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MEMORANDUM TO BANDERS

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- 1. The US Bird Banding Laboratory turns 100!**

In response to the growing interest in bird banding, the US Bureau of Biological Survey assumed responsibility for coordinating bird banding from the American Bird Banding Association in March 1920. Canada joined the US in 1923 to create the North American Bird Banding Program (NABBP). In 1940, the Bird Banding Laboratory (BBL) moved to the US Fish and Wildlife Service and in 1996, BBL along with other biological surveys programs moved to the US Geological Survey (USGS) where it remains today. Since its inception, data from banded birds have been used to study avian behaviour and ecology, monitor populations, set hunting regulations, address concerns about human health, safety and economy, assess bird hazards at airports and crop depredations, and educate people about the environment. Overall, the resulting data are used to inform management and conservation practices, and to support national and international conservation programs such as the North American Waterfowl Management Plan and Partners in Flight. Today, the NABBP manages about 80 million archived banding records and more than 5 million records of encounters. In addition, each year approximately 1.3 million bands are distributed to banders, and nearly

100,000 band encounter reports are submitted into the program database. BBL is looking forward to the next 100 years of bird banding, as technology advances and research and management needs develop.

2. The Chief of the Bird Banding Laboratory has retired

Bruce Peterjohn retired December 31, 2019, after 11 years as Chief of the Bird Banding Laboratory (BBL), and nearly 29 years of federal service. While Bruce has retired from his job, he will continue to pursue his passion for birding and banding hummingbirds. In his parting remarks, Bruce states that “Bird banding remains an essential tool to advance ornithological science and bird conservation, and every bander should be proud of their contributions towards advancing this science.” We couldn’t agree more! We wish Bruce well in this next chapter of life and thank him for his support to the BBO and Canadian banders over the years. Jenn Malpass is the Acting BBL Chief January to April and Tony Celis-Murillo will act May to August.

3. Data quality, reporting and reducing errors

Ensuring data quality requires error prevention and error correction. Both are crucial to maintain the integrity of the banding database. Error prevention is most efficient and requires that banders collect data accurately according to standards and transcribe them correctly into the database. This requires that data are accurate even when precise information cannot be determined e.g., record bird age as Unknown if you are unable to determine its age, do not guess. When transcribing data into Bandit, follow the prescribed coding system to prevent creation of inaccurate data. The codes are listed on the [BBL website](#) and in Bandit under the references tab. If you are unsure of the correct code to use, contact us (ec.bbo.ec@canada.ca) or the Bandit Help Desk (bandithelpdesk@usgs.gov). Bandit has built-in filters to detect errors for data quality control. Data records with an error do not enter the database. The BBO and BBL follow-up on and process data errors as time allows. See Appendix 1 for more information on how to avoid common data errors.

4. Reporting foreign recaptures

A foreign recapture is a captured banded bird originally banded as part of a banding operation other than your own. To avoid creating duplicate reports in our system, a foreign recapture should be reported either through Bandit or through www.reportband.gov, but not both ways. To obtain the original banding data for any recapture, input the information directly into www.reportband.gov. Alternatively, include the recapture data under Bandit’s RECAP tab as part of your regular data submission and submit a data request to receive the complete data records for these birds. Access the data request form from our [Google Drive](#).

5. Receipt of banding data from Bandit

Some banders did not receive a data submission receipt when they submitted their data in December 2019 due to an issue with the database. If you do not receive a receipt by e-mail within 48 hours, then we have not received your data. Bandit 4.0 submits data files automatically using Java; please ensure that your computer’s Java version is up to date. If problems persist, you can submit your submission files manually: navigate to your Documents folder (or wherever your back-ups are stored), locate the Submission, Mods or Recaps .tab files created when you attempted submission. The name of the file includes a date/time stamp (e.g., Bandit_Submission_permitnumber_yyyymmddhhmm.tab). E-mail this file to ec.bbo.ec@canada.ca.

6. Pan American Shorebird Program (PASP)

Shorebird marking in the Western Hemisphere follows the [Pan American Shorebird Program \(PASP\) marking protocol \(2016\)](#). Flag codes are assigned by band size, and are not species specific in many cases. It is possible to see the same colour and code on species that take different band sizes. When a species has two or more recommended band sizes flag codes are assigned according to the first recommended band size. E.g., a Semipalmated Plover (SEPL) can take band size 1A or 1B, when requesting flag codes for SEPL, you will only receive flag codes for 1A. This helps prevent code overlap for the same or similar species (e.g., SEPL and WEPL). If the flag does not fit the individual bird, do not attach the flag. If you are shaping the flags yourself, consider forming some of your flags to fit birds that take the second recommended band size. E-mail us at ec.bbo.ec@canada.ca to reserve a series of flag codes. Let us know the species, the permit number, the study site, the date the project will take place and how many codes are required for each band size.

7. Protected information under Canada's Privacy Act

Under federal legislation, and in order to fulfill its mandate, the BBO collects personal information (name, address, telephone number, etc.) from individuals who choose to apply for a scientific permit to capture and band birds. As such, the BBO is committed to abiding by the [Privacy Act](#), which sets out rules for how the federal government must manage personal information of individuals. To better understand how your information is used, read our [FAQ on protected information](#).

8. North American Banding Council updates

The NABC has developed a series of banding manuals for specific species groups, available on their website www.nabanding.net under resources. These manuals include:

- Passerines
- Hummingbirds
- Shorebirds
- Waterfowl
- Raptors
- and more...

Updated French translations of the shorebird and waterfowl manuals are now available (Spanish shorebird manual coming soon). Banders are to follow the best practices found in these manuals.

9. Webpage updates

We are updating the BBO webpages. Look for new information in the coming weeks. Our website address is <https://www.canada.ca/en/environment-climate-change/services/bird-banding.html>.

10. Reminders

- When purchasing mist nets and other tools, ensure you are getting high quality equipment from a reputable supplier. Some products on the market do not meet scientific standards and their use will put birds at unnecessary risk.
- Download up-to-date forms and instructions from the BBO's Google Drive or request them by e-mail. Please use these forms for a permit application, modification or renewal, recommending an applicant, ordering bird bands or requesting data.

- All banders should use Bandit 4.0 to submit banding data. The [Bandit FAQ](#) and [User Manual](#) address common issues. Please use these resources before calling the Bandit Help Line. If you are unable to use Bandit 4.0 and are using Bandit version 3.01 or earlier to submit data, please send your submission file (.tab) to: ec.bbo.ec@canada.ca. If you are unable to submit your banding data using Bandit, please contact our office.

- BBL published a Memo to All Banders (MTAB) in January 2020. Access all BBL MTABs at this URL: <https://www.pwrc.usgs.gov/BBI/resources/MTAB.cfm> (English only).

- The service standard for a scientific permit is 40 days or 20 days before the permit is required, whichever is later. A 90-day service standard applies to any permit application, which may affect a species protected by the Species at Risk Act (SARA). Be sure to submit your permit requests in plenty of time ahead of your field season. We process applications on a first-come, first-served basis. <https://www.canada.ca/en/environment-climate-change/services/migratory-bird-permits/service-standards-regulations.html>

- For all queries contact us at ec.bbo.ec@canada.ca. Notify us of any changes to your name, address, telephone number or e-mail. Always include your permit number in the subject line so we may serve you efficiently.

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Appendix 1: Data quality and avoiding common data errors

Ensuring high data quality is essential to scientific integrity and providing confidence in resulting conservation or management decisions. The route to data quality requires both error prevention and error correction. Error prevention requires that banders collect data accurately according to standards and secondly transcribes them correctly into the database. Pyle (1997 & 2008) volumes 1&2 are the standard references for bird banding in North America and all banders should know how to use these volumes for data collection and verification. The Bandit manual provides instruction on how to code and enter your data. Seek additional training, ask a colleague, contact the BBO, or contact the Bandit Help Desk if you need assistance.

Ensure that data are accurate even when precise information cannot be determined e.g., record bird age as “unknown” if you are unable to determine the age and “AHY- After Hatch Year” if you are unable to assess if the bird is SY-Second Year or ASY – After Second Year. Do not guess. Take a photo and add a comment to your own data such as “suspected ASY”. Submit HOW you aged/sexed birds in Bandit and provide more precise information when available. For example if sexing a bird by cloacal protuberance/brood patch (CP/BP) the age of the bird is at least AHY and not unknown. If you use a non-standard method of assigning age or sex not included in Pyle, include an explanation of the method used with measurements in the Remarks field so that we may verify your data.

When transcribing data into Bandit, follow the prescribed coding system to prevent creation of inaccurate data. Be familiar with all status codes and use the appropriate code when reporting data to the BBO. The Status Code is a three-digit code where the first digit gives the status of the bird and the second and third digits provide additional information (AI). Find the codes on the [BBL website](#) and in Bandit under the references tab. If you are unsure of the correct code to use, contact us at ec.bbo.ec@canada.ca or the Bandit Help Desk at bandithelpdesk@usgs.gov.

Review your data before submitting, correct errors and to catch any transcription errors and use the remarks field in Bandit to explain the choices you made, especially when not supported by Pyle. Bandit has built-in filters to detect errors for data quality control. Data records with an error do not enter the database. The BBO and BBL follow-up on and process data errors as time allows.

Feather sampling and cloacal swabs

- There is no status or additional information codes for feather sampling or cloacal swabs. To report feather collection and any swabs, check off the appropriate boxes in the Primary tab of the Bands Details of Bandit.

Miscellaneous

- Codes 306 (Miscellaneous band plus federal band) and 329 (Miscellaneous band, plus federal band, plus aux. markers) may only be used by authorized banders. These are defined as any other type of unique metal band not considered in the given options e.g., Jack Miner bands, bands from foreign schemes, bands used to assess reporting rates, etc.
- Code 385 (Miscellaneous) refers to a combination of AI codes or a situation not covered by other AI codes. Please make the distinction between codes 306, 329 and 385. Always give explanations in the Remarks. Please refer to the Reference section of your Bandit file.

- Do not use status code 385 to get Bandit to accept your data. You are inserting error and we will ask you to resubmit your data.

Transportation

- Code 200 is a bird transported outside the 10-minute block from where it was banded. It may or may not be held for longer than 24 hours. Banding location, age, sex, and date banded must be at RELEASE. Capture location and date must be given in Remarks.

Injured and Released

- Code 500 is any bird that has a new or old injury, is sick, exhausted, physically deformed (e.g., bill deformity, leg deformity), emaciated and cold, stressed and held less than 24 hrs. Include a remark with this code and take a photo. Examples of old injuries include a missing foot, missing toe or talon, a wound, missing eye, scab, broken bill etc.

Auxiliary Markers

- Enter auxiliary markers in the Aux Marker field in Bandit (Version 4 allows you to enter more than one) and add additional markers in the Remarks for Version 3.01. Ensure the bird status code matches the auxiliary marker fields. If there is no remark or it is not clear, you may be asked to resubmit your data.
- Code 325 is two or more auxiliary marker types e.g., colour bands and radio transmitter, PIT tag with colour bands, web tagged with a satellite transmitter and colour bands, etc.
- Code 369 is a flag or streamer with a federal band, commonly used on shorebirds.
- Code 375 is PIT tag with a federal band. Please enter the brand and model in the Remarks.
- Code 380 is Satellite/Cell/GPS transmitter with a federal band. Please enter the brand and model in the Remarks.
- Code 381 is a federal band with a radio transmitter; Nano tags and Motus tags are radio transmitters (81).
- Codes for auxiliary markers you are approved to use are listed on your banding permit.

Nest Boxes

- Code 333 is a bird taken from an artificial nest structure e.g., bluebird boxes, Osprey platforms, Tree Swallow boxes, etc.
- Code 334 is the same as 333 but the bird has an auxiliary marker.

How aged/sexed codes

- A Local bird (L) is described as a bird before their 1st prebasic moult, or “pre-flighted” young. It includes very recently fledged young as well (How code NF). The Banding Program does not accept age code “HY” for birds in juvenile plumage, before the first prebasic moult. Please use “L” for local birds that are nestlings (How code NN) or recently fledged, and “HY” for birds that can fly.
- There are many species where local birds (L) and hatch year birds (HY) can only be sexed by blood. Do not include the age of these birds unless verified by analysis.

- Look at a combination of definitive (e.g., CP/BP, skull windows, measurements, moult limits in the Greater Coverts) and less definitive (feather wear and shape) characteristics to reach a conclusion on the age and sex of a bird.
- Some species cannot be aged as SY in spring and so all birds will be AHY in the spring. Skulling is not dependable in the spring.
- When using wing length, make sure the feathers are not broken or too worn, and ensure the longest primary is not in sheath. If the feather is growing, the measurement isn't reliable.
- Use bar graphs in Pyle to assess the reliability of identifying birds of specific age classes.

Records with Remarks

- Banding Program staff review all records with remarks. Provide a reasonable remark for any status code that requires one. We use this information to validate your data. If it cannot be validated, we may need to contact you.
- When reporting a bird's age and/or sex that is out of the ordinary, explain your reasoning and document the extra measurements collected. You can also submit a photo.

Band Size

- Use the correct band size for each bird. The list of recommended band sizes can be found [on the BBL website](#). If you need to put on a band that does not correspond to the correct size assigned by the Banding program, please note why in the remarks. This way we know the data are correct and there is not an error in reporting.

Auxiliary Marker at capture/release

- In Bandit, you have two tabs under the detail view (under both Bands and Recaptures sections): they are "Aux Marker at Capture," and "Aux Marker at Release." When banding, use Aux Marker at Capture only in the rare case when banding a bird that has an auxiliary marker but no band at capture e.g., it has a web tag but no band. Otherwise, report newly attached auxiliary markers in the "Aux Marker at Release" tab (what markers does it have at release?).
- Under the Recapture section, describe markers on the bird when it was recaptured (i.e. captured by you), and the markers it had when it was released. For example, did you recapture a bird and remove a datalogger or other marker? In the case where the recaptured bird was released without a change in status, use the button "Copy to marker at release" on the "At Capture" page to copy the info to "At Release."

Banding captive birds at release

- Birds may be taken into captivity for scientific purposes, for rehabilitation or another purpose and may be banded at the time of release.
- We see many data errors associated with birds that have been held in captivity, banded and released back into the wild. Please refer to the guidelines (BBO_GUID_G010) accessible on our [Google Drive](#).