

# **Integrated Monitoring in Bird Conservation Regions (IMBCR):**

## **Point Transect Full Proofing Protocol**

**2013**



**Suggested Citation:**

Van Lanen, N.J., C.M. White and M.F. McLaren. 2013. Integrated Monitoring in Bird Conservation Regions (IMBCR): Full proofing protocol. Unpublished report. Rocky Mountain Bird Observatory, Brighton, Colorado, USA.

**Cover Photos:**

Upland Sandpiper by Jeff Birek. Used with permission.

**Contact Information:**

Nick Van Lanen [nick.vanlanen@rmbo.org](mailto:nick.vanlanen@rmbo.org)  
Chris White [chris.white@rmbo.org](mailto:chris.white@rmbo.org)  
Rocky Mountain Bird Observatory  
PO Box 1232  
Brighton, CO 80601  
303.659.4348

## Table of Contents

<b>Table of Contents.....</b>	<b>2</b>
<b>I. Introduction .....</b>	<b>3</b>
<b>II. Full Proof.....</b>	<b>3</b>
1. Visit Data .....	3
2. Points Completed.....	4
3. Vegetation Data .....	5
4. Bird Data .....	8
5. Submitting Your Changes.....	9
6. Tracking Your Progress.....	9

## I. Introduction

In order to provide data quality assurance, IMBCR Partners proof the data collected and entered into the database after each field season. To efficiently catch as many errors as possible the data undergoes both a full proof and a proof using data queries. The full proof is designed to catch data entry errors that cannot be detected using the data queries. The proofing queries will identify records that are unusual in some way to facilitate further inspection. This document details instructions for conducting the full proof. If at any time you come across incomplete or incorrect data while following this protocol and there are not clear instructions in this document on how to proceed, contact your proofing supervisor.

## II. Full Proof

We conduct a full proof of all IMBCR data collected each year to catch and fix as many data entry errors as possible. The main goal of a full proof is to ensure that the data in the database mirrors that on the datasheet. It is a long and tedious process requiring considerable concentration. Proofers are therefore encouraged to work through the full proof process by dedicating shorter intervals of time each day to the proofing process so they may maintain a sufficient level of focus (and sanity). Following the full proof, crew leaders will run some proofing queries to catch errors unrelated to typos such as ground cover percentages not adding up to 100%.

To conduct a full proof, you will need to compare the data on the datasheet with the data entered into the database for every survey assigned to you by your proofing supervisor. If the data does not match up, then you will need to correct the data in the database to match the datasheet. In some cases you may find erroneous or missing data on the actual datasheet.

To view the data in the database, use Firefox to open up the index.html file within the data entry file. While holding down the Shift key, move your mouse pointer over the Pi symbol in the lower left hand corner of the screen and click on it. A pop-up window will appear asking you for a password. Enter the password provided to you by your supervisor. If done correctly, you should see the option "Remote Transects" underneath "Saved Transects" in the upper left corner of your screen. Click on the "Remote Transects" button and select the transect and visit (year) of interest from the drop down menu. You should now be able to see the data entered for that transect.

The following sections will give you a detailed breakdown on what to look for while conducting a full proof, how to document errors found in the database and how to handle erroneous or missing data on the datasheet. The first section covers the transect information listed at the top of every vegetation datasheet, the second deals with point data, the third with vegetation data and the fourth covers bird data.

### 1. Visit Data

Check the following information to verify that it was entered correctly.

#### A. Observer

Verify the observer ID on the datasheet matches that in the database.

#### B. Date

Verify the date on the datasheet matches the database and the work log for each technician. If the date in the database does not match the date on the datasheet and work log, correct it. If

## Point Transect Quality Assurance/Quality Control Protocol

the date on the datasheet and the date in the database do not match the work log, email your proofing supervisor who will verify when the survey was actually conducted with the technician. If no date was recorded, consult the technician's work log to determine when the survey was conducted and enter that date.

### **C. GPS Unit #**

Verify the correct GPS Unit # is listed. If a personal GPS was used then the GPS Unit # should be "0000".

### **D. Observer 2**

In some cases two observers will complete a single transect together for safety reasons. One observers name should be listed in the Observer field, and the other observer's name should be listed in the Observer 2 field. Your data proofing supervisor will let you know when you are assigned a transect conducted by two observers.

### **E. Who Collected**

Make sure the survey is associated with the organization that conducted the survey.

### **F. Time**

Verify that correct start and end times were entered into the database. If no time is recorded on the datasheet then the time should have been entered as "0000".

### **G. Sky**

Verify the sky codes on the datasheet match those in the database. If no code was recorded on the datasheet the code should have been entered as "-1" in the database.

### **H. Wind**

Verify the wind codes on the datasheet match those in the database. If no code was recorded on the datasheet the code should have been entered as "-1" in the database.

### **I. Temp**

Verify the temperatures on the datasheet match the temperatures in the database. If no temperature was recorded on the datasheet then the temperature should have been entered as "-.99".

### **J. Notes**

This section should contain any notes recorded in the "Notes" section at the bottom of each bird data sheet. Check for notes recorded on the datasheets and make sure those notes were entered into the database.

## **2. Points Completed**

This page contains information on point count start times, GPS Accuracy and reasons points were not completed. Before going through the following categories line-by-line, check the hard copy or scan of the datasheet to make sure there is bird data for each point listed as "completed". Also check to make sure there is no bird data recorded for a point on the hard copy of the datasheet that is listed as "not completed" on the point data page. If a point is listed as "completed" on the point data page in the database but there is no corresponding bird data on the hard copy of the data, change the status of that point to "O: Other" and enter "Reason unknown" in the notes section. If a

point is listed as “not completed” but you find bird data for that point, first make sure there are no notes on the datasheets explaining why that point was not entered. If there are no notes and the data is legitimate change the status to “Completed”, enter the start time and accuracy for that point and enter the Veg and Bird data in the corresponding tabs for that point. Once this is complete, check each of the following categories for accuracy:

**A. Point Start Times**

Verify the Point Start Times on the datasheet matches the times in the database. If no Point Start Time was recorded then “0000” should have been entered.

**B. GPS Accuracy**

Verify the GPS accuracy on the datasheet matches that in the database. If no GPS accuracy was recorded on the datasheet then “-1” should have been entered in the database.

**C. Completed**

Verify that each point listed as completed was actually completed. To do this, look at the bird datasheets and find the data for each point listed as completed. You should also verify there aren't additional points of data on the hard copy that are not listed as completed in the database. Lastly, for points that were not completed, verify that the reasons points weren't completed entered in the database match the reasons on the datasheet. If the reason is “O = Other” make sure that the notes section contains notes about why the point was not completed. Let your proofing supervisor know about any missing information.

**3. Vegetation Data**

Check the following information to verify that it was entered correctly.

**A. Private Property**

Check the Private Property column to make sure the entered data matches the datasheet. Correct any errors in data entry. If the Private Property box on the datasheet has a “Y” on it, then the Private Property box on the data entry application should be checked.

**B. Other (Midstory, Cliff/Rock, P-dog town, P-dogs present)**

Check to make sure all boxes marked “Y” on the datasheet are checked in the database and all boxes marked “N” are unchecked. If a box was left blank on the datasheet, assume that the field should be populated with an “N”.

**C. # of Snags**

Verify the Number of Snags recorded on the datasheet match the Number of Snags entered into the database. Correct any errors in data entry. If the Number of Snags was left blank and BC, BD, DA, DC, DD, DJ, DY or SN were not recorded in the Overstory Species then enter “0” for the number of Snags. This indicates that no Snags were present at this point. If the Number of Snags was left blank but one of those species codes was recorded, enter “-1” in the snags column.

**D. Primary Habitat**

Make sure that all codes entered for Primary Habitat match the codes recorded on the datasheet. Correct any errors in data entry which you find. If the Primary Habitat field was left blank or the code recorded does not match any of the options on the drop-down list, make sure “XX” is selected in the database.

**E. Canopy Cover % (% Overstory)**

Check to make sure that all data entered for Canopy Cover matches the datasheet. Correct any errors in data entry which you find. If the Canopy Cover % is left blank and there is no information entered in the overstory species or mean canopy height fields then enter "0". This indicates that there was no overstory present at this point. If the % Canopy Cover is left blank but there is information entered in the Overstory Species or Mean Canopy Height fields, then enter "-1". This indicates that an overstory was present but the observer did not record the Overstory Percentage. These records will be corrected during the query proof process.

**F. Mean Canopy Height (Overstory Mean Height)**

Check to make sure that all entered Mean Canopy Heights match the datasheet. Correct any errors in data entry which you find. If the Mean Canopy Height was left blank, no Overstory Species were recorded and the Mean Canopy Cover Percentage was entered as "0" or was left blank, enter "0". This indicates that there was no overstory present at this point. If the Mean Canopy Height is left blank and there is information entered in either the Canopy Cover Percentage or the Overstory Species, enter "-1" in the Overstory Mean Height field in the database. This indicates that an overstory was present but the observer forgot to record this information. These records will be corrected in the query proof process.

**G. Overstory Species and Abundance**

Check all Overstory Species and Percentages to make sure the data entered match the information on the datasheet. Make any necessary corrections. An "XX" code for an Overstory Species indicates that a legitimate two-letter plant code was recorded on the datasheet but that code was not available from the drop-down list at the time of data entry. Check the datasheet to find the two-letter code and change the "XX" to the appropriate code if it is available. If the code recorded on the datasheet does not match anything in the drop-down list leave it entered as "XX". Someone will correct this record during the query proofing process.

If there is a % Canopy Cover or Mean Canopy Height recorded and the Overstory Species field is left blank on the datasheet make sure the Overstory Species fields are left blank and the abundance fields are filled in with "-1" in the database. This indicates that the observer forgot to record the Overstory Species information. These records will be corrected during the query proofing process. If there is a single Overstory Species Percent field that was left blank and the percentages sum to less than 100, enter a quantity that allows for the sum of the fields to equal 100. If more than one Overstory Species Percent field is left blank leave the data as is. These records will be corrected during the query proofing process. If there is a percentage recorded with no associated two-letter veg code, make sure the Overstory Species Percentage is entered in the database and enter "XX" for the Overstory Species Code.

**H. Understory % Cover (% Shrub Cover)**

Check all values entered for Understory % Cover and make sure they match the datasheet. Correct any errors in data entry. If the % Shrub Cover is left blank and there is no information recorded for Shrub Species or Shrub Height then enter "0". This indicates no shrub layer was present at this point. If the % Shrub Cover is left blank and there are Shrub Species or a Shrub Height recorded make sure the % Shrub Cover is entered as "-1". This indicates that a shrub layer was present, but the observer forgot to record this information. These records will be corrected during the query proofing process.

**I. Understory Mean Height (Shrub Mean Height)**

Check all Shrub Heights entered against the datasheet. Correct any errors in data entry. If the Shrub Height field is left blank and information is recorded for either Shrub Species or % Shrub Cover, enter “-1” in the Shrub Mean Height field in the database. This indicates that a shrub layer was present, but the Shrub Height was not recorded. These records will be corrected during the query proofing process. If the Shrub Height field is left blank and no other shrub information is recorded then enter “0”. This indicates that no shrub layer was present at this point.

**J. Shrub Species and Abundance**

Check all Shrub Species and Shrub Species Percentages to make sure they match the data recorded on the datasheet. Correct any errors in data entry. If “XX” was entered for a species, this indicates that a legitimate two-letter plant code was recorded on the datasheet but that code was not available from the drop-down list at the time of data entry. In these instances, check the datasheet to find the two-letter code and change the “XX” to the appropriate code if available. If the code recorded does not match anything on the drop-down list, leave it entered as “XX”. Someone will correct this information during the query proofing process.

If the Shrub Species field is left blank and information is entered for either % Shrub Cover or Mean Shrub Height leave the data as is. This indicates that a shrub layer was present but not all of the necessary information was recorded. These records will be corrected during the query proofing process. If the Shrub Species is left blank and no information is entered for Mean Shrub Height or % Shrub Cover, enter a “0” for % Shrub Cover and Mean Shrub Height. If there is a single Shrub Species Percent field that was left blank and the percentages sum to less than 100, enter a quantity that allows for the sum of the fields to equal 100. If more than one Shrub Species Percent field is left blank enter “0” for the missing Shrub Species Percentages. If there is a percentage recorded with no associated two-letter veg code, make sure the percentage is entered in the database and enter “XX” for the Shrub Species that was not recorded.

**K. Ground Cover Percentages**

Check that all Ground Cover Percentages match the datasheet. Correct any errors in data entry. If any field in the ground cover section was left blank, but the entered percentages sum to 100, enter a “0” for the blank field. If a single field in the ground cover section was left blank and the percentages sum to less than 100, enter a quantity that allows for the sum of the fields to equal 100. If more than one Ground Cover Percent field is left blank, leave those Ground Cover Percentages blank in the database. These records will be corrected during the query proofing process.

**L. Dead Standing Grass Height**

Check to make sure that the Dead Standing Grass Height was entered correctly. Make any necessary changes. If the Dead Standing Grass Height was left blank and no Dead Standing Grass Percent was recorded enter “0”. If the Dead Standing Grass Height was left blank or entered as “0” and a non-zero Dead Standing Grass Percent was recorded make sure the Dead Standing Grass Height is left blank in the database. This indicates that Dead Standing grass was present but the Dead Standing Grass Height was not recorded. These records will be corrected during the query proofing process.

**M. Live Grass and Herbaceous Height**

Check to make sure that the Live Grass and Herbaceous Height was entered correctly. Make any necessary changes. If the Live Grass and Herbaceous Height was left blank and no Live Grass or Herbaceous Percent was recorded enter "0". If the Live Grass and Herbaceous Height was left blank or entered as "0" and either a Live Grass or Herbaceous Percent was recorded make sure the Live Grass Height field is left blank in the database. This indicates that grass or herbaceous covers were present but the Live Grass and Herbaceous Height was not recorded. These records will be corrected during the query proofing process.

**4. Bird Data**

Check the following information to verify it was entered correctly.

**A. Point Number**

Make sure the Point Number associated with each bird record matches the datasheet.

**B. Minute**

Make sure the Minute associated with each bird record matches the datasheet. If a technician recorded an "88" bird between points, the datasheet will have the bird with an "88" recorded in the Point column and no Minute recorded in the Minute column. These records should be represented in the database with the Point Number of the previous point and the Minute equal to "88".

If no Minutes were recorded on the datasheet for a Point then each Minute for that Point should be entered as "0".

**C. Species Codes**

Verify that the four-letter Species Codes on the datasheet match the four-letter Species Code in the database. If the four-letter Species Code on the datasheet does not appear in the database, consult your proofing supervisor. If you are the proofing supervisor, see if you can confidently decipher the incorrect Species Code. If you are unsure of the correct Species Code, contact the field technician to see if they can figure out what the species should be. If you still can't figure it out, enter "UNBI" for the Species Code.

Note that for "NOBI" (No Bird) detections the Distance, How, Sex, Visual, Migrating, Cluster Size and Cluster Code info will be grayed out. These fields do not need to be verified. You should check that all "NOBI" detections have a Point and Minute associated with them. Make any necessary corrections to the database.

**D. Distance**

Verify the correct distance was entered for each bird record. If no distance was recorded on the datasheet then the distance should be entered in the database as "-1". If a distance over 999m was recorded on the datasheet, that distance should be entered as "999". 88 birds should not have distances associated with them, so if a distance was entered for an 88 bird change the Distance in the database to "-1".

**E. How**

Verify the correct How code was entered for each bird record. If no How code was recorded on the datasheet then "U" should be entered. If two how codes were recorded and the second

code is anything other than “S”, then make sure only the first code recorded was entered. Assume the leftmost How code recorded was the first code.

**F. Sex**

Verify the correct Sex code was entered for each bird record. If no Sex code was recorded on the datasheet then “U” should be entered.

**G. Visual?**

If the Visual checkbox is checked on the datasheet, make sure that box is checked in the database.

**H. Migrating?**

If the Migrating checkbox is checked on the datasheet, make sure that box is checked in the database.

**I. Cluster Size**

Verify the Cluster Size on the datasheet matches the Cluster Size in the database. If the Cluster Size is blank on the datasheet, it should be entered as “1” in the database (except for NOBIs).

**J. Cluster Code**

If a Cluster Code is recorded on the datasheet make sure the Cluster Code was entered into the database.

**K. 88 Birds**

Field technicians tend to make mistakes when recording and entering 88 birds. Check to make sure all 88 birds are associated with the correct point (the point the technician surveyed immediately prior to detecting the 88 bird). If a field technician records an 88 bird before the first point or after the last point on a transect remove this data from the database. You should note these bird detections in the notes section on the Visit Data page (the page where you enter wind, sky, time, etc.). Make sure the distance to each 88 bird was entered as “-1” in the database, since we do not record distances for 88 birds. Make any necessary changes in the database.

**5. Submitting Your Changes**

Upon completing the full proof of a transect you will need to make sure that any corrections you made are submitted so the database can be updated appropriately. To do this you will need to click on the “File” button at the top of the page and select the “Submit Transect Visit” option. Please note that clicking “Save Transect” only saves the changes you made on your computer and does not save the changes to the database, so make sure you select the “Submit Transect Visit” option.

**6. Tracking Your Progress**

**A. Proofer Work Log**

In order to assist your supervisor in processing and approving your timesheets we ask that you track the transect numbers you have proofed, the date you proofed each, the approximate number of errors that you corrected on each and the amount of time you spent proofing each transect. Proofers can then utilize this work log when completing their timesheets. Work logs

should be submitted to your supervisor along with your timesheet every two weeks to assist your supervisor in tracking the proofing progress and in reviewing your timesheet. You will be notified in advance when each pay period is ending.

**B. Erroneous Datasheet Tracking**

The role of the full proofer is to ensure that the database reflects the datasheet as closely as possible. You will likely encounter instances when it is not possible to make the database reflect the datasheet exactly. The most common instance where this may occur is when an incorrect AOU code for a bird species was recorded on the datasheet. Because the data entry system will not allow incorrect codes to be entered you will need to consult your supervisor to determine what species and code should be entered. Your supervisor will need to correct the hard copy of the datasheet to eliminate future confusion and rescan the data. To help your supervisor track which datasheets need to be rescanned, we ask that you document the transect number, point, survey date, portion of the datasheet where the change should be made to the datasheet (i.e., bird data or vegetation data) and a description of the change to be made on the datasheet. When you have concluded all of your full proofing assignments you should submit this spreadsheet to your supervisor so they can easily determine which datasheets need to be rescanned.