LONGEVITY RECORDS OF NORTH AMERICAN BIRDS SUPPLEMENT 1

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Abstract.—This is the first supplement to the previous published four-part series on avian longevities (Clapp et al. 1982, 1983; Klimkiewicz et al. 1983; Klimkiewicz and Futcher 1987). Records processed in the Bird Banding Laboratory through August 1988 are included, as well as several corrections to the original series. One hundred-seven of the 147 entries in this supplement are new longevity records for species or forms listed previously. Another 37 entries represent taxa not listed before, and the remaining three records correct previous listings that were in error.

REGISTROS DE LONGEVIDAD EN AVES DE NORTE AMÉRICA: PRIMER SUPLEMENTO

Sinopsis.—Este es el primer suplemento a la primera serie de informes relacionada con registros de longevidad (Clapp et al. 1982, 1983; Klimkiewicz et al. 1983; Klimkiewicz and Futcher 1987). En este trabajo se presentan los registros procesados por el Laboratorio de Anillamiento de Aves hasta agosto de 1988, y además se incluyen correcciones de las listas originales. De los 147 informes, 107 son nuevos registros de longevidad, 37 representan especies que no habian sido includias previamente en la lista y tres corresponden a correcciones de información previa.

Kennard (1975) published the first extensive list of North American longevity records. This list was updated by a four-part series by Clapp et al. (1982, 1983), Klimkiewicz et al. (1983) and Klimkiewicz and Futcher (1987). This supplement includes new records that have been received since 1982, plus several corrections to the previous series. Records and corrections processed through 31 Aug. 1988 are included.

All records from the files of the Bird Banding Laboratory (BBL) have been verified by checking the original banding schedules and recovery letters. Although Kennard (1975) used a minimum age of 5–00 as a cut-off for inclusion, we have included a number of species of lesser age. Some of these are species that are seldom banded or for which there are very few returns or recoveries in our files. These records are included not only to provide a more complete list, but also to stimulate banders to check their data for records of greater longevity.

We have not listed longevities of seabirds or waterbirds of less than 5 yr because such records have little or no significance. For some groups (e.g., shearwaters, shorebirds), the existing longevity data are often more a matter of band longevity than bird longevity.

Data listed in the table of longevities (Table 2) are presented in a

TABLE 1. Codes used in list of longevities of North American birds (Table 2).

| Codes for age and sex and their ver | bal equivalent: | |
|--|-------------------------------------|----------------------|
| N = Nestling | AHY = After hatching year | M = Male |
| L = Local | SY = Second year | F = Female |
| I = Immature | ASY = After second year | U = Unknown |
| A = Adult | ATY = After third year | |
| HY = Hatching year | A4Y = After fourth year | |
| Codes for encounter type: | | |
| 00 = Found dead | 21 = Caught or found dead in buil | ding or enclosure |
| 01 = Shot | 26 = Caught by or due to entangler | nent in fishing gear |
| 03 = Caught due to injury | 28 = Caught by hand | |
| 04 = Caught by or due to trap or | 29 = Sight record: identified by au | |
| snare other than those used | | |
| for catching birds | 33 = Caught or observed at or in n | |
| 09 = Caught by or due to hawks, | | |
| owls, or other raptors | 49 = Caught at, on, or in nest by p | oredator |
| 10 = Died during banding oper- | 55 = Caught due to pesticides | |
| ations | 57 = Caught due to entanglement | in anything other |
| 12 = Caught by or due to cat | than fishing gear | |
| 13 = Caught due to striking sta- | 89 = Trapped and released by ban | |
| tionary object other than | minute block from where orig | |
| wires or towers | 99 = Trapped and released by ban | |
| 14 = Struck or struck by motor vehicles | nute block where originally b | anded |
| 16 = Collected as scientific spec- | | |
| imen or for scientific study | | |
| 18 = Caught or found dead due to disease | | |

different format from previous papers. The first line of each entry gives the common name, band number, bander, encounter date, data source, and estimated minimum age (EMA) in years and months. The second line includes the banding date, banding locale, encounter code (Table 1). and the encounter locale. The persons who encountered the birds are listed only when their role in obtaining the data seemed relevant (e.g., a biologist or bander familiar with the identification of birds). The third line gives the scientific name and the age and sex when banded (Table 1). The fourth line lists the number of recoveries and the total number banded for each species as of August 1988. The estimated minimum age is calculated by assuming a hatching date of 1 June. This is not precise for some species that hatch young at other times of year, but we feel that such estimations are of more value than figures for elapsed time between banding and recovery that make no allowance for the age of the bird when it was banded. In a few instances we have amended the estimated minimum age (e.g., Brown Booby) based on our knowledge that some birds in adult plumage or that are breeding are more than one year old. The number of species covered as well as the variability of breeding seasons from region to region prevented us from adjusting the calculations

of many species this way; but, the data presented should permit the reader to adjust the age based upon individual species' biology. If the age and/or sex has been changed for this reason or if the sex was determined upon recapture, the data are indicated in parenthesis.

The designation BBL under Data Source indicates that the banding and recovery information came directly from the BBL files. When other sources were the primary source of information (literature reports, personal communication), the BBL designation indicates that the information exists in the BBL files. Several records had inexact encounter dates. We equated these to the minimum month to permit age calculations (e.g., Spring = March or minimum age month 09) and reduce any error in the estimated minimum age.

The codes for age and sex (Table 1), with the exception of the A4Y age code, are those used by the Bird Banding Laboratory. "Year" in these codes always refers to the calendar year of hatching. Many of the birds listed were banded well before these codes (e.g., HY, AHY) came into use, and a number of the earlier codes (e.g., N, I) do not have the same implications as those currently in use (e.g., the previously used N and I for the currently used L and HY); therefore, we have listed age and sex as they appear on the original banding schedules or other sources of information. We occasionally list age, and more frequently, sex in parenthesis. This indicates an age or sex not in the original data that we have added based on information received subsequent to the original banding or the present use of the age codes (e.g., U = AHY after December).

Totals for the number encountered and number banded are given beneath the scientific name. The number of encounters is for those in the BBL files as of August 1988. The number of bandings is a composite figure that indicates the total banded since the inception of banding in North America.

Because the banding totals in the BBL computer files through August 1988 are complete only for gamebirds (Anseriformes, Gruiformes, Columbiformes, and two Charadriiformes—American Woodcock and Common Snipe), we have derived our banding totals for other species from three sources. Our first source was the BBL computer files through August 1988 which includes all game bandings and all non-game bandings since 1955 but not those banded before that year. The second source was BBL banding totals through 1953 as given by Van Velzen (1964) and the third source was the banding totals in the BBL files for 1954 (Van Velzen 1965). We emphasize that our figures are not exact. Van Velzen's (1964) total included schedules received through April 1954 that undoubtedly include some totals for 1954. The discrepancy from the true total is probably slight because most schedules are received late in the year. There are also some errors in Van Velzen's list (e.g., Great Frigatebirds were listed as Magnificent Frigatebirds), some of which we have been able to correct. We list no totals for gallinaceous birds because these species are

TABLE 2. Longevity Records of North American Birds.

| Esti- mated mini- mum age (yr-mo) | 4-10 | 20-9 | 16-09 | 4-10 | 5-01 | 00-6 | 31-00 | 23-09 |
|--|---|---|--|--|---|--|--|--|
| Data source | BBL | BBL | BBL | BBL | BBL | BBL | PC-MKK, BBL | BBL |
| Encounter date Encounter code and locale | Apr. 41 (26) Straits of Mackinac, Lake Michigan, Michigan | 9 Jan. 84 (00) 11 km NW Guala, California | 30 Mar. 82 (28) same | 12 Apr. 81 (01) Lawn Harbor, Placentia Bay, Newfoundland | 11 Jul. 83 (99) R. Bottomley | 24 Jun. 83 (89) Barren Island, Alaska | 26 Jun. 83 (99) | 30 Mar. 1986 (28) same |
| Bander and Banding locale | M. K. Nelson, Thief Lake Refuge, Gatzke, Minnesota | Delta Wildlife Research Station, Marshy Point, Manitoba | United States National Museum, Kilauea Point, Kauai, Hawaii | Memorial University, 4.8 km SE Lords Cove, Newfoundland | Hawaii Fish and Game, Ki- lauea Point, Kauai, Hawaii | Office Biological Services, Lewis Island, Alaska | Bowdoin College, Kent Island, New Brunswick | United States National Museum, Howland Island, Pacific Ocean |
| Band number Banding date Age/Sex | 35-602906 27 Apr. 37 A-U | 1107-34256 11 Jul. 78 AHY-M | 785-08548 28 Jul. 68 ATY-U | 564-39276 18 Jun. 77 AHY-U | 584-15420 27 Sep. 78 L-U | 119-141128 24 May 76 AHY-F | 67-151979 7 Jul. 56 (A4Y-M) | 625-85735 22 Jul. 1964 (ASY)-U |
| Common name Scientific name (Total encounters— total banded) | **Red-necked Grebe Podiceps grisegena (8—316) | **Western Grebe¹ Aechmophorus occidentalis (58—1499) | *Wedge-tailed Shearwater Puffnus pacificus (4831—89,876) | **Manx Shearwater Puffnus puffnus (6—387) | **Townsend's Shearwater Puffnus auricularis (17—12,872) | *Fork-tailed Storm-Petrel Oceanodroma furcata (166—9010) | *Leach's Storm-Petrel ² Oceanodroma leucorhoa (2279—85,896) | *Red-tailed Tropicbird Phaethon rubricauda (2—2386) |

TABLE 2. Continued.

| Esti- mated mini- mum age (yr-mo) | 24-07 | 20-05 | 17-09 | 23-06 | 17-07 | 6-03 | 90-9 | 19-08 |
|---|--|---|--|---|--|--|---|---|
| Data | BBL | BBL | BBL | BBL | BBL | BBL | BBL | BBL |
| Encounter date Encounter code and locale | 01 Jan. 87 (00) same | 16 Nov. 87 (00) North Truro, Massachusetts | 30 Mar. 84 (00) Inks Lake, Texas | 25 Nov. 87 (26) Pagadian, Philippine Islands, Pacific Ocean | 7 Jan. 88 (01) same | 9 Sep. 80 (01) 6.4 km E El Dorado, Sinaloa, Mexico | Dec. 80 (00) 30.4 km N Highway I, Tamiami Trail, Florida | 25 Feb. 83 (89) R. J. Limpert, Broad Creek, 2.8 km SE Bozman, Maryland |
| Bander and Banding locale | United States National Museum, Sand Island, Johnston Atoll, Pacific Ocean | J. M. Poulin, Bonaventure Island, Quebec | C. S. Houston, Redberry Lake, 12.8 km SE Hafford, Sas- katchewan | United States National Museum, Howland Island, Pacific Ocean | G. G. Robinson, 12 km S Saguache, Colorado | Director General Fauna Silvestre, Isla Tijeras, Sinaloa, Mexico | A. Sprunt IV, 16 km NNE Flamingo, Everglades Na- tional Park, Florida | T. W. Barry, Kugaluk River, Mackenzie, Northwest Terri- tories |
| Band number Banding date Age/Sex | 737-44040 24 Feb. 64 (ASY)-F | 588-73466 9 Sep. 67 N-U | 508-08880 1 Jul. 66 L-U | 747-58933 12 Oct. 64 N-U | 786-96604 2 Jul. 70 L-U | 1007-55268 20 Jul. 74 L-U | 658-57356 18 Apr. 74 L-U | 509-26582 9 Aug. 65 (ASY)-F |
| Common name Scientific name (Total encounters— total banded) | *Brown Booby Sula leucogaster (940—8664) | *Northern Gannet Sula bassanus (789—14,570) | *Double-crested Cormorant Phalacrocorax auritas (5589—96,651) | *Lesser Frigatebird Fregata ariel (457—15,502) | *Snowy Egret Egretta thula (403—42,920) | **Yellow-crowned Night-Heron Nycticorax violaceus (13—1401) | **Wood Stork Mycteria americana (31—2047) | *Tundra (Whistling) Swan Cygnus c. columbianus (4474—10,020) |

TABLE 2. Continued.

| Encounter date Data age Encounter code and locale source (yr-mo) | 10 Mar. 88 BBL 26-09 (00) same | 1 Oct. 84 BBL 22-04 (01) 27.2 km SE Castor, Alberta | 1 Dec. 84 BBL 24-06 (01) near Harrisburg, Arkansas | Dec. 82 BBL 21-06 (01) Willows, California | 1 Jan. 85 (01) Rehobeth Bay, Dewey Beach, Delaware | 2 Mar. 88 BBL 25-09 (01) Boundry Bay, British Columbia | 4 Oct. 86 BBL 24-04 (01) Noire River, St. Jena de Matha, Quebec | 28 Dec. 84 (01) Dixon, California |
|---|--|--|---|--|--|--|---|---|
| Bander and Banding locale | Rhode Island Fish and Game, West Kingston, Rhode Island | A. Dzubin, 6.4 km NW Coleville, Saskatchewan | L. Lemieux, Koukdjvak River, Baffin Island, Franklin, Northwest Territories | A. Dzubin, 3.2 km SE Smiley, Leo Lake, Saskatchewan | R. H. Kerbes, near mouth Boas River, Keewatin, Northwest Territories | Alaska Fish and Game, Lower Kashunuk River, Alaska | Blackwater National Wildlife Refuge, near Cambridge, Maryland | Oregon State Game Commission, Sauvie Island Game Management Area, Oregon |
| Band number Banding date Age/Sex | 509-85526 16 Jul. 62 (SY)-M | 528-06887 28 Sep. 62 HY-M | 667-70164 25 Jul. 61 A-U | 667-66100 18 Oct. 62 AHY-M | 1127-63499 11 Aug. 65 (ASY-F) | 647-60842 13 Jul. 63 S-M | 558-99041 21 Jan. 63 A-M | 575-46150 8 Sep. 62 I-M |
| Common name Scientific name (Total encounters—total banded) | *Mute Swan Cygnus olor (429—1542) | *Greater White-fronted Goose Anser albifrons (13,275—60,511) | *Snow (Blue) Goose Chen caerulescens (21,825—141,997) | *Ross' Goose Chen rossii (2916—14.871) | *(Atlantic) Brant Branta branicla hrota (3984—23.006) | *(Black) Brant Branta bernicla nigricans (6324—47,173) | *Canada Goose Branta canadensis (368.430—1.648.273) | *Wood Duck Aix sponsa (77,293—717,686) |

TABLE 2. Continued.

| Common name Scientific name (Total encounters— total banded) | Band number Banding date Age/Sex | Bander and Banding locale | Encounter date | Data source | Esti- mated mini- mum age (yr-mo) |
|---|--|---|--|----------------|--|
| **Hawaiian Duck Anas wywilliana (16—596) | 776-11698 17 Apr. 79 AHY-F | Hawaii Fish and Game, Kawainui Swamp, 2.4 km W Kailua, Oahu, Hawaii | 15 Feb. 82 (29) R. Coleman, James Campbell National Wildlife Refuge, Oahu, Hawai | BBL | 3-08 |
| *Northern Pintail Anas acuta (13.870—1.123.935) | 616-08400 25 Aug. 60 A-M | California Fish and Game, Los Banos, California | 22 Oct. 80 (01) 19.2 km SW Dietrich, Ida- ho | BBL | 21-04 |
| *Blue-winged Teal Anas discors (52.075—1.011.095) | 545-08400 6 Sep. 60 I-F | Vermont Fish and Game, South Bay, Newport, Vermont | 30 Oct. 82 (01) Lac St. Pierre, Baieville, Ouebec | BBL | 22-04 |
| Anas strepera (8003—59.577) | 616-43063 8 Aug. 62 L-M | J. L. Nelson, Last Mountain Lake, Imperial, Saskatchewan | 29 Dec. 81 (01) South Pass, 16 km SE Pilottown, Louisiana | BBL | 19-06 |
| anvasback Aythya valisineria (21.237.—140.320 | 727-19749 13 Feb. 1964 I-M | New York Conservation Department, Dunkirk Harbor, New York | 2 Nov. 1985 (01) Lorain, Ohio | BBL | 22-05 |
| *Ring-necked Duck Aythya collaris (18 082—125 792) | 686-66555 20 Nov. 64 A-M | Lacassine National Wildlife Refuge, Lake Arthur, 12.8 km SSF, Havs. Louisiana | 16 Nov. 83 (01) Spitzer Lake, Minnesota | BBL | 20-05 |
| ommon Eider Somateria mollissima (1664—13,285) | 787-89950 27 Jun. 69 A-F | A. Reed, Ile Blauche, Quebec | 17 Oct. 87 (01) St. Felicíte, Quebec | BBL | 21-04 |

TABLE 2. Continued.

| Esti- mated mini- mum age (yr-mo) | 14-03 | 15-07 | 15-07 | 23-00 | 7-00 | 8-00 | , 21-11 |
|---|--|---|--|---|---|--|---|
| Data source | BBL | BBL | BBL | BBL | BBL | BBL | JFO 57: 173, 1986, BBL |
| Encounter date Encounter code and locale | 12 Sep. 81 (99) | 17 Jan. 88 (01) Long Harbour, Placentia Bay, Newfoundland | 22 Jan. 81 (00) Point Holmes, Comex, British Columbia | 18 Jun. 86 (28) Dowell, Maryland | 14 Jun. 86 (29) Kissimmee River, Florida | 18 Aug. 87 (55) C. A. Rogillio, Thibodaux, Louisiana | 16 May 84 (89) S. Cain, Admiralty Island, Alaska |
| Bander and Banding locale | United States Fish and Wildlife Service Alaska, Cape Glaze- nap, Izembek National Wild- life Refuge, Alaska | D. L. Pattie, Devon Island, Franklin, Northwest Territories | C. S. Houston, Redberry Lake, Saskatchewan | J. S. Weske, Hopkins Cove, 2.4 km SSE Crocheron, Mary- land | Patuxent Wildlife Research Center, 16 km W Clewiston, Florida | E. J. Bienvenu, 3.2 km N Theriot, Louisiana | United States Fish and Wildlife Service Alaska, Chilkat River between Klukwan and Haines, Alaska |
| Band number Banding date Age/Sex | 647-64436 13 Sep. 68 AHY-F | 586-25205 24 Jul. 73 AHY-F | 637-97350 16 Jul. 67 (ASY)-F | 528-50519 28 Jun. 63 N-U | 816-39871 18 Jun. 79 L-U | 695-02154 1 Aug. 79 L-U | 519-20045 Fall 65 ATY-(M) |
| Common name Scientific name (Total encounters—total banded) | *Steller's Eider ³ Polysticta stelleri (173—6925) | *Oldsquaw Clangula hyemalis (58—2495) | *White-winged Scoter Melanitta fusca (128—2739) | *Osprey Pandion haliaetus (1642—23,581) | **Snail Kite Rostrhamus sociabilis (7—479) | **Mississippi Kite Ictinia mississippiensis (10—846) | *Bald Eagle Haliaeetus leucocephalus (1555—14,308) |

TABLE 2. Continued.

| , e d |
|--|
| 515-07934 D. Goodnow, Berlinsville, 9 Nov. 74 Pennsylvania AHY-F |
| 987-04385 C. Sindelar, Duluth, Minnesota 14 Oct. 72 SY-F |
| 877-19206 F. Hamerstrom, Aquilares, 31 Dec. 73 Texas ASY-F |
| 736-11333 D. C. Tabb, North Key Largo, 31 Oct. 70 Florida AHY-(U) |
| 737-01533 D. Berger, Earlville, Iowa 2 Dec. 63 A-(U) |
| 509-54603 R. Fyfe, Big Muddy Valley, 15 Jun. 68 Saskatchewan L-M |
| 877-20406 Archbald Expeditions, Brighton, 15 May 77 Florida L-U |

TABLE 2. Continued.

| Esti- mated mini- mum Data age source (yr-mo) | 10-07 | JFO 52: 341, 8-06 1981, PC- MKK, PDM | 22-04 | 19-05 | 7-04 | 4-10 | 11-00 |
|---|--|---|--|---|---|---|---|
| | BBL | JFO 19 M M | BBL | BBL | BBL | BBL | BBL |
| Encounter date Encounter code and locale | 2 Jan. 84 (57) near Claresholm, Alberta | 31 Dec. 79 (01) same | Oct. 82 (01) Snake River, near Marsing, Idaho | 29 Nov. 86 (01) near Muleshoe National Wildlife Refuge, Bailey, Texas | 5 Oct. 84 (29) Axe Lake, Saskatchewan | 30 Apr. 67 (99) | 16 Jun. 81 (89) R. L. Boyd, Blackman Salt Works, 4.8 km S Alva, Okla- homa |
| Bander and Banding locale | R. Fyfe, Crowfoot, Alberta | Indiana Department Natural Resources, Perry County, In- diana | D. R. Kraft, 11.2 km S Camrose, Alberta | R. H. Wheeler, 11.2 km SE Overton, Nebraska | E. Kuyt, Wood Buffalo National Park, Mackenzie, Northwest Territories | United States National Museum, Green Island, Kure Atoll, Hawaii | D. F. Parmelee, Cheyenne Bottoms, Great Bend, Kansas |
| Band number Banding date Age/Sex | 617-22265 29 May 75 ASY-F | 1184 30 Sep. 72 AHY-F | 656-55095 20 Jul. 61 A-F | 588-23510 28 Mar. 68 (AHY)-U | 599-09807 30 Jul. 77 L-U | 642-00159 12 Nov. 63 AHY-U | 101-116855 29 Jul. 70 L-U |
| Common name Scientific name (Total encounters— total banded) | *Prairie Falcon Falco mexicanus (589—12,022) | *Ruffed Grouse* Bonasa umbellus | *American Coot Fulica americana (7311—144,163) | *Sandhill Crane Grus canadensis (728—8911) | **Whooping Crane Grus americana (404—193) | **Lesser Golden-Plover Pluvialis dominica (34—1857) | *Snowy Plover Charadrius alexandrinus (93—4102) |

TABLE 2. Continued.

| Esti- mated mini- mum age (yr-mo) | 5-02 | 00-6 | 11-09 | 3-11 | 10-02 | 13-01 | 12-02 | 16-00 |
|--|--|--|---|---|--|---|--|---|
| Data | BBL | BBL | BBL | BBL | BBL | JFO 55: 485, 1984, BBL | BBL | JFO 58: 49- 51, 1987, BBL |
| Encounter date Encounter code and locale | 21 Aug. 83 (00) P. Pyle, same | 26 Jun. 85 (45) 9.6 km NE Limerick, Sas- katchewan | 16 Mar. 79 (04) Likiep Atoll, Marshall Island, Pacific Ocean | May 69 (01) near Beringouskii, United Soviet Socialists Republic | 9 Aug. 83 (10) same | 24 Jul. 83 (14) J. S. Boates, same | 22 Aug. 1988 (09) Parker River National Wildlife Refuge, Newbury- port, Massachusetts | 8 Jun. 85 (33) M. Reid, same |
| Bander and Banding locale | Hawaii Fish and Game, 1.2 km NW Kahuku, Oahu, Hawaii | E. F. Martinez, Cheyenne Bottoms, Great Bend, Kansas | E. Kridler, Lisianski Island, Hawaii | United States National Museum, East Point, Saint George Island, Alaska | Manomet Bird Observatory, North River, 1.6 km ESE Greenbush, Massachusetts | R. McNeil, Sable Island, Nova Scotia | R. I. G. Morrison North Point, James Bay, On- tario | R. McNeil, Sable Island, Nova Scotia |
| Band number Banding date Age/Sex | t 705-58030 28 Mar. 79 AHY-F | 704-91561 7 Sep. 77 AHY-F | 615-30662 25 Sep. 67 U-U | 635-26024 31 May 66 A-U | 772-19084 17 Jul. 74 AHY-U | 74-181593 4 Aug. 71 (AHY)-U | 1151-04268 30 Jul. 1977 AHY-U | 123-23204 22 Jul. 70 SY-(F) |
| Common name Scientific name (Total encounters— total banded) | **Black-necked (Hawaiian) Stilt 705-58030 Himanlopus mexicanus 28 Mar. 74 knudsensi AHY-F (5-298) | **American Avocet Recurvivostra americana (13—2328) | **Bristle-thighed Curlew Numenius tahitiensis (14—293) | **Bar-tailed Godwit Limosa lapponica (2—124) | *Red Knot Calidris canutus (62—6390) | *Sanderling Calidris alba (37—9293) | *Semipalmated Sandpiper Calidris pusilla (1383—182,260) | *Least Sandpiper ⁵ Calidris minutilla (258—50,976) |

TABLE 2. Continued.

| Esti- mated mini- mum age (yr-mo) | 5-11 | 7-04 | 12-05 | 11-01 | 13-03 | 11-04 | 28-00 |
|---|---|---|---|--|--|---|---|
| Data | BBL | BBL | NABB 11: 147, 1986, BBL | BBL | BBL | BBL | BBL |
| Encounter date Encounter code and locale | 3 May 83 (03) Jiboa River, near El Achiotal, El Salvador | 15 Oct. 85 (00) same | 28 Nov. 83 (99) | 25 Jul. 82 (99) | 1 Aug. 88 (01) Inch Marlow Swamp, Barbados, West Indies | 2 Oct. 82 (01) Silver Cliff, Wisconsin | Jun. 87 (28) Fish Lake, Minnesota |
| Bander and Banding locale | E. F. Martinez, Cheyenne Bottoms, Great Bend, Kansas | Office Biological Services, Nelson Lagoon, near Cold Bay, Alaska | Point Reyes Bird Observatory, Kent Island, Bolinas, California | E. F. Martinez, Cheyenne Bottoms, Great Bend, Kansas | A. L. Spaans, 10 km NW Para- maribo, Suriname | Wisconsin Fish and Game, 11.2 km W Park Falls, Wisconsin | P. B. Hofslund, Knife Island, Minnesota |
| Band number Banding date Age/Sex | 712-54340 9 Aug. 78 AHY-U | 832-72311 10 Jul. 79 AHY-U | 702-99986 29 Oct. 71 HY-U | 78-100101 14 Aug. 72 AHY-U | 792-06530 16 Apr. 76 AHY-U | 1013-70725 30 Jun. 71 HY-F | 616-20577 19 Jun. 59 L-U |
| Common name Scientific name (Total encounters— total banded) | **Pectoral Sandpiper Calidris melanotos (13—7705) | **Rock Sandpiper Calidris ptilocnemis (6—736) | *Dunlin Calidris alpina (75—16,063) | *Stilt Sandpiper Calidris himantopus (19—5917) | *Short-billed Dowitcher Limnodromus griseus (47—5350) | *American Woodcock Scolopax minor (4703—81 125) | *Herring Gull Larus argentatus (36,385—835,187) |

TABLE 2. Continued.

| Esti- mated mini- mum age (yr-mo) | 22-09 | 8-00 | 22-02 | 14-00 | 12-00 | 24-01 | 18-00 |
|---|--|--|--|---|---|---|---|
| Data | BBL | BBL | BBL | BBL | BBL | BBL | BBL |
| Encounter date Encounter code and locale | 28 Mar. 84 (00) Dyes Inlet, 3.2 km N Bremerton, Washington | Sep. 86 (01) Tugssaq, Greenland | 22 Aug. 87 (28) Cumberland Island, Georgia | 11 Jun. 80 (99) H. Hays | 19 Jun. 84 (18) J. E. Houk, Tulare Lake Drainage District, Alpaugh, California | 8 Jul. 81 (31) Cedar Bonnet Island, Manahawkin, New Jersey | 26 Jun. 81 (99) A. Newman |
| Bander and Banding locale | Z. M. Schultz, Coleville Island, Washington | National Museum Natural Science, Seymour Island, Franklin, Northwest Territories | H. T. Davis, Shell Castle Island, Ocracoke Inlet, North Carolina | D. M. Cooper, Great Gull Island, New York | L. R. Mewaldt, Moffet Field, San Francisco Bay, California | W. Pepper, Katama, Edgar- town, Massachusetts | E. Kridler, Nihoa Island, Ha- waii |
| Band number Banding date Age/Sex | 657-90808 23 Jul. 61 L-U | 634-03641 2 Aug. 77 L-U | 654-00957 4 Jul. 65 L-U | 1083-40096 24 Jun. 68 ASY-U | 1083-91268 12 Jun. 72 L-U | 54-173309 5 Jul. 57 L-U | 763-19095 6 Mar. 64 A-U |
| Common name Scientific name (Total encounters—total banded) | *Glaucous-winged Gull Larus glaucescens (19,955—160,400) | **Ivory Gull Pagophila eburnea (15—1521) | *Royal Tern Sterna maxima (7384—307,939) | *Roseate Tern Sterna dougallii (1554—118,244) | *Forster's Tern Sterna forsteri (73—9512) | *Least Tern Sterna antillarum (447—55,589) | *Gray-backed Tern Sterna lunata (46—6467) |

TABLE 2. Continued.

| Esti- mated mini- mum age (yr-mo) | 21-09 | 14-00 | 9-05 | 11-10 | 9-10 | 10-02 | 7-05 | 00-9 |
|--|--|--|---|--|--|--|--|--|
| Data source | BBL | BBL | BBL | BBL | NABB 11: 147, 1986, BBL | BBL | BBL | BBL |
| Encounter date Encounter code and locale | 12 Mar. 85 (00) Green Island, Kure Atoll, Hawaii | 11 Jun. 80 (99) | 12 Nov 1987 (01) Twillingate Bight, Newfoundland | 29 Apr. 86 (00) same | 4 Apr. 84 (09) R. McCluskey, same | 18 Aug. 87 (00) same | 5 Nov. 87 (00) V. W. Wilson, same | 16 Jun. 82 (00) same |
| Bander and Banding locale | E. Kridler, Sand Island, Midway Atoll, Pacific Ocean | Hawaiian Islands National Wildlife Refuge, Nihao Island, Hawaii | D. N. Nettleship, Gannet Clusters, Labrador | Point Reyes Bird Observatory, Farallon Island, California | G. L. Hunt, Santa Barbara Island, California | Point Reyes Bird Observatory, Farallon Island, California | F. Hosea, Protection Island, Washington | Office Biological Services, Middleton Island, Alaska |
| Band number Banding date Age/Sex | 662-05321 13 Feb. 64 A-U | 682-16903 30 Jul. 66 U-U | 846-40867 4 Aug. 1981 L-U | 584-04633 19 Jul. 74 L-U | 802-01996 25 Mar. 76 (ASY)-U | 1313-07528 2 Apr. 78 AHY-U | 815-98321 20 Jul. 80 L-U | 836-52827 30 Jul. 76 L-U |
| Common name Scientific name (Total encounters— total banded) | *Black Noddy Anous minutus (220—21,825) | *Blue-gray Noddy Procelsterna cerulea (81—3478) | *Razorbill Alca torda (78—1981) | *Pigeon Guillemot Cepphus columba (130—3517) | **Xantus' Murrelet [®] Synthliboramphus hypoleucus (10—652) | *Cassin' Auklet Ptychoramphus aleuticus (668—19.802) | *Rhinoceros Auklet Cerorhinca monocerata (15—2671) | **Tufted Puffin Fratercula cirrhata (1—1308) |

TABLE 2. Continued.

| Esti- mated mini- mum age (yr-mo) | 20-00 | 14-05 | 18-06 | 7-02 | 3-09 | 20-07 | 10-09 |
|---|--|---|---|--|---|--|---|
| Data | BBL | BBL | BBL | BBL | BBL | BBL | BBL |
| Encounter date Encounter code and locale | 8 Jun. 86 (00) G. Byrne, same | Nov. 86 (01) Boca del Yuma, Dominican Republic | 20 Dec. 85 (00) same | 14 Aug. 85 (01) Acatlan, Hildalgo, Mexico | 7 Mar. 82 (99) | 18 Jan. 88 (00) near Saskatoon, Saskatche- wan | 15 Mar. 84 (00) G. Erickson, 1.6 km NNE Morinville, Alberta |
| Bander and Banding locale | D. N. Nettleship, Great Island, Witless Bay, Ferryland, Newfoundland | R. Cotte, Sahona Island, Do- minican Republic | Washington Department Game, Tacoma, Washington | L. H. Blankenship, 16 km S Dinero, Texas | C. E. Corchran, Tuscon, Arizona | C. S. Houston, Lanigan, Sas- katchewan | R. Fyfe, Legal, Alberta |
| Band number Banding date Age/Sex | 705-50905 11 Aug. 68 (ASY)-U | 574-10186 Sep. 72 L-U | 635-86535 7 May 68 AHY-U | 852-27034 13 Apr. 79 AHY-F | 815-60112 7 May 79 AHY-M | 518-60626 20 May 67 N-U | 599-04281 25 Jan. 75 ASY-F |
| Common name Scientific name (Total encounters—total banded) | *Atlantic Puffin Fratercula arctica (96—8711) | *White-crowned Pigeon Columba leucocephala (781—20,354) | *Band-tailed Pigeon Columba fasciata (8158—110,795) | *Common Ground-Dove Columbina passerina (289—14,644) | **Greater Roadrunner Geococcyx californianus (11-582) | *Great Horned Owl Bubo virginianus (2155—24,412) | *Snowy Owl Nyctea scandiaca (212—1860) |

TABLE 2. Continued.

| Esti- mated mini- mum age (yr-mo) | 4-11 | 18-02 | 7-05 | 00-6 | 6-04 | 6-01 | 12-02 | 4-01 |
|---|---|--|--|---|---|--|---|--|
| Data | BBL | BBL | BBL | BBL | BBL | BBL (pt.) | BBL | BBL |
| Encounter date Encounter code and locale | 7 May 87 (99) | 20 Aug. 86 (45) 9.6 km W Cincinnati, Ohio | 23 Nov. 84 (45) Wilton, New Hampshire | 11 Jun. 86 (99) | 14 Oct. 82 (99) | 24 Jul. 88 (89) E. G. Jones, 5 km E Condon, Montana | 12 Aug. 87 (99) | 10 Jul. 83 (99) |
| Bander and | P. M. Walters, Tanque Verde Ranch, Tuscon, Arizona | J. B. Holt, Jr., Covington, Kentucky | Prince Edward Point Bird Observatory, Prince Edward Point. Ontario | A. M. Baumgartner, 8 km S Jay, Oklahoma | Point Reyes Bird Observatory, 5.6 km NW Bolinas, California | W. A. Calder, 1.5 km SE Condon, Montana | W. A. Calder, Gothic, Colorado | W. A. Calder, Gothic, Colorado 10 Jul. 83 (99) |
| Band number Banding date Age/Sex | 872-42528 7 Jul. 83 AHY-U | 877-02532 9 May 68 L-U | 614-03677 20 Oct. 77 HY-U | X20239 2 Sep. 78 AHY-F | X15233 25 Jun. 76 HY-(F) | XTTB 24 May 83 | X18025 21 Jun. 76 AHY-F | X20725 29 Jul. 79 U-(F) |
| Common name Scientific name (Total encounters— total banded) | **Elf Owl Micrathene whitneyi (5—370) | *Barred Owl Strix varia (208—3142) | *Northern Saw-whet Owl Aegolius acadicus (243—26,153) | *Ruby-throated Hummingbird Architochus colubris (19—14.995) | *Anna's Hummingbird? Calypte anna (4—3504) | *Caliope Hummingbird Stellula calliope (10-425) | *Broad-tailed Hummingbird Selasphorus platycercus (50-2733) | **Rufous Hummingbird ⁸ Selasphorus rufus (1—3247) |

TABLE 2. Continued.

| 8-00 | NABB 8: 42, 1983, BBL | 6 Jun. 81 (99) | Starr Ranch Audubon Society, Starr Ranch, 4.8 km E Tra- buco, Cailfornia | 850-53119 5 May 74 AHY-(M) | *Black Phoebe Sayornis nigricans (16–3506) |
|--|--------------------------|---|--|--|--|
| 8-02 | BBL | 2 Aug. 83 (99) M. L. Morton | Point Reyes Bird Observatory, Tioga Pass, 12.8 km SW Lee Vining, California | 78-31094 28 Jul. 76 AHY-F | **Dusky Flycatcher Empidonax oberholseri (1—2755) |
| 8-00 | BBL | 20 Jun. 85 (99) | D. W. Johnston, Mountain Lake Biological Station, Mountain Lake, Virginia | 1430-65629 6 Jul. 77 L-U | *Least Flycatcher Empidonax minimus (39—74,057) |
| 7-01 | BBL | 27 Jul. 83 (99) | Point Reyes Bird Observatory, 5.6 km NW Bolinas, California | 110-134522 16 Jul. 77 AHY-M | *Olive-sided Flycatcher Contopus borealis (3—1683) |
| 4-09 | BBL | Spring 83 (14) 32 km SE Patagonia, Arizona | C. E. Corchran, Tanque Verde Ranch, Tuscon, Arizona | 1420-32986 15 Mar. 79 AHY-U | **Northern Beardless- Tyrannulet Camptostoma imberbe (1—60) |
| 9-11 | BBL | 25 May 88 (99) | M. T. Donnald, Adventure- Watts Branch Stream Valley Park, Potomac, Maryland | 544-32397 18 May 79 AHY-M | *Pileated Woodpecker Dryocopus pileatus (18—870) |
| 7-07 | BBL | 9 Jan. 78 (99) | Point Reyes Bird Observatory, 5.6 km NW Bolinas, California | 1063-66484 30 Aug. 71 AHY-F | *Common (Red-shafted) Flicker Colaptes auratus sspp. (107—4603) |
| 4-00 | BBL | 18 Jun. 85 (99) | Point Reyes Bird Observatory, 5.6 km NW Bolinas, California | X24569 6 Jun. 81 HY-F | *Allen's Hummingbird Selasphorus sasin (6—1902) |
| Esti- mated mini- mum age (yr-mo) | Data source | Encounter date Encounter code and locale | Bander and Banding locale | Band number Banding date Age/Sex | Common name Scientific name (Total encounters— total banded) |

TABLE 2. Continued.

| Bander and Banding locale |
|--|
| D. F. De Sante, Cabo San Lu- cas, Baja California, Mexico |
| Starr Ranch Audubon Society, Starr Ranch, 4.8 km E Tra- buco, California |
| C. E. Corchran, Tanque Verde Ranch, Tucscon, Arizona |
| V. A. Truan, 12.8 km W Pueblo, Colorado |
| K. A. Arnold, 9.6 km SW Somerville, Texas |
| S. West, Carlsbad Caverns National Park, 4.8 km W Whites City, New Mexico |
| R. B. Williams, Totem Park, 16 km N Juneau, Alaska |

TABLE 2. Continued.

| Esti- mated mini- mum age (yr-mo) | 16-04 | 17-07 | 11-00 | 5-11 | 4-08 | 8-00 | 4-09 |
|--|---|---|--|---|--|---|--|
| Data source | BBL | PC-MKK, BBL | BBL | BBL | BBL | BBL | BBL |
| Encounter date Encounter code and locale | Oct. 81 (21) same | Jan. 87 (29) same | 8 Jun. 81 (99) | 20 May 88 (57) same | 15 Feb. 84 (04) same | 11 Jun. 86 (99) | 3 Mar. 82 (99) |
| Bander and Banding locale Encou | H. Goldman, Glen Falls, New York | J. L. Brown, Southwestern Research Station, Portal, Arizona | R. P. Balda, Flagstaff, Arizona | Pacific Northwest Field Station, Benton City, Washington | L. J. Peyton, Univeristy of Alaska campus, Fairbanks, Alaska | Point Reyes Bird Observatory, 5.6 km NW Bolinas, California | Point Reyes Bird Observatory, 5.6 km NW Bolinas, California |
| Band number Banding date Age/Sex | 763-38263 21 Sep. 65 U.U | 1353-07402 31 May 69 L-(M) | 743-80628 8 Mar. 72 ASY-F | 664-19723 7 Nov. 82 U-U | 1530-59621 19 Aug. 79 HY-U | 78-33583 2 Jul. 78 HY-U | 702-74337 19 Jan. 78 AHY-M |
| Common name Scientific name (Total encounters— total banded) | @Blue_Jay° Cyanocitta cristata (22,948—483,395) | *Gray-breasted Jay Aphelocoma ultramarina (92—1734) | *Pinyon Jay Gymnorhinus cyanocephalus (171—6503) | *Black-billed Magpie Pica Pica (296—14,117) | **Boreal Chickadee Parus hudsonicus (16—2322) | *Bewick's Wren Thryomanes bewickii (97—10,190) | *Varied Thrush Ixoreus naevius (32—3759) |

TABLE 2. Continued.

| Common name Scientific name (Total encounters— | Band number Banding date | Bander and | Encounter date | Data | mated mini- |
|--|--|--|--|--------------------------|-------------|
| | A279800 23 Aug. 31 | es, Cali- | Jul. 36 (01) same | BBL | 6-01 |
| | A-U 122-64738 23 May 78 | C. Van Riper, Hawaii National Park, Hawaii | 3 Jul. 83 (89) D. Berger, Hawaii Volca- | BBL | 5-01 |
| 1 6 7 1 | 111-0 1440-92440 28 Jun. 77 HV-11 | Point Reyes Bird Observatory, 5.6 km NW Bolinas, Califor- | 31 Dec. 83 (99) | BBL | 90-9 |
| | 1260-48720 1 Aug. 77 11-(M) | D. A. McCallum, 11.2 km S Thoreau, New Mexico | 29 Jul. 81 (99) | NABB 8: 42, 1983, BBL | 4-01 |
| 7 7 A | 1450-35396 10 Apr. 80 AHY-M | C. E. Corchran, Tanque Verde Ranch, Tuscon, Arizona | 4 Apr. 85 (99) | BBL | 5-10 |
| 12 % D | 1370-19464 24 Aug. 75 U-F | M. R. Hannisian, Denville, New Jersey | Feb. 85 (01) Chiriqui Province, Panama | BBL | 90-6 |
| $\pm \approx \pm$ | 1300-61636 20 Oct. 74 HY-F | Point Reyes Bird Observatory, 5.6 km NW Bolinas, California | 17 Jan. 78 (99) | BBL | 3-07 |
| | | | | | |

TABLE 2. Continued.

| Common name Scientific name (Total encounters— total banded) | Band number Banding date Age/Sex | Bander and Banding locale | Encounter date | Data source | Esti- mated mini- mum age (yr-mo) |
|--|--|--|--|----------------|--|
| *Blackburnian Warbler Dendroica fusca (11—19,633) | 1350-94909 11 Sep. 76 HY-(M) | C. E. Corchran, 3.3 km S Lake Hubert, Minnesota | 3 Aug. 84 (99) | BBL | 8-02 |
| **Yellow-throated Warbler Dendroica dominica (4—1580) | 1590-49630 14 Sep. 81 U-U | A. M. Baumgartner, 8 km S Jay, Oklahoma | 3 Jul. 86 (99) | BBL | 5-01 |
| **Bay-breasted Warbler Dendroica castanea (18—55,845) | 1620-38469 13 Sep. 82 AHY-F | C. C. Ayres, Jr., Pioneer Ridge Park, Ottumwa, Iowa | 4 Nov. 84 (03) 7 km E Almirante, Boca del Toro, Panama | BBL | 3-05 |
| *Blackpoll Warbler Dendroica striata (30—111,157) | 1490-32168 20 Sep. 78 AHY-U | Manomet Bird Observatory, 9.6 km ESE, Plymouth, Massa- chusetts | 29 Sep. 81 (99) | BBL | 4-03 |
| *Northern Waterthrush Seiurus noveboracensis (47—81.873) | 880-38926 21 Aug. 78 HY-U | Long Point Bird Observatory, Courtright Ridge, Long Point, Ontario | 11 May 87 (89) J. Komorowski, 3.2 km S Luna Pier, Michigan | BBL | 8-11 |
| *MacGillivray's Warbler Oporomis tolmiei (10—7620) | 1330-04440 5 Jul. 76 AHY-M | L. R. Mewaldt, Hart Mountain National Wildlife Refuge, Oregon | 3 Jul. 79 (99) | BBL | 4-01 |
| *Canada Warbler Wilsonia canadensis (25—59,300) | 1300-28152 29 Jun. 75 AHY-M | L. Genest, Port-au-Saumon, Charlevoix, Quebec | 14 Jun. 82 (13) same | BBL | 8-00 |

TABLE 2. Continued.

| Esti- mated | mnm mum | age (yr-mo) | 20-9 | 7-03 | 12-11 | 8-11 | 8-09 | 7-01 | 8-11 | 8-01 |
|----------------|--------------------------------|---|--|---|---|--|--|--|--|--|
| | | Data source | BBL | BBL | BBL | NABB 9: 26, 1984, PC- MKK, BBL | BBL | BBL | BBL | NABB 13: 76, 1988, BBL |
| | | Encounter date Encounter code and locale | 3 Jan. 81 (99) | 11 Sep. 87 (99) | 5 May 87 (99) D. Malec | 21 May 82 (99) A. Stokes | 4 Mar. 88 (99) | 24 Jul. 86 (99) | 30 May 87 (10) M. V. McDonald, same | 10 Jul. 86 (29) E. K. Bollinger, near Bridgeport, New York |
| | | Bander and Banding locale | S. H. Spofford, 2.4 km SW Portal, Arizona | G. W. Lasley, Driftwood, 22.4 km W Buda, Texas | K. Y. Hodgdon, Pleasant Valley, Bittinger, Maryland | D. S. Winn, Logan, Utah | P. B. Hamel, Clemson University, Clemson, South Carolina | A. M. Mery, 9.6 km N Powderhorn, Colorado | Florida Game and Fish Commission, Cedar Key, Florida | R. L. Kalinoski, 1.7 km S Lakeport, New York |
| | Band number | Banding date Age/Sex | 27-29141 9 Sep. 78 AHY-(M) | 951-00193 1 May 82 ASY-M | 851-91090 11 May 76 ASY-M | 850-20914 12 May 74 AHY-M | 1520-72237 17 Nov. 79 HY-U | 1241-69151 29 Jun. 80 AHY-M | 1251-16030 3 Jul. 79 AHY-(M) | 103-178176 16 Jun. 78 L-(F) |
| 8 | Common name Scientific name | (Total encounters—total banded) | *Painted Redstart ¹¹ Myioborus pictus (484) | *Summer Tanager Piranga rubra (38—6414) | *Rose-breasted Grosbeak Pheucticus Iudovicianus (1327—74,190) | *Lazuli Bunting ¹² Passerina amoena (91—14,517) | *Field Sparrow Spizella pusilla (2030—148,715) | *Vesper Sparrow Pooectes gramneus (442—20,847) | *Seaside Sparrow Ammodramus maritimus (14—5830) | *Bobolink ¹³ Dolichonyx oryzivorus (39—14,522) |

TABLE 2. Continued.

| Common name Scientific name (Total encounters— total banded) | Band number Banding date Age/Sex | Bander and Banding locale | Encounter date Encounter code and locale | Data source | Esti- mated mini- mum age (yr-mo) |
|---|--|---|---|------------------------------|--|
| *Brown-headed Cowbird Molothrus ater (13,936—869,977) | 55-135538 30 May 69 AHY-M | C. L. Strelitzer, Milwaukee, Wisconsin | 17 May 85 (99) | NABB 11: 35, 1986, BBL | 16-11 |
| @Orchard Oriole ¹⁴ Icterus spurius (93—17,230) | 35-139750 21 May 32 (AHY)-U | J. F. Brenckle, Northville, South Dakota | Fall 1940 (00) Aberdeen, South Dakota | BBL | 9-03 |
| *House Finch Carpodacus mexicanus (8818—564,409) | 830-24634 8 Dec. 73 U-F | R. P. Yunick, Schenectady, New York | 20 Jan. 85 (99) | PC-MKK, BBL | 11-07 |
| **Hoary Redpoll ¹⁵ Carduelis hornemanni (10—5085) | 1540-26131 1 Mar. 81 AHY-(M) | University Alaska Museum, Ester, Alaska | 5 Jan. 85 (16) D. Gibson, same | NABB 11: 150, 1986 | 4-07 |
| *American Goldfinch Carduelis tristis (5468—778,131) | 1450-60189 8 Apr. 77 SY-M | R. P. Yunick, Schenectady, New York | 15 Sep. 85 (12) same | BBL | 9-03 |
| **Common Amakihi¹° Hemignathus virens (2—2111) | 70-116939 29 Dec. 72 AHY-M | A. J. Berger, Mauna Kea, Ha- waii | 27 Feb. 79 (99) C. Van Riper | NABB 5: 129, 1980, BBL | 7-08 |

Continued. TABLE 2.

- 'Clark's and Western Grebe were considered conspecific until the 6th Ed AOU Checklist.
- ³ This band was etched 647-644X6. A number was chosen at random from five AHY-F eiders banded on the same day at the same location. ² 67-151979 replaced band 54-22224 (Clapp et al. 1982). This is the bird C. E. Huntington nick-named "Paul Bunyan."
- The other five numbers had been placed on males.
- ⁵ The age at banding was SY; thus, the bird hatched in 1969 and was retrapped in June 1985. The age computes to 16-00 not 17-00. The 4 This is a State band, not one from United States Fish and Wildlife Service. No banding or encounter totals are available for this species. bander was R. McNeil according to BBL records.
 - ⁶ 802-01996 was erroneously Jisted as 802-01966 in NABB (1986).
 - 7 X15233 is the same bird as listed in Clapp et al. (1983).
- 8 X20725 was originally banded as an "Unidentified Hummingbird."
- 9 763-38263 was listed in Clapp et al. (1983) with the banding year as 63 instead of 65; thus, the EMA is reduced to 16-04.
- 10 40-347172 was published (Klimkiewicz et al. 1983) with a banding date of 13 Dec. 39. This was accepted from the old BBL IBM cards in lieu of the original schedule which could not be located. A. M. Baumgartner (pers. comm.) advised us that the banding date was 13 Dec. 49.
 - 11 27-29141 is the same bird as listed in Klimkiewicz et al. (1983).
- 12 NABB (1984) lists the age as SY; however, the banding schedule lists the age as AHY. A. Stokes was a subpermittee of D. S. Winn. ¹³ This is the same bird as listed in Klimkiewicz and Futcher (1987).
- 14 35-139750 was originally coded with a recovery date of 2 Jan. 41; however, this was the letter date. The letter states "This fall I found an oriole that was dead on the highway...." Season codes were not in use by the BBL in the forties nor was Encounter Type 45.
 - 15 1540-26131 was originally banded as "Unidentified Redpoll" and is not in the BBL files.
 - 6 NABB (1980) listed 70-116939 with the incorrect band number, age, and bander.

the responsibility of State wildlife agencies and records are not a part of the North American Bird Banding System.

We give recovery and banding totals for several reasons. First, they help in evaluating the significance of the longevity records. When large numbers of short-lived species have been banded, particularly species not known to remove bands or for which bands may reasonably be expected to outlast the bearer, the longevity given probably represents a reasonable estimate of the maximum longevity that occurs in the wild (this is particularly true for a number of passerines). For some species where only moderate or small numbers of birds have been banded or recovered, longevities given here are almost certainly not the maximum that is attained in the wild. For other species our longevity records more often constitute a report on the "state of the art" both in terms of the amount of work that has been done with each species and in terms of the development of more durable bands for marking these birds.

A second reason for presenting banding and recovery figures is to aid in future research involving banding. Although banding and recovery figures are not strictly comparable, among species they may allow a fair estimate of the amount of work needed to obtain a given number of recoveries. This would not be true; however, for certain groups (e.g., the seabirds, largely banded by the Smithsonian Pacific Ocean Biological Survey Program—POBSP, where a great number of the recoveries were obtained by the program itself) but would likely be helpful for most species. In addition, a quick look through these figures will soon reveal those species that have been least subjected to the kinds of studies for which a marking program is necessary or helpful (e.g., dispersal, breeding biology, territoriality).

We have added one of three symbols before the common name in the list of longevities (Table 1). An * denotes a bird of greater age than in the original lists and ** indicate a species not listed in any of the previous papers. Three species—Blue Jay, Loggerhead Shrike and Orchard Oriole—have a @ that indicates that the records in the original series were in error and the longevity is less than those listed in the earlier series.

One hundred seven records of the 147 species or forms given in Table 2 are for birds of greater longevity than those listed in previous lists. Another 37 longevity records are for taxa not listed in the original series, and the remaining three records are birds of lesser age that correct or replace incorrect records in the original series.

We encourage banders to submit records for longevities of wild birds that exceed those listed here or in the previous series. We also wish to obtain data for species which have not been listed—these individuals should have an EMA of at least 5–00. This information will be helpful in producing further supplements on the longevity of North American birds.

ACKNOWLEDGMENTS

Many individuals including those listed in Table 2 supplied us with original banding or recovery data. We thank them and others for their help. The following persons or groups were particularly helpful in supplying updated records—C. E. Huntington, R. A. Ryder, P. D. Major, Point Reyes Bird Observatory, A. M. Baumgartner, W. A. Calder, C. E. Corchran, P. M. Walters, P. J. Sykes, J. L. Brown, Manomet Bird Observatory, L. R. Mewaldt, G. Laskey, A. M. Mery and R. P. Yunick.

Personnel of the Bird Banding Laboratory (BBL), Office of Migratory Bird Management, aided us in locating and verifying records. We particularly thank Nancy G. Mullis, whose incomparable knowledge of the BBL files saved us many hours of work; Danny Bystrak, Biologist, BBL, for his cooperation and assistance; George M. Jonkel, Chief, BBL, for his cooperation and encouragement; Leslie Lammons, for her perseverance in typing the manuscript and Rosanne Cummins, for technical typing assistance. Sam Droege, Danny Bystrak, and Robert I. Smith kindly reviewed the manuscript.

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