# www.bandedbirds.org
## Shorebird Resighting Database
### Web-Based Data Management and Retrieval System for Reporting Sightings of Uniquely Marked Shorebirds



**Metadata Supplement for Banding Extract: Banding Data Codes**

**First Revision (March 2011)**

**Background**

A web-based data management system has been developed and implemented for storing and retrieving data about uniquely marked shorebirds. The data is stored in a SQLSERVER2000 database. The design of the entry system using both data forms and bulk uploads from Excel enables the tracking of individual birds based upon unique information. Birds may be marked as individuals with an engraved marker where codes are etched onto a flag or leg band. Some birds are also marked as individuals with a unique pattern of colorbands. In this case, a "code" is devised based on the colors. These individuals are identified through both banding and resighting. The capture information allows tracking by the metal bands and the engraved color markers placed on birds. The individuals can also be identified by resighting with spotting scopes and recording the unique combination of bird species, marker type/color and engraved code on the marker or pattern of colorbands. Custom programming creates and maintains the relationship of capture and resighting data, even when band changes are made to an individual, allowing the retrieval of data that details a bird's recorded history.

This document is a supplement to the FGDC compliant metadata for the banding extract available for researchers. Detailed here are the definitions of coded attributes for the banding data.

**Projects:** Codes representing the project that has ownership of the data. Codes are generated by the database.

| Code | Name |
|------|------|
| 1 | Public Domain |
| 2 | Delaware Bay Shorebird Banding Project - New Jersey |
| 3 | Delaware Bay Shorebird Resighting Project - New Jersey |
| 5 | New Jersey Atlantic Coast Shorebird Banding Project |
| 6 | New Jersey Atlantic Coast Shorebird Resighting Project |
| 7 | Delaware Bay Shorebird Banding Project - Delaware |
| 8 | Delaware Bay Shorebird Resighting Project - Delaware |
| 9 | Delaware Semipalmated Sandpiper Banding Project |
| 10 | New Jersey Audubon Society Shorebird Banding Project |

| Code | Name |
|---|---|
| 11 | New Jersey Audubon Society Shorebird Resighting Project |
| 12 | Virginia Coastal Islands Banding Project |
| 13 | Virginia Coastal Islands Resighting Project |
| 14 | Northeast Florida/Southern Georgia Shorebird Banding Project |
| 15 | Northeast Florida/Southern Georgia Shorebird Resighting Project |
| 16 | Southwest Florida Shorebird Banding Project |
| 17 | Southwest Florida Shorebird Resighting Project |
| 18 | Tierra Del Fuego Shorebird Banding Project - Chile |
| 19 | Tierra Del Fuego Shorebird Resighting Project - Chile |
| 20 | Mingan Quebec Shorebird Banding Project |
| 21 | Mingan Quebec Shorebird Resighting Project |
| 22 | James Bay Shorebird Resighting Project |
| 23 | South Central Florida Shorebird Resighting Project |
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| 25 | Texas Shorebird Resighting Project |
| 26 | Georgia Shorebird Banding Project |
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| 28 | NJAS French Guiana Shorebird Banding Project |
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| 32 | Argentina Shorebird Banding Project_Dataloggers |
| 33 | The Effects of Human Induced Habitat Modification on Shorebirds and Seabirds in Florida |
| 34 | South Carolina Shorebird Banding Project |
| 35 | Determining Migratory Connectivity of Alaskan Red Knots |
| 36 | Chiloé Island Shorebird Banding Project |

**Catch Method:** Technique used to trap birds for banding.

| Code | Catch Method |
|---|---|
| Cannon | Cannon Netting |
| Mist | Mist Netting |
| WalkIn | Walk-In Trap |
| Whoosh | Whoosh Net |

**Location Codes**: These alphacodes represent the banding and resighting locations in the database. Since the list is so long, location codes are in an individual document. Please refer to the document Metadata Supplement for Location Codes, which can be found in the Metadata Section at http://report.bandedbirds.org/.

**Species:** These four character codes are based on the alpha codes required for reporting bandings to the Bird Banding Laboratory. Following are codes in use in this database. A complete list of all species may be accessed via http://www.pwrc.usgs.gov/BBL/DEFAULT.HTM.

| Code | Common Name | Latin Name |
|---|---|---|
| AMAV | American Avocet | Recurvirostra americana |
| AMGP | American Golden Plover | Pluvialis dominica |
| AMOY | American Oystercatcher | Haematopus palliatus |
| BADE | Banding Code: Band Destroyed | |
| BALO | Banding Code: Band Lost | |
| BBPL | Black-bellied Plover | Pluvialis squatarola |
| BLSK | Black Skimmer | Rynchops niger |
| BNST | Black-necked Stilt | Himantopus mexicanus |
| BOGU | Bonaparte's Gull | Larus philadelphia |
| CLRA | Clapper Rail | Rallus longirostris |
| COPL | Collared Plover | Charadrius collaris |
| COTE | Common Tern | Sterna hirundo |
| DCCO | Double-crested Cormorant | Phalacrocorax auritus |
| DUNL | Dunlin | Calidris alpina |
| FOTE | Forster's Tern | Sterna forsteri |
| GBBG | Great Black-backed Gull | Larus marinus |
| GBHE | Great Blue Heron | Ardea herodias |
| GLGU | Glaucous Gull | Larus hyperboreus |
| GLIB | Glossy Ibis | Plegadis falcinellus |
| GRYE | Greater Yellowlegs | Tringa melanoleuca |
| HERG | Herring Gull | Larus argentatus |
| HUGO | Hudsonian Godwit | Limosa haemastica |
| KILL | Killdeer | Charadrius vociferus |
| LAGU | Laughing Gull | Larus atricilla |
| LBCU | Long-billed Curlew | Numenius americanus |
| LBDO | Long-billed Dowitcher | Limnodromus scolopaceus |
| LESA | Least Sandpiper | Calidris minutilla |
| LETE | Least Tern | Sterna antillarum |
| LEYE | Lesser Yellowlegs | Tringa flavipes |
| LGUL | Unidentified Large Gulls | Larus spp. |
| MAGO | Marbled Godwit | Limosa fedoa |

| Code | Common Name | Latin Name |
|---|---|---|
| MERL | Merlin | Falco columbarius |
| PEEP | Unidentified Small Sandpipers | |
| PEFA | Peregrine Falcon | Falco peregrinus |
| PIPL | Piping Plover | Charadrius melodus |
| RBGU | Ring-billed Gull | Larus delawarensis |
| REKN | Red Knot | Calidris canutus |
| REPH | Red Phalarope | Phalaropus fulicarius |
| RNPH | Red-necked Phalarope | Phalaropus lobatus |
| ROST | Roseate Tern | Sterna dougallii |
| ROYT | Royal Tern | Sterna maxima |
| RUFF | Ruff | Philomachus pugnax |
| RUTU | Ruddy Turnstone | Arenaria interpres |
| SAND | Sanderling | Calidris alba |
| SATE | Sandwich Tern | Sterna sandvicensis |
| SBDO | Short-billed Dowitcher | Limnodromus griseus |
| SEPL | Semipalmated Plover | Charadrius semipalmatus |
| SESA | Semipalmated Sandpiper | Calidris pusilla |
| SGUL | Unidentified Small Gulls | Larus spp. |
| SNEG | Snowy Egret | Egretta thula |
| SNPL | Snowy Plover | Charadrius alexandrinus |
| SOSA | Solitary Sandpiper | Tringa solitaria |
| SPSA | Spotted Sandpiper | Actitis macularia |
| STSA | Stilt Sandpiper | Calidris himantopus |
| UDOW | Unidentified Dowitchers | Limnodromos sp. |
| UGUL | Unidentified Large Gulls | Larus sp. |
| USHO | Unidentifed Shorebirds | |
| UYEL | Unidentified Yellowlegs | Tringa sp. |
| WESA | Western Sandpiper | Calidris mauri |
| WHIM | Whimbrel | Numenius phaeopus |
| WILL | Willet | Catoptrophorus semipalmatus |
| WIPL | Wilson's Plover | Charadrius wilsonia |
| WRSA | White-rumped Sandpiper | Calidris fuscicollis |

**Flag Color:** The term "flag color" is archaic and left from when the database only handled birds marked with flags. These codes represent any type of marker type that in conjunction with a code can determine individuality of a bird.

| Flag Code | FlagColor |
|-----------|-----------|
| CB | Bands Only: No engraving or flag |
| FB | Dark Blue Flag |
| FBk | Black Flag |
| FBl | Light Blue Flag |
| FBlFW | Lt Blue/White Flags |
| FG | Dark Green Flag |
| FL | Light Green Flag |
| FLFB | Lt Green/Dk Blue Flag(s) |
| FLFG | Lt Green/Dk Green Flag(s) |
| FLFR | Lt Green/Red Flag(s) |
| FLFY | Lt Green/Yellow Flag(s) |
| FO | Orange Flag |
| FOFB | Orange/Dk Blue Flag(s) |
| FOFL | Orange/Lt Green Flag(s) |
| FOFR | Orange/Red Flag(s) |
| FOFY | Orange/Yellow Flag(s) |
| FR | Red Flag |
| FRFB | Red/Dk Blue Flag(s) |
| FRFBk | Red/Black Flag(s) |
| FRFG | Red/Dk Green Flag(s) |
| FRFGy | Red/Grey Flag(s) |
| FRFL | Red/Lt Green Flag(s) |
| FRFO | Red/Orange Flag(s) |
| FRFW | Red/White Flag(s) |
| FRFY | Red/Yellow Flag(s) |
| FW | White Flag |
| FWFY | White flag over yellow flag |
| FY | Yellow Flag |
| FYFB | Yellow/Dk Blue Flag(s) |
| FYFG | Yellow/Dk Green Flag(s) |
| FYFL | Yellow/Lt Green Flag(s) |
| FYFO | Yellow/Orange Flag(s) |
| FYFR | Yellow/Red Flag(s) |
| FYFW | Yellow/White Flag(s) |
| LB | Dark Blue Engraved Leg Band |

| Flag Code | FlagColor |
|-----------|-----------|
| LBk | Black Engraved Leg Band |
| LG | Dark Green Engraved Leg Band |
| LO | Orange Engraved Leg Band |
| LR | Red Engraved Leg Band |
| LY | Yellow Engraved Leg Band |

**Disposition (Disp)**: These codes are the same as the codes required for reporting banding data to the Bird Banding Laboratory. Further information may be accessed via http://www.pwrc.usgs.gov/BBL/DEFAULT.HTM.

| Disp | Description |
|------|-------------|
| 1 | Newly banded bird, record normal |
| 4 | Band destroyed |
| 5 | Band replaces old band (removed) |
| 6 | This band added to existing band |
| 8 | Band lost |
| 9 | Record lost |
| F | Foreign Recovery |
| R | Recapture of your own band |

**Status:** These codes are based on the codes required for reporting banding data to the Bird Banding Laboratory. Following are codes in use in this database. A complete list of all codes may be accessed via http://www.pwrc.usgs.gov/BBL/DEFAULT.HTM.

| Status | Description |
|--------|-------------|
| 300 | Normal wild bird Federal numbered metal band only |
| 301 | Normal wild bird Colored leg band(s): plastic, metal, paint, tape |
| 310 | Normal wild bird All flight feathers on one or both wings clipped or pulled plus auxiliary marker(s) |
| 318 | Normal wild bird Blood sample taken |
| 319 | Normal wild bird Blood sample taken, plus auxiliary marker(s) |
| 325 | Normal wild bird Two or more types of auxiliary markers |
| 329 | Normal wild bird Miscellaneous band, federal band, plus auxiliary marker(s) |
| 330 | Normal wild bird Double-banded with federal bands, plus auxiliary marker(s) |
| 369 | Normal wild bird Flag, streamer, or tab on leg |
| 385 | Normal wild bird Miscellaneous (combination or situation not covered by other ai codes) |
| 800 | Held for longer than 24 hours for experimental or other purposes Federal numbered metal band only. |

| Status | Description |
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| 801 | Held for longer than 24 hours for experimental or other purposes Colored leg band(s): plastic, metal, paint, tape |

**Age:** These codes are the same as the codes required for reporting banding data to the Bird Banding Laboratory. Further information may be accessed via http://www.pwrc.usgs.gov/BBL/DEFAULT.HTM.

| Age | Description |
|---|---|
| AHY | After Hatch Year |
| ASY | After Second Year |
| ATY | After Third Year |
| HY | Hatch Year |
| L | Local |
| SY | Second Year |
| TY | Third Year |
| U | Unknown |

**Sex:** These codes are the same as the codes required for reporting banding data to the Bird Banding Laboratory. Further information may be accessed via http://www.pwrc.usgs.gov/BBL/DEFAULT.HTM.

| Sex | Description |
|---|---|
| F | Female |
| M | Male |
| U | Unknown |

**BMI Extent:** These codes represent the amount of body moult occurring.

| BMI Extent | Description |
|---|---|
| 0 | No molt |
| 1 | Few feathers in molt (1-6) |
| 2 | Some feathers in molt (1/3 to 2/3 everywhere you look) |
| 3 | Many feathers in molt everywhere you look |

**Plumage:** These codes represent the degree of basic and alternate plumage, typically scored during migration.

| Plumage | Description |
|---------|-------------|
| 0 | Not scored |
| 1 | Full Basic (winter) plumage |
| 2 | Trace of Alternate (summer) plumage |
| 3 | 25% Alternate (summer) plumage |
| 4 | 50% Alternate (summer) plumage |
| 5 | 75% Alternate (summer) plumage |
| 6 | Trace of Basic (winter) plumage |
| 7 | Full Alternate (summer) plumage |

**Primary Stage 1 to 10:** Stage of growth for each primary feather.

| Primary Stage | Description |
|---------------|-------------|
| 0 | An old feather |
| 1 | Old feather missing or new feather completely in pin |
| 2 | New feather just emerging from sheath, up to one third grown |
| 3 | New feather between one and two thirds grown |
| 4 | New feather more than two thirds grown, but waxy sheath still at its base |
| 5 | New feather fully-grown with no trace of sheath at its base |
| 6 | New feather fully-grown in a 2nd wave of molt on a wing with an active or recently completed 1st wave |
| 7 | New feather fully-grown in a 3rd wave of molt on a wing showing 1st & 2nd waves |
| J | A feather grown by a Juvenile when first fledged on the breeding ground |
| R | A feather replacing a "J" primary before the first conventional molt |

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| DUNL | Dunlin | Calidris alpina |
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| ROYT | Royal Tern | Sterna maxima |
| RUFF | Ruff | Philomachus pugnax |
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| SNPL | Snowy Plover | Charadrius alexandrinus |
| SOSA | Solitary Sandpiper | Tringa solitaria |
| SPSA | Spotted Sandpiper | Actitis macularia |
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| Flag Code | FlagColor |
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| FOFB | Orange/Dk Blue Flag(s) |
| FOFL | Orange/Lt Green Flag(s) |
| FOFR | Orange/Red Flag(s) |
| FOFY | Orange/Yellow Flag(s) |
| FR | Red Flag |
| FRFB | Red/Dk Blue Flag(s) |
| FRFBk | Red/Black Flag(s) |
| FRFG | Red/Dk Green Flag(s) |
| FRFGy | Red/Grey Flag(s) |
| FRFL | Red/Lt Green Flag(s) |
| FRFO | Red/Orange Flag(s) |
| FRFW | Red/White Flag(s) |

| Flag Code | FlagColor |
|-----------|-----------|
| FRFY | Red/Yellow Flag(s) |
| FW | White Flag |
| FWFY | White flag over yellow flag |
| FY | Yellow Flag |
| FYFB | Yellow/Dk Blue Flag(s) |
| FYFG | Yellow/Dk Green Flag(s) |
| FYFL | Yellow/Lt Green Flag(s) |
| FYFO | Yellow/Orange Flag(s) |
| FYFR | Yellow/Red Flag(s) |
| FYFW | Yellow/White Flag(s) |
| LB | Dark Blue Engraved Leg Band |
| LBk | Black Engraved Leg Band |
| LG | Dark Green Engraved Leg Band |
| LO | Orange Engraved Leg Band |
| LR | Red Engraved Leg Band |
| LY | Yellow Engraved Leg Band |

**Disposition (Disp)**: These codes are the same as the codes required for reporting banding data to the Bird Banding Laboratory. Further information may be accessed via http://www.pwrc.usgs.gov/BBL/DEFAULT.HTM.

| Disp | Description |
|------|-------------|
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| 6 | This band added to existing band |
| 8 | Band lost |
| 9 | Record lost |
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| 319 | Normal wild bird Blood sample taken, plus auxiliary marker(s) |
| 325 | Normal wild bird Two or more types of auxiliary markers |
| 329 | Normal wild bird Miscellaneous band, federal band, plus auxiliary marker(s) |
| 330 | Normal wild bird Double-banded with federal bands, plus auxiliary marker(s) |

| Status | Description |
|---|---|
| 369 | Normal wild bird Flag, streamer, or tab on leg |
| 385 | Normal wild bird Miscellaneous (combination or situation not covered by other ai codes) |
| 800 | Held for longer than 24 hours for experimental or other purposes Federal numbered metal band only. |
| 801 | Held for longer than 24 hours for experimental or other purposes Colored leg band(s): plastic, metal, paint, tape |

**Age:** These codes are the same as the codes required for reporting banding data to the Bird Banding Laboratory. Further information may be accessed via http://www.pwrc.usgs.gov/BBL/DEFAULT.HTM.

| Age | Description |
|---|---|
| AHY | After Hatch Year |
| ASY | After Second Year |
| ATY | After Third Year |
| HY | Hatch Year |
| L | Local |
| SY | Second Year |
| TY | Third Year |
| U | Unknown |

**Sex:** These codes are the same as the codes required for reporting banding data to the Bird Banding Laboratory. Further information may be accessed via http://www.pwrc.usgs.gov/BBL/DEFAULT.HTM.

| Sex | Description |
|---|---|
| F | Female |
| M | Male |
| U | Unknown |

**BMI Extent:** These codes represent the amount of body moult occurring.

| BMI Extent | Description |
|---|---|
| 0 | No molt |
| 1 | Few feathers in molt (1-6) |
| 2 | Some feathers in molt (1/3 to 2/3 everywhere you look) |
| 3 | Many feathers in molt everywhere you look |

**Plumage:** These codes represent the degree of basic and alternate plumage, typically scored during migration.

| Plumage | Description |
|---|---|
| 0 | Not scored |
| 1 | Full Basic (winter) plumage |
| 2 | Trace of Alternate (summer) plumage |
| 3 | 25% Alternate (summer) plumage |
| 4 | 50% Alternate (summer) plumage |
| 5 | 75% Alternate (summer) plumage |
| 6 | Trace of Basic (winter) plumage |
| 7 | Full Alternate (summer) plumage |

**Primary Stage 1 to 10:** Stage of growth for each primary feather.

| Primary Stage | Description |
|---|---|
| 0 | An old feather |
| 1 | Old feather missing or new feather completely in pin |
| 2 | New feather just emerging from sheath, up to one third grown |
| 3 | New feather between one and two thirds grown |
| 4 | New feather more than two thirds grown, but waxy sheath still at its base |
| 5 | New feather fully-grown with no trace of sheath at its base |
| 6 | New feather fully-grown in a 2nd wave of molt on a wing with an active or recently completed 1st wave |
| 7 | New feather fully-grown in a 3rd wave of molt on a wing showing 1st & 2nd waves |
| J | A feather grown by a Juvenile when first fledged on the breeding ground |
| R | A feather replacing a "J" primary before the first conventional molt |