinus gravis*).—WESTON, no records.—1965-79, three records: 7 May 70, off Santa Rosa Is., two birds, James M. Stevenson; 17 July 77, 2 mi. S of Pensacola Bay Pass, John DeLorge; 30 Sept. 78, 40-55 mi. SW of Destin, 6-15 birds, CLK.

SOOTY SHEARWATER (*Puffinus griseus*).—WESTON, "casual in the coastal area," five records.—1965-79, one record, 30 Sept. 78, 40-55 mi. SW of Destin, CLK.

HARCOURT'S STORM-PETREL (*Oceanodroma castro*).—WESTON, no records.—1965-79, one record, 20 Aug. 69, Pensacola Beach, JTB, found dead after Hurricane Camille. Spec. (No. 67960) to Louisiana State U. Museum of Zoology.

BLUE-FACED BOOBY (*Sula dactylatra*).—WESTON, "accidental on the coast; one dependable sight record."—1965-79, four records: 23 Nov. 74, Destin, SL, EL, Richard Crittenden & Judy Crittenden, unpubl; 31 Mar. 76, off Santa Rosa Is., BJS; 30 Sept. 78, 40-55 mi. SW of Destin, 4-8 birds, CLK; 28 July 79, off Santa Rosa Is., CLK et al.

GREAT CORMORANT (*Phalacrocorax carbo*).—WESTON, no records.—1965-79, two records: 29 Oct. 72, Pensacola Bay, imm., RAD, LD, AF & TF; 18 Jan. 75, Gulf Breeze, imm., RAD.

REDDISH EGRET (*Dichromanassa rufescens*).—WESTON, "casual in summer on the coast; does not breed. Extreme dates of occurrence: 28 Feb. 64 & 10 Oct. 62."—1965-79, rare visitor May-Nov. Has occurred 12 of the past 15 years and has been recorded every month except Dec., Jan. & June. The majority of sightings are of dark-phase birds involving 1-4 individuals.

FULVOUS WHISTLING-DUCK (*Dendrocygna bicolor*).—WESTON, "accidental." Placed on Hypothetical List based on unreliable sight record.—1965-79, one record, 9 May 71, Destin, HG & AG.

OLDSQUAW (*Clangula hyemalis*).—WESTON, "casual in winter in salt water."—1965-79, rare winter visitor. Has occurred in 11 of the past 15 years. Max. number 26, Dec. 77, Choctawhatchee CBC. First freshwater record, 26 Nov. 79, Air Prod. Sanc., CWM, TM & m. ob., present to 31 Dec. 79.

KING EIDER (*Somateria spectabilis*).—WESTON, no records.—1965-79, one record, 14 Dec. 74-14 March 75, Gulf Breeze, TF & AF, m. ob., imm. or female, photos. Found emaciated on 9 May 75 and died 13 May 75. Spec. TTRS. No. 3317, a female.

COMMON MERGANSER (*Mergus merganser*).—WESTON, no records.—1965-79, four records: 4 Dec. 66 & 8 Jan. 67, Pensacola, Michael Gochfeld; 28 Nov. 75, Gulf Breeze, female, RAD & LD, unpubl.; 4 Feb. 78, Gulf Breeze, female, RAD.

RED-SHOULDERED HAWK (*Buteo lineatus*).—WESTON, "resident throughout the Region." Formerly considered fairly common but much reduced in nos. in recent years. Over 100 birds counted in a single day during fall hawk movements on at least four occasions.—1965-79, no longer migrates through the Region in large nos. (Duncan & Duncan 1975, Fla. Field Nat. 3:2-4). Max. recorded in a single day, 6 birds, 27 Sept. 75, Gulf Breeze, RAD, unpubl.

ROUGH-LEGGED HAWK (*Buteo lagopus*).—WESTON, Hypothetical List, two records.—1965-79, two records: 5 Nov. 70, Gulf Breeze, light phase, RAD, unpubl.; 3 Nov. 79, Gulf Breeze, light phase, LD.

GOLDEN EAGLE (*Aquila chrysaetos*).—WESTON, "casual in winter," two records.—1965-79, one record, 4 Nov. 79, Gulf Breeze, imm., OEF, LD, SD & RAD.

SANDHILL CRANE (*Grus canadensis*).—WESTON, "casual in winter," three records.—1965-79, one record, 26 Dec. 79, Ft. Walton Beach, SL, unpubl.

KING RAIL (*Rallus elegans*).—WESTON, "resident throughout the region; rare; probably breeds."—1965-79, positive evidence of breeding; adult with 5 downy young seen near Bronson Field, 21 May 79, OEF, unpubl.

YELLOW RAIL (*Coturnicops noveboracensis*).—WESTON, "casual in fall and winter, so far only in the coastal area." Eight records.—1965-79, one record, 22 March 74, Prairie Ponds (EAFB), SL & Fred Bartleson, unpubl.

PURPLE GALLINULE (*Porphyryla martinica*).—WESTON, "summer resident...breeding sparingly," irregular spring visitor. One positive confirmation of breeding.—1965-79, additional evidence of breeding: summer of 1977 & 1978, Jack's Lake (EAFB), adults with downy young, SL & RAD, unpubl.; summer resident at Air Prod. Sanc., breeds (1978 & 1979), CWM, TM et al., unpubl. First winter record; 27 Dec. 75, Garcon Pt., DT.

COMMON GALLINULE (*Gallinula chloropus*).—WESTON, rare visitor all seasons, no evidence of breeding.—1965-79, positive evidence of breeding: adults with young seen late June & early July and with black downy young 7 Sept. 78, Air Prod. Sanc., CWM, TM et al., unpubl; adults with downy young present summer 1977 & 1978, Jack's Lake (EAFB), SL & RAD, unpubl; breeding at Weekley Pond (EAFB), summer 1979, SL, unpubl.

SURFBIRD (*Aphriza virgata*).—WESTON, Hypothetical List, one record.—1965-79, one record: 16-24 March 68, Little Sabine, two birds, FMW, CJK et al., photos (TTRS P93).

PURPLE SANDPIPER (*Calidris maritima*).—WESTON, no records.—1965-79, five records, all at Destin jetties: 6-13 Jan. 77, RAD & SJS; 26 Dec. 77, Choctawhatchee CBC; 20 Nov. 78, RAD, unpubl; 9 Dec. 79, DR; 28 Dec. 79, LD & SD.

BUFF-BREASTED SANDPIPER (*Tryngites subruficollis*).—WESTON, rare in fall, no spring records.—1965-79, first spring record, 4 May 78, EAFB, 4 birds, SL.

AMERICAN AVOCET (*Recurvirostra americana*).—WESTON, "accidental," three records.—1965-79, rare & irregular visitor; 24 records. Recorded in 12 of the past 15 years and every month except Feb. & Dec. 13 of 24 records Sept.-Nov. Max. 17 birds, 8 Sept. 73, Destin, SJS; flock of 25 flying west, 25 April 76, Ft. Pickens, RAD & LD, unpubl.

WILSON'S PHALAROPE (*Steganopus tricolor*).—WESTON, "casual in the coastal area in migration," three records.—1965-79, twelve additional records. Has occurred in 8 of the past 15 years in spring and/or fall migration.

NORTHERN PHALAROPE (*Lobipes lobatus*).—WESTON, no records.—1965-79, 13 May 72, Navarre, CLK et al., first record for the Region.

POMARINE JAEGER (*Stercorarius pomarinus*).—WESTON, accidental, three records.—1965-79, one additional record, 30 Sept. 78, 40-55 miles SW of Destin, CLK.

PARASITIC JAEGER (*Stercorarius parasiticus*).—WESTON, "casual, may occur regularly in spring off the coast," six records.—1965-79, one record, 19 Feb. 79, Ft. Pickens, RAD, first winter record (incorrectly reported in *Amer. Birds* as 19 Dec. 78).

BAND-TAILED GULL (*Larus belcheri*).—WESTON, no records.—1965-79, one record. In Sept. 1968 a sick gull was brought to the Swamparium, a private zoo north of Pensacola, where it remains. It was photographed, subsequently measured and identified as *L. b. belcheri* (Stevenson et al. 1980, Fla. Field Nat. 8:21-23).

GREAT BLACK-BACKED GULL (*Larus marinus*).—WESTON, no records.—1965-79, rare winter visitor, accidental in other seasons. There have been 17 separate occurrences, usually involving single adult birds. One adult has wintered at Destin every year since 1974. Sixteen of the 17 occurrences involve adults seen since 1974. First recorded 27 Aug. 66, at Santa Rosa Is. near Pensacola, a partially disabled imm. bird seen by B. P. Brown and J. R. Sanders. Extreme dates of occurrence, 12 Nov. 75 and 12 March 77. One late spring record, 21 May 79, Pensacola Beach, RAD. Two summer records: 27 Aug. 66 and 22 Aug. 79, Ft. Pickens, M. Magley, unpubl. Max. 2 birds: 15 Feb. 75, Pensacola Bay, AF & TF; 28 Jan. 78, Pensacola Bay, E. Barbig & MLM; 19 Jan. 79, Ft. Pickens, WHV, unpubl.

BLACK-LEGGED KITTIWAKE (*Rissa tridactyla*).—WESTON, "accidental," two records.—1965-79, two records: 27 Aug. 66, Santa Rosa Is. near Pensacola, B. P. Brown & J. R. Sanders; 25 May 68, Destin, FMW et al.

RAZORBILL (*Alca torda*).—WESTON, no records.—1965-79, one record, 18 May 79, Santa Rosa Is. near Gulf Breeze, Marianne Garrigues & J. D. Scott (Arnold 1980, Fla. Field Nat. 8: 50), spec. TTRS No. 3658.

WHITE-WINGED DOVE (*Zenaida asiatica*).—WESTON, "winter visitant in the coastal area; rare & irregular," one spring record.—1965-79, fifteen additional records occurring in 7 of the past 15 years. Five additional spring records and one summer record: 6 March & 1 April 76, Gulf Breeze, RAD & LD; 12 May 74, Gulf Breeze, RAD; 15 May 77, Pensacola, William Holmberg & Terry Holmberg; 23 May 77, Gulf Breeze, LD; 8 June 67, Pensacola, CJK.

GROUND DOVE (*Columbina passerina*).—WESTON, "probably breeds," no definite data.—1965-79, positive evidence of breeding: adult with "2 imms.," 13 May 67, Destin, AG & HG.

GROOVE-BILLED ANI (*Crotophaga sulcirostris*).—WESTON, "accidental," one record.—1965-79, rare fall and winter visitor. Has occurred every year since 1973. Eighteen records. Extreme dates of occurrence, 6 Oct. 1973 - 28 March 1976. Max. seen 3 birds. Most frequently seen in Nov.

BARN OWL (*Tyto alba*).—WESTON, no positive evidence of breeding.—1965-79, confirmed breeding in summer of 1979 near Gonzalez, nest, 3 young hatched, two fledged, Ed Nowak, CLK, DR, AFW.

BURROWING OWL (*Athene cunicularia*).—WESTON, "accidental," two records.—1965-79, seven records: 8 Jan. 66, Pensacola, FMW; 25 Nov. 67, Pensacola, FMW et al.; 6 April 68, Pensacola, FMW; 1 March 69, Ft. Pickens, CLK, LC, AFW; 18 Jan. 70, Ft. Pickens, RAD et al.; 15 Oct. 78, Santa Rosa Is., WHV, G. Boyce, found dead and discarded; 7 Dec. 79, Ft. Pickens, Nick Delassandro.

TROPICAL KINGBIRD (*Tyrannus melancholicus*).—WESTON, no records.—1965-79, one record, 7 Sept. 75, Gulf Breeze, SJS & BJS (Stedman & Lohrer 1976, Fla. Field Nat. 4: 40-41). The difficulty of separating this species from Couch's Kingbird (*T. couchii*) (Traylor 1979, Auk 96:221-233) clouds the status of this species in Florida. (Ayers et al. 1980, Fla. Field Nat. 8:25-26).

ASH-THROATED FLYCATCHER (*Myiarchus cinerascens*).—WESTON, "accidental," two records.—1965-79, one record, 20 Oct. 75, Gulf Breeze, RAD.

OLIVE-SIDED FLYCATCHER (*Nuttallornis borealis*).—WESTON, "casual in fall migration," four records.—1965-79, ten records: 23 Aug. 66, Pensacola, 2 birds, FMW & JTB; 26 Aug. 69, Gulf Breeze, RAD, unpubl; 25 Aug. 71, Gulf Breeze, 2 birds, RAD & LD; 29 Aug. 76, Gulf Breeze, 2 birds, RAD, LD, Steven E. Liston & Susan Liston, photos; 14 & 16 Oct. 76, Pensacola, CWM & TM, unpubl.; 21 Aug. 77, Gulf Breeze, RAD, LD, SJS & BJS, unpubl.; 8 Sept. 77, Gulf Breeze, RAD, unpubl.; and 15 Aug. 79, Gulf Breeze, SD, LD & RAD. Five of the nine fall records involve 1 to 2 birds seen in different years during the latter half of Aug. on exposed perches within a 500 yd. area. First spring record: 14 March 71, Gulf Breeze, DB & LD.

VERMILION FLYCATCHER (*Pyrocephalus rubinus*).—WESTON, "casual in fall migration," four records.—1965-79, one record, 7 Oct. 72, Santa Rosa County, LEG, Goldwyn Gary, Nell Broughton & Charles Broughton.

SAGE THRASHER (*Oreoscoptes montanus*).—WESTON, no records.—1965-79, one record. A single bird found at Ft. Pickens by LD, 28 March 76, constituted the state's second record. Seen by many. Photos (TTRS P225, 226) by Brooks Atherton, LD and Steven E. Liston. Last reported 3 May 76 by WHV.

BLACK-WHISKERED VIREO (*Vireo altiloquus*).—WESTON, "accidental," two records.—1965-79, rare but regular spring transient & summer visitor; possibly breeds. Fourteen occurrences since 1965, 13 of these since 1972. Extreme dates of occurrence, 6 April 1977-6 Oct. 1951. Most records occur April-June. No Aug. or Sept. sightings. Evidence of probable breeding occurred at Gulf Breeze on 14 June 74 when a bird was observed "fluffing up" and singing in the presence of another & feeding the latter. On 15 June RAD, LD and SJS watched a bird singing, and RAD later observed two birds exchange what appeared to be a cottony material (Duncan 1976, Amer. Birds 30:658). Brownish colored birds with indistinct malar streaks believed to be *V. a. altiloquus* have been seen at Gulf Breeze on two occasions (Stevenson 1978, Auk 95:595).

BLACK-THROATED GRAY WARBLER (*Dendroica nigrescens*).—WESTON, "accidental," two records.—1965-79, one record, 1 & 3 Oct. 76, Gulf Breeze, Steven E. Liston & RAD.

CONNECTICUT WARBLER (*Oporornis agilis*).—WESTON, no records.—1965-79, two records: Sept. 72, Gulf Breeze, LD, unpubl; 22 Sept. 78, Ft. Pickens, RAD, unpubl.

MOURNING WARBLER (*Oporornis philadelphia*).—WESTON, Hypothetical List, one record.—1965-79, fall transient; accidental in spring. Eleven additional records: 8 Oct. 67, Destin, HG & AG; 24 Sept. 75, Gulf Breeze, LD; 24 Sept. 77, LD banded, imm. female, photo (TTRS P277); 4 Oct. 77, Gulf Breeze, LD, banded imm. female; 15 Oct. 77, Santa Rosa Co., CWM, TM, et al.; 15 Oct. 77, Gulf Breeze, LD, unpubl.; 5 Sept. 79, Gulf Breeze, RAD, imm.; 14 Oct. 79, Gulf Breeze, LD, Lynn Gould, imm.; 8 Sept. 79, Ft. Pickens, OEF;

9 Sept. 79, Ft. Pickens, OEF, Mary Gray, Katy Willis. First spring record: 18 May 77, Pensacola, DR, unpubl. Extreme dates of occurrence, 5 Sept. 1979-15 Oct. 1977.

YELLOW-HEADED BLACKBIRD (*Xanthocephalus xanthocephalus*).—WESTON, "accidental," two records.—1965-79, casual spring and rare but irregular fall and early winter visitor. Fourteen additional records. Has occurred in 9 out of the past 15 years and in every month except Jan., Feb., March & July. Extreme dates of occurrence, 15 April 1977-12 June 1975 and 24 Aug. 1978-23 Dec. 1972.

BLACK-HEADED GROSBEEK (*Pheucticus melanocephalus*).—WESTON, "accidental," three records.—1965-79, two records at Inerarity Pt.: 7 Dec. 72-4 Jan. 73, female joined by imm. male at feeder on 21 Dec., Sherlie Gade, unpubl., photo by Steven E. Liston (TTRS P267); 15-22 Dec. 74, female at feeder, S. Gade, unpubl.

EVENING GROSBEEK (*Hesperiphona vespertina*).—WESTON, no records.—1965-79, five records: 16 April 69, Gulf Breeze, Ralph Miller; 16 Dec. 72 Pensacola CBC; 17 Dec. 73, Pensacola, CWM & TM; 25 & 26 Nov. 75, Pensacola, fide BD; spring 1978, Crestview, Gene Estes. photo.

LARK BUNTING (*Calamospiza melanocorys*).—WESTON, no records.—1965-79, one record, 31 Aug.-30 Sept. 67, Destin. HG & AG, imm. female, photo (TTRS P33, see Fla. Nat. 41:83, 1968).

CLAY-COLORED SPARROW (*Spizella pallida*).—WESTON, "accidental," two records.—1965-79, one record, 15 Oct. 76, Gulf Breeze, RAD & Steven E. Liston.

HARRIS' SPARROW (*Zonotrichia querula*).—WESTON, "accidental," one record.—1965-79, one record, 31 Dec. 66, Pensacola CBC, Michael Gochfeld, a striking adult.

LAPLAND LONGSPUR (*Calcarius lapponicus*).—WESTON, "accidental," one record.—1965-79, one record, 17 Dec. 78-6 Jan. 79, Destin, LD & RAD, m. ob., 3 birds.

SNOW BUNTING (*Plectrophenax nivalis*).—WESTON, no records.—1965-79, one record, 22 Dec. 77, Destin, Charles & James Saunders, m. ob. Photos by EL.

DISCUSSION

This compilation of published and unpublished records for the period 1965-1979 adds 18 new species to the original (Weston 1965) Regional List of 336 (Red-necked Grebe, Cory's Shearwater, Greater Shearwater, Harcourt's Storm-Petrel, Great Cormorant, King Eider, Common Merganser, Purple Sandpiper, Northern Phalarope, Band-tailed Gull, Great Black-backed Gull, Razorbill, Tropical Kingbird, Sage Thrasher, Connecticut Warbler, Evening Grosbeak, Lark Bunting, Snow Bunting). In addition, 3 species have been removed from the Hypothetical List (Fulvous Whistling-Duck, Surf-bird, Mourning Warbler); 6 considered accidental or rare are now of frequent occurrence (Reddish Egret, Oldsquaw, American Avocet, Groove-billed Ani, Black-whiskered Vireo, Yellow-headed Blackbird); and positive evidence of breeding has been established for 4 (King Rail, Common Gallinule, Ground Dove, Barn Owl).

Rampant urbanization and intensive use of beaches has no doubt had an adverse effect on certain species. However, some habitat alterations such as establishment of sewerage holding ponds and spray fields, and industrial waste-water holding ponds and spoil areas has had beneficial effects on birdlife and can partly account for some records noted above.