



Australian Government

Department of the Environment and Energy

The Australian Bird and Bat Banding Scheme

GUIDELINES FOR BANDERS

PREPARATION OF BANDING DATA

FOR

CAPTURE OF DISK DATA

"CODD"

Version 1.8, November 2015

INTRODUCTION

Most banders have computerised their banding data for retention and study. The Australian Bird & Bat Banding Scheme (ABBBS) has sought to broaden its capacity to receive banding data electronically to reduce double handling of data by banders and by the Banding Office. The objectives have been to:

1. maximise the amount of data being submitted electronically;
2. minimise the amount of work required in the Banding Office to transfer data into the database (data grooming, error correction), by providing validation and submission capability through the on line portal, and to
3. allow banders considerable latitude in submitting data electronically to the ABBBS.

The main constraints have been that

- The ABBBS's *Oracle* database has a quite rigidly defined structure and data must conform to that structure to be accepted into the database;
- banders usually have their computer record systems set up to suit their own needs and preferences. Their data are seldom in precisely the format demanded by the ABBBS database, and
- banders use a range of PC software, determined by what they can afford, or what they can share. Software programs store data differently and records from one program might not make sense to the ABBBS *Oracle* database.

The mechanism adopted by the Banding Office is called **CODD - the Capture Of Disk Data** facility. CODD requires banders to conform to 3 fundamental rules.

1. **Validate and Submit data in the specified field sequence.**
2. **Validate and Submit all 14 specified data fields. Blank fields **MUST** be included.**
3. **Use ABBBS-authorised codes and formats as outlined in the Australian Bird Banders Manual (ABBM)**

To help banders prepare data files that satisfy these fundamentals, the ABBBS has compiled detailed format guidelines for CODD.

You probably won't need to restructure your present data storage system substantially to accommodate these guidelines. As long as you can extract and **export** data in a format that satisfies the guidelines, you will be able to validate and submit data successfully, regardless of how your own data storage system is set up. The more similar your system is to the structure outlined in these guidelines, the easier you will find it to produce data files that CODD can read.

CODD has been developed to receive data from **spreadsheet** files, **database** files, and comma-delimited **text files**. If data files are received in a format that CODD can't read, it will reject the file and return it to the bander.

Banders who have been successfully submitting data from **AVETECH** (year 2000 compliant only) or in **fixed format** will be able to continue to do so (this may change in the near future).

The Banding Office can no longer capture data in Apple Macintosh format. **Macintosh users must submit data as a CSV file only.**

GENERAL HINTS

- Define fields as alpha-numeric or text, except for date fields in databases and spreadsheets.
- Use upper case letters.
- You may align your data to the left, right or centred.
- It is not necessary to show leading zeros in numbers such as Method Codes (08), Status Codes and Bander Authority Numbers. CODD will automatically insert leading zeros where needed (**except** the time field)
- In dates, leading zeros must be used in the formats DDMMYYYY or DD/MM/YYYY (see details in the instructions for the DATE field).
- Fields 1 to 14 must be all present, in the prescribed sequence, even if a field contains no information.
- Data must be sent via the ABBBS online secure web portal.
- Check first and last date on your green summary sheet as soon as it's received. Any discrepancies must be reported to ABBBS office immediately.
- Submit recoveries of foreign bands on a data sheet or direct email rather than electronically.
- As a general rule, if you have a banding or recovery record that doesn't fit these guidelines, send the record to ABBBS in a separate file, email or on a paper data sheet.

If you have trouble following these guidelines or have difficulties satisfying the guidelines, please contact the ABBBS. We will do our best to find a solution that will enable you to provide your data in a readable format.

ADDITIONAL INFORMATION

Capturing the extreme variety of data that might be submitted under Additional Information codes has raised difficulties that can not be resolved during this phase of development for CODD. So, for the moment, ABBBS is not able to load additional information into the database efficiently. We are working on a solution that will be deployed in the near future. All banders will be informed of these changes when they are made.

In the mean time, it is particularly important that the ABBBS continues to receive the following additional data as part of the submitted file in fields 15 and onwards.

| | |
|----------|--|
| CB or LF | colour banding or leg flagging details |
| RW | "this band was replaced with band number 123-45678" |
| RE | "this band replaces band number 123-45678" |
| OB | "this animal also carries band number 123-45678" |

These data are essential to ABBBS's capacity to link recovery and banding data, and the ABBBS will manually add such information to the ABBBS database.

Banders may continue to submit other additional information (morphometric and morphological data etc) after the 15th field in their data file by defining the appropriate code as the column header, or on data sheets. ABBBS will continue to curate these data but will not be computerising them.

PRODUCING A DATA FILE

File Title Always ensure your file title contains no spaces or it will not work. The title should look like this:

Woody_Nov_11 **NOT** **Woody, Nov 11**

Export: Generally, you will need to **export** a file from your system so it can then be uploaded for validation/submission via the ABBBS web portal. Many software packages have a built-in export facility as part of their Utilities, Tools, File Management, Save As or equivalent menu.

Reports: In some programs (databases commonly) you may be able to design a **report** or **query** format to automatically produce a file containing the required fields in the right sequence, for export.

Database Files: If you are using database software such as *MS Access* simply export your data in a database file. The exported file should have been automatically assigned a file name extension of .MDB if this process has been successful.

Spreadsheet Files: If you are using *Excel*, simply send your file as a worksheet (.XLS, 93-2007 workbook), but it is essential that the date cell be formatted as **dd/mm/yyyy** and fields such as "time" have a leading zero where necessary, eg 0900ES. With *Excel*, another popular format to use is a comma-separated value (.CSV) file as described below. If you are using an uncommon or obsolete spreadsheet you may need to submit data in the comma/tab-separated text format as described below.

Text Files: This **must** be used when formatting from Apple Macintosh. Other platform users may choose to send your data in a comma or tab-delimited text file. Most (but not all) software packages can automatically convert your file to this format. It might be referred to as comma-separated value (automatically assigns extension **.CSV**), tab-delimited text, delimited ASCII, delimited ANSI or something similar. With the last two, there is usually an options button which allows you to choose what type of delimiter you wish to insert. The extension **.TXT** is automatically assigned to identify most text files.

Delimiters: A delimiter is a keystroke used to signify the end of a field. If you are submitting text files, CODD can accept **comma** or **tab** delimiters, i.e. the fields of the data file **MUST** be separated by either commas or tab markers. **Comma delimiters** are the **preferred** option.

- there **must not** be a comma or tab at the start of the first field
- there **must** be a comma or a tab at the end of each field,
- **but not** at the end of the last (fourteenth) field of a record. At the end of a record (before putting in the next band number), you need to enter a record delimiter, usually a *carriage return* or *enter* keystroke, or less commonly, a *line feed* command.

Beware - not all **.TXT** files are delimited automatically, and not all delimited text files use comma delimiters! If your software will not automatically insert delimiters, then you should **not** consider entering the delimiters yourself - it would require an enormous amount of work and would inevitably generate errors. Instead, contact the ABBBS. We will do our best to find you a solution.

GUIDELINES FOR THE DATA FIELDS

Following are guidelines and examples to help banders prepare files of banding and recovery data for submission to the ABBBS electronically. A one-page summary is provided separately. More detailed information is available throughout the ABBM.

1. BAND NUMBER

- Sequence:** 1st field.
Contents: band number.
Can be blank? No.
Constraints: There are few restrictions on how you present the band number. It may include a dash after 3rd digit (ie before the 5th-last digit). This will be removed automatically in CODD.
- Every record must have a valid entry in this field.
 - The whole band number must be presented as **one** field (do **not** split band prefix and suffix)
 - For non-standard bands such as K-bands (kingfisher bands) present the band number in full, complete with alpha characters (see examples).

Examples: The following are some of the acceptable forms for the band number
 01234567 (no separator - this is how the number is stored)
 012-34567 (a dash separating band size from number)
 K012345 (kingfisher band with no separator)
 K0-12345 (kingfisher band with dash separator)

2. RETRAP

- Purpose:** to signify whether this is a banding record or a recovery record
Sequence: 2nd field
Contents: code showing if the record contains recovery data
Can be blank? Yes – however note constraints below.
- Constraints:**
- This field must be left **blank for banding** records
 - This field must be **entered for retrap** records
 - This field must have a recovery **code for recovery** records.

Acceptable recovery codes are:
 C - control recoveries (of someone else's band)
 R - retrap of your own band
 D - recovery of a dead bird carrying your band
 S - same-day recovery of your own band

3. SPECIES NUMBER

- Purpose:** to identify the species to which the record relates
Sequence: 3rd field
Contents: species number
Can be blank? No.
Constraints:
- This field **must** contain a species code (do **not** include the species name)
 - Only ABBBS authorised numeric codes listed in the Approved Band Size Lists may be used.
 - For recovery records **only**, a species code of 1000 should be used if the species is not definitely known.
 - For Lost, Destroyed or Defective band records, a species code of 0 should be used.
 - For species for which there is no species number listed in the Approved Band Size List (hybrids, and some overseas species) a code of NONE should be used. These records need to be supported by some written background forwarded with the file.

Examples: 0 (Lost, Destroyed or Defective Bands)
 123 (Lesser Noddy)
 1000 (recovered species unknown)
 NONE (no code listed for this species)

Do not add a field with species name after this field. If you wish to record this in your file then do so after field 14

4. AGE

Purpose: to indicate the age, or minimum age of the bird/bat at the time of banding or recovery
Sequence: 4th field
Contents: code for age of bird/bat
Can be blank? Yes.
Constraints:

- If not blank, only ABBBS authorised codes may be used, as outlined in the ABBM

Examples: P (*pullus*)
 1 (*first year or immature*)
 1+ (*at least 1 year old*)
 2 (*in the second year of life*)
 (*blank - will be interpreted as unknown*)
 U (*unknown*)

5. HOW AGED

Purpose: to indicate how age of the bird/bat was determined
Sequence: 5th field
Contents: code for how the bird/bat was aged
Can be blank? Yes – however if an age is assigned you must submit a value for how aged.
Constraints:

- If not left blank, only **two** ABBBS authorised codes may be used, as outlined in the ABBM

Examples: O (*assessment of characteristics such as abdomen condition, gape flange, and palate*)
 (*blank - will be interpreted as unknown*)
 U (*unknown*)
 P (*plumage pattern*)
 K (*Known age for retraps from original banding data*)

6. SEX

Purpose: to indicate the sex of the bird/bat
Sequence: 6th field
Contents: code for sex of bird/bat
Can be blank? Yes. (*blank - will be interpreted as unknown*)
Constraints:

- If not blank, only authorised codes may be used.

Acceptable codes are:

M *male*
 F *female*
 U *sex unknown*

7. HOW SEXED

Purpose: to indicate how sex was determined
Sequence: 7th field
Contents: code for how the bird/bat was sexed
Can be blank? Yes – however if a sex is assigned you must submit a value for how sexed.
Constraints:

- If not left blank, a maximum of **two** ABBBS authorised codes may be used, as outlined in the ABBM

Examples: B (*brood patch*)
 BP (*brood patch and plumage*)
 (*blank - will be interpreted as unknown*)
 U (*unknown*)

8. DATE

Purpose: to record the date on which the bird/bat was released after banding, or was recaptured/recovered wearing a band.

Sequence: 8th field

Contents: date

Can be blank? No.

Constraints:

- If the entry is a date-formatted field, ie from database or spreadsheet application, choose date format dd/mm/yyyy.
- If you are submitting a comma-delimited text file, the date **MUST** be entered as
 - 8 numbers, with zeroes if necessary
 - in the format DDMMYYYY **OR**
 - DD/MM/YYYY
- If using Excel, do not choose any date format that is marked with an asterix (*)

Examples: 31121994 (*31 December 1994 without separators*)
 01/07/1994 (*1 July 1994 with separators*).

9. LOCODE

Purpose: to describe where the bird/bat was banded or released or recaptured

Sequence: 9th field

Contents: code for location where bird/bat was banded or released or recovered

Can be blank? No.

Constraints:

- This field must contain a valid locode.
- The locode must be registered with the ABBBS prior to submission of data
- If the locode is registered to you, only the 1 or 2-digit end code needs to be entered.
- If the locode is a Cooperative Banding Site locode, you must submit the locode in full, that is, the 4 digit number for the Coop Site followed by the two-digit site code

Examples: 1 (*Bander's location 01*)
 12 (*Bander's location 12*)
 A4 (*Bander's location A4*)
 143801 (*Bander 1438's location 01*)
 8504MG (*Munghorn Gap Cooperative Banding Station, banding site MG – Munghorn Gap Nature Reserve near Mudgee*)

10. TIME

Purpose: to record the time of day at which the bird/bat was released after banding, or was recaptured/recovered wearing a band.

Sequence: 10th field

Contents: time banded and time zone

Can be blank? Yes.

Constraints: This field may be left blank. If not blank:

- time must be entered as 4 numbers **followed** by a 2-letter code for the time zone in which the event occurred (ES, ED, CS, CD, WS);
- time must be entered in the format HHMMTZ;
- separators may not be used as part of the time value;
- times **must** be in 24 hour form;
- the latest time that can be used is 2359 (one minute to midnight). The clock then reverts to 0000 (midnight);

Examples: 0600ED (*6.00 am Eastern Daylight Saving Time*)
 1900CD (*7.00 pm Central Daylight Saving Time*)

11. METHOD

Purpose: to describe how the bird/bat was encountered
Sequence: 11th field
Contents: code for method of encounter
Can be blank? No.
Constraints:

- This field must contain a method code.
- Only ABBBS authorised codes may be used, as outlined in the ABBM

Examples: 03 (*trapped in a mist-net*)
 08 (*trapped by hand or with hand-held net*)
 25 (*found sick or injured*)
 44 (*Band Lost*)
 45 (*Band Defective or Destroyed*)

12. STATUS

Purpose: to describe the last known fate of the bird/bat and band
Sequence: 12th field
Contents: code for status
Can be blank? No.
Constraints:

- This field must contain a status code.
- Only ABBBS authorised codes as outlined in the ABBM

Examples: 05 (*the bird/bat was dead and the band was removed*)
 13 (*was released alive with the band*)
 10 (*rehabilitation attempted but bird/bat died, band left on*)
 00 (*status of bird/bat and band is unknown*) ****This is used for Lost, Defective or Destroyed bands**

13. PROJECT HOLDER'S AUTHORITY NUMBER (Bander ID)

Purpose: to associate a bander with the record
Sequence: 13th field
Contents: Project Holder's ABBBS A-class authority number
Can be blank? No.
Constraints:

- This field must contain the project holder's A-class banding authority number.
- For a banding record this must be the ABBBS authority number of the bander to whom the project is registered under AND to whom the band is issued **OR**
- must be a registered Corporate Banding Group number (e.g. 8001, 8022, 8028).
- For a Cooperative site banding record this must be the ABBBS authority number of the bander to whom the band was issued
- For a recovery record, this field contains the authority number of the bander who is reporting the recovery

Examples: 2340 (*David Drynan's authority number*)
 8001 (*Victorian Wader Study Group*)

14. PROJECT NUMBER

Purpose: to identify the project for which this record was generated
Sequence: 14th field
Contents: ABBBS Project Number
Can be blank? No.
Constraints:

- The project number must be registered with the ABBBS
- If the project number is registered to the A-class Authority Number given in this record, only the 1 or 2-digit end code (allocated by ABBBS) needs to be entered.
- If the project is registered as a cooperative site, you must submit the project number in full, that is, the 4 digit authority number for the Cooperative Site followed by a two-digit project number with a leading zero if required. (e.g. 850401, not 85041)

Examples: 3 (*Bander's Project Number 03*)
 10 (*Bander's Project Number 10*)
 850401 (*Munghorn Gap Cooperative Station Authority Number, Project Number 1*)
 800101 (*Victorian Wader Study Group Project No 1*)

EXAMPLES OF DATA PRESENTATION

Below are examples of records presented in a comma-delimited text file, followed by an explanation of what data are presented.

Example 1: presenting banding data

20013733,,107,1+,P,U,U,07122000,1,,08,13,2340,1

Example 2: one alternative way of presenting the data in Example 1

200-13733,,107,1+,P,,,7/12/2000,1,,8,13,2340,1

Band id 200-13733, (banding data), Red-tailed Tropicbird, at least 1 year old, aged by plumage, sex unknown, (how sexed not specified), banded on 7 Dec 2000, at Bander 2340's Site 1 (Norfolk Island), (time not specified), caught by hand, released alive with band, banded by Bander 2340 (David Drynan, to whom the project is registered), for Project No 1(END OF RECORD)

Example 3: presenting a recovery or retrap record

09100022,R,694,1+,,,,27121971,1,,01,13,2340,1,

Band 09100022, recovered, species 694 (Pied Currawong), at least 1 year old, (how aged not specified), (sex not specified), (how sexed not specified), on 27 December 1971, at Bander 2340's locoded 234001, (time not specified), probably trapped by device unspecified, released alive with band, finder was Bander 2340 (David Drynan), for Project No 1 (END OF RECORD)

Example 4 : a banding record processed at a cooperative banding site

9010046,,694,1+,P,,,31/12/1971,8504MG,,4,13,2340,850401

Band 090-10046, banding data, Pied Currawong, 1st year or older, aged by plumage, (sex not specified), (how sexed not specified), caught on 31 Dec 1971, at Munghorn Gap Co-op Banding Station, banded by Bander 2340 (David Drynan, to who the bands were issued), for Munghorn Gap Cooperative Station Project number 1.

All of these records could be included on the same disk, in which case they would look like this in a comma-delimited text file.

200-13733,,107,1+,P,,,07122000,1,,8,13,2340,1
 20013733,,107,1+,P,U,U,07/12/1991,1,,08,13, 2340,1
 09100022,R,694,1+,,,,27121971,042001,,01,13, 2340,1
 9010046,,694,1+,P,,,31/12/1971,8504MG,,4,13, 2340,850401

Or if they were in an excel sheet, they would look like:

| BAND | RETRAP | SPECIES | AGE | HOW_AGED | SEX | HOW_SEXED | DATE | LOCODE | TIME | METHOD | STATUS | BANDE | PROJECT |
|----------|--------|---------|-----|----------|-----|-----------|------------|--------|------|--------|--------|-------|---------|
| 20013733 | | 107 | 1+ | P | | | 07/12/2000 | 1 | | 8 | 13 | 2340 | 1 |
| 20013733 | | 107 | 1+ | P | U | U | 07/12/1991 | 1 | | 08 | 13 | 2340 | 1 |
| 09100022 | R | 694 | 1+ | | | | 27/12/1971 | 042001 | | 01 | 13 | 2340 | 1 |
| 09010046 | | 694 | 1+ | P | | | 31/12/1971 | 8504MG | | 4 | 13 | 2340 | 850401 |

The Australian Bird and Bat Banding Scheme
 GPO Box 8
 CANBERRA ACT 2601

Email: abbbs@environment.gov.au

Phone: 02-62742407

Fax: 02-62742455

Web: <http://www.environment.gov.au/biodiversity/science/abbbs/>

SUMMARY OF GUIDELINES FOR SUBMITTING BANDING DATA ELECTRONICALLY TO ABBBS

| FIELD NO | DATA TO BE ENTERED IN THIS FIELD | CAN FIELD BE LEFT BLANK? | RESTRICTIONS ON DATA | EXAMPLES |
|----------|--|--------------------------|--|--|
| 1 | Band Number | NO | must be Australian band numbers | 12345678 123-45678 K012345 |
| 2 | Retrap code | YES | <ul style="list-style-type: none"> blank unless a retrap/recovery record C, R, D, S if a retrap or recovery record | C R |
| 3 | Species Number | NO | <ul style="list-style-type: none"> ABBBS authorised codes only | 123 |
| 4 | Age code | YES | <ul style="list-style-type: none"> ABBBS authorised codes only U or blank if unknown | 1+ P 1 U |
| 5 | Code for how age was determined | YES | <ul style="list-style-type: none"> ABBBS authorised codes only U or blank if unknown | P O PO U PM |
| 6 | Sex code | YES | <ul style="list-style-type: none"> M or F U or blank if unknown | M F U |
| 7 | Code for how sex was determined | YES | <ul style="list-style-type: none"> ABBBS authorised codes only U or blank if unknown | O P PO U M |
| 8 | Date banded/released or recovered | NO | <ul style="list-style-type: none"> "DATE" field OR DDMMYYYY OR DD/MM/YYYY OR DD/MM/YYYY (Excel) | a <i>database</i> date field 01071994 12/01/2000 01/07/1994 |
| 9 | Location code | NO | <ul style="list-style-type: none"> registered 1 or 2 digit site code if bander's site OR Cooperative Site Number + Site Code | 1 B2 8504MG |
| 10 | Time banded or recovered, plus time zone | YES | <ul style="list-style-type: none"> may be left blank OR HHMMTZ | 0600ED |
| 11 | Method Code | NO | <ul style="list-style-type: none"> authorised ABBBS codes only | 3 25 |
| 12 | Status Code | NO | <ul style="list-style-type: none"> authorised ABBBS codes only | 13 5 |
| 13 | Authority Number | NO | <ul style="list-style-type: none"> must be numbers | 1234 |
| 14 | Project Number | NO | <ul style="list-style-type: none"> 1 or 2 digit project code if bander's project OR co-op site authority and project number | 2 10 850401 |