Euring Data Bank Data Submission Guide
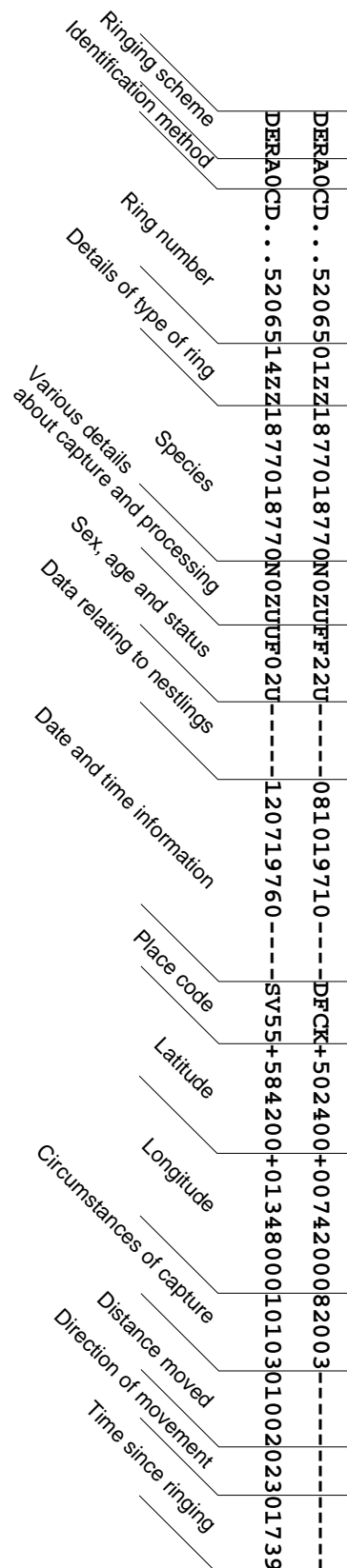
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Ringing scheme
Identification method
Ring number
Details of type of ring
Various details about capture and processing
Species
Sex, age and status
Data relating to nestlings
Date and time information
Place code
Latitude
Longitude
Circumstances of capture
Distance moved
Direction of movement
Time since ringing

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DERA0CD..5206514ZZ18770187700N0ZUTUF02U----120719760----SV55+584200+013480000101030100020230301739

DERA0CD..5206501ZZ18770187700N0ZUFF22U----081019710----DFCK+502400+00742000082003-----
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1 Outline of the data submission process

1. Schemes are expected to submit their entire recovery data set annually.
2. The date of submission should be at a time to suit the ringing scheme.
3. All data should be submitted annually - new recoveries, corrected recoveries and all old recoveries that were submitted previously.
4. Data will be validated at the EDB. Details of errors will be sent back to the schemes.
5. Provided checks are satisfactory, the existing data in the EDB will be deleted and the new data set loaded.
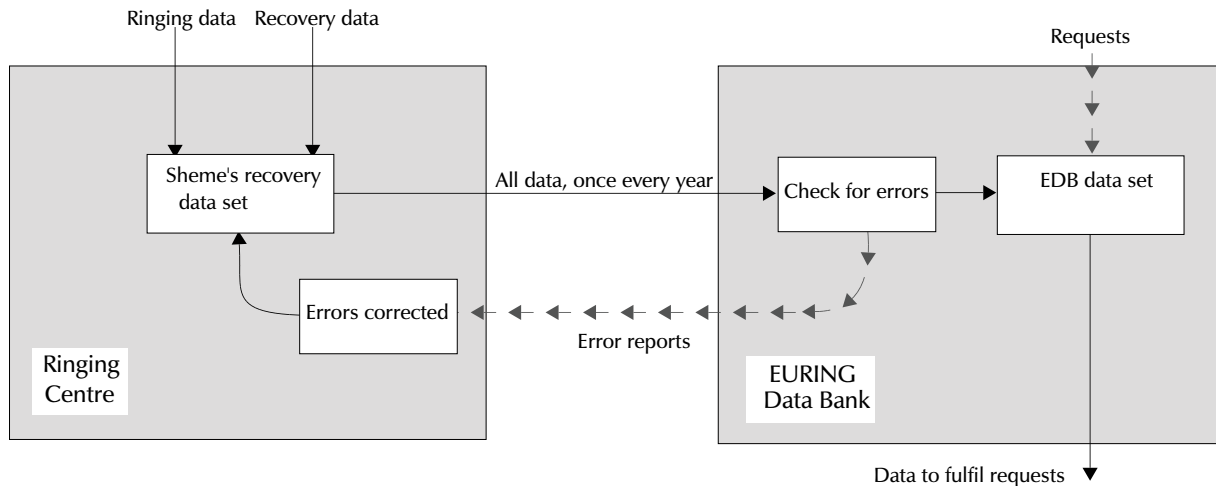
2 Rationale

It may seem wasteful and unnecessary to resubmit the entire scheme's recovery data set annually. However, the alternatives would be for schemes to submit data only in response to requests or else submit new recovery data annually, together with any corrected recovery data.

The first system would require schemes to extract and submit data every time there was a request. This might be as often as every two or three weeks. It would be very demanding of schemes' time and resources. Further, it would require a great deal of work at the EDB in checking and combining separate data sets for each request.

The second system also has disadvantages for both the scheme and the EDB. Schemes would have to keep a record of which recoveries had been submitted to the EDB. This would require some additional form of record keeping, particularly where old records had been corrected. There would also be additional work at the EDB for these records. In some cases - perhaps where a ring number had been corrected - records would have to be removed from the data bank manually.

For ringing schemes, and for the EDB, it is far simpler to submit all recovery data every year. A scheme's routine for selecting records to be submitted will always be the same - select all data. Likewise the system at the EDB will always be the same - delete all old data and load all new. These systems can be entirely automatic with the computer doing all the work.

The time of submission should be arranged to suit the individual scheme. This allows schemes to arrange the annual submission to be done at a time when it is most convenient to do so. This should also be better for the EDB. If schemes were all asked to submit data at the same time, the workload at the EDB would become too great at that particular time. Far better to allow the workload to be spread throughout the year.

3 Which code - 1979 or 2000?

It is hoped that all schemes will soon be able to submit data in EURING 2000 code format. However, it is recognised that, for schemes which are already submitting in 1979 code, considerable work may have to be done to change this system. All schemes are under great pressure of time and other resources. Sometimes it will be better to wait for an appropriate time before embarking on the work of changing to the 2000 format. For example, if it is anticipated that the scheme's computer system is to be reorganised in one or two years, then it might be better to wait for this major change - when new systems have to be created anyway - to change to the newer code.

Schemes which have not yet submitted data to the EDB should use 2000 code only.

4 Submission of local recaptures

Schemes have, traditionally, defined a lower distance limit for reporting live recaptures of birds. For example in Britain and Ireland movements of under 5 km for most species have not been recorded in the national recovery database. Each scheme must determine its own lower limit for inclusion of live recaptures in their own database. The EDB will accept all records that schemes decide to include, whatever the lower distance limit may be. Schemes should submit all records for dead recoveries, even where the ringing and recovery location are the same.

5 Error checking and feedback to schemes

Data will be validated at the EDB before loading into the main EDB database. Some errors can be corrected on loading. Typical errors in this category include an incorrect value for unknown data in a particular field, perhaps a U instead of a Z. Other errors cannot be corrected in this way - dates such as 31022007, for example.

Two sorts of feedback will be sent to schemes. First will be a general report with comments, where appropriate, on each field. The hypothetical example below shows typical sorts of feedback for the first few fields.

EURING 2000 Code format   Feedback to Scheme XYX   Date 23 October 2007

Fields	Columns	Length	Notes
Ringing Scheme	1-3	3	Two records with invalid code XY3
Primary identification method	4-5	2	No problems found
Identification number (ring number)	6-15	10	No problems found
Verification of the metal ring	16	1	No problems found
Metal ring information	17	1	Some records with invalid code M.
Other marks information	18-19	2	No problems found
Species + subsp. - mentioned by person	20-24	5	Some records have unknown species code '00000' in both reported and determined fields
Species + subsp. - concluded by Scheme	25-29	5	See above
Manipulated	30	1	No problems found
Moved before the (re)capture/recovery	31	1	No problems found
.....	..	.	.....

The second type of feedback will be a spreadsheet detailing records with particular errors. An example of this type of feedback is given below. Each field has as separate page on the spreadsheet and identifies invalid records and the nature of the error found. The example lists the 8 records with

invalid co-ordinates found in one submission.

Ring	Day	Mon	Year	Latitude	°	'	''	Longitude	°	'	''
..90100625	23	11	1965	-			00	-			00
...7129447	16	10	1977	+	50	77	00	+	013	35	00
...418899	05	10	1986	+	35	23	00	-	000	66	00
....325699	01	05	1974	+	53	12	00	+	013	63	00
..90534135	26	10	1975	+	53	33	00	+	010	88	00
..90713388	15	07	1978	+	51	43	00	+	011	66	00
...7046255	01	04	1977	+	51	54	00	+	012	62	00
...7046255	07	10	1977	+	51	54	00	+	012	62	00

The errors are: 90100625 has no co-ordinates given; 7129447 has latitude with 77'; the other records have longitudes with over 59'.

Schemes will be able to use this feedback to help improve the veracity of their own ringing recovery data sets. Erroneous records which need to be corrected before being loaded into the EDB need not be resubmitted until the scheme's next annual submission.

6 File organisation

Although the EURING Exchange Code 2000, manual is quite clear about the format of encounter records, the organisation of records within the file is not mentioned.

As far as the EDB is concerned, the organisation of files is of little importance. Schemes are free to organise their submission data files in the way most convenient to them.

Some methods which are used are these:

1   All records in a single file, sorted by ring number and date of encounter. This is the most frequently used format and appears to be the most natural.

2   All ringing encounter records in one file; all recovery encounters in a second file. Both files sorted by ring number order.

3   One file for each species. Within the files, data are sorted by ring number and date.

Files are generally submitted as an email attachment to the edb@bto.org. Large files are often zipped in order to ease transmission by email. It is also acceptable to submit data on CD (postal address on page 1).

7 Extinct schemes and old place codes

Data from old schemes should normally retain the old scheme code. The only exception to this is where a scheme continues, but under a new code. This can happen as a result of political changes. In these cases, the scheme must decide at which point the scheme code changes. It is possible, for example, to change all historical records for the scheme to the new code, provided all birds with that old code were ringed with rings from the same ringing centre.

Place codes also change according to various political considerations. Again, it is a matter for ringing schemes to determine whether their own records retain the old country and region codes, or whether they are converted to the current equivalent codes. However, for submission to the EDB, it is most helpful if country codes, at least, are converted to the latest version. Extraction of data from the EDB is made particularly difficult if any country codes are still in the original 1967 numeric codes.

If you need detailed advice about old codes, please contact the EDB.

8 Unrecorded data

The EURING code provides opportunities for recording variables which are vital for any bird encounter record - the ring number, for instance. However, some fields may be useful for many analyses, but do not carry the same importance as others. These include fields such as the catching method or pullus age. Some schemes demand that ringers record and submit these data, others do not. Where schemes do not record such items, records should be submitted with the appropriate code for unknown or unrecorded (usually U, Z or a hyphen) rather than just leaving a blank character space.

9 Derived data

The EURING code provides three fields for derived data. These are for the distance moved, direction travelled and time elapsed since ringing. For the ringing event, these fields must all contain hyphens, not zeros. This provides one simple way of separating the ringing record from subsequent records.

Some schemes have found difficulty in calculating the distance and direction fields. These can be calculated by the EDB when the data are loaded. In these cases they should be left as hyphens in the recovery/recapture record. However, always calculate the elapsed time.

10 Sample data

EURING 2000 coded data are stored as ASCII text. Files may be examined easily in a text editor such as Microsoft Notepad or Programmer's File Editor (a public domain text editor which can be downloaded from *http://www.lancs.ac.uk/staff/steveb/cpaap/pfe/default.htm*

Viewing data in a text file can also give you a good idea of whether certain types of error are present - lines of varying lengths, blanks on some records or unusual patterns in some columns.

An example of EURING 2000 coded is given below, together with an overlay showing where the different fields lie.


```
DERA0CD...5128101ZZ1464014640N0MNMM44U-----180520030----DECK+503600+0075000082004-------------
DERA0CD...5128104ZZ1464014640N0MNMM46U-----290520040----DECK+503600+00750000802040000000000377
DERA0CD...5134501ZZ1598015980N0MUUU22U-----080420020----AU05+462812+0151948082004------------
DERA0CD...5134504ZZ1598015980N0MUUU22P-----230720020----AU05+470000+016000008020400078041001 06
DERA0CD...5196701ZZ1277012770N0ZUFF44U-----050719710----DFCK+502400+0074200082003-------------
DERA0CD...5196704ZZ1277012770N0ZUUF08U-----150819732----DFCK+502400+0074200010103000000000000 0
DERA0CD...5204901ZZ1710017100N0ZUM533U-----220919710----DFCK+502400+0074200082003-------------
DERA0CD...5204904ZZ1710017100N6ZUU509U-----010219740----DFCK+502400+007420001440300000000 00863
DERA0CD...5206501ZZ1877018770N0ZUFF22U-----081019710----DFCK+502400+0074200082003-------------
DERA0CD...5206514ZZ1877018770N0ZUUF02U-----120719760----SV55+584200+0134800010103010020230 1739
```

The last two lines give the history of the Radolfzell bird CD52065. It was ringed, with a metal ring only, as a Reed Bunting *Emberiza schoeniclus* in a typical ringing situation (no lures, not moved or manipulated). It was a fledged female of unknown age (code 2) ringed on 8 October 1971 in Koblenz, Germany 50°24' north, 7°42' east.

On recovery, the finder identified it as the same species but could not identify the sex; the scheme has subsequently assigned the code F for female and also the age code 2 (full grown but otherwise unknown) although the age was reported as unknown (code 0). It was found on 12 July 1976 in Skaraborg, Sweden, 58°42' north, 13°48' east. On recovery it was dead but no other circumstances known. It had moved 1,002 km in a direction of 023° and was recovered 1,739 days after ringing.

11 Common errors

Experience has shown some particular types of error occur relatively frequently. This list is not exhaustive but is aimed at helping schemes to prevent erroneous data occurring in their submissions.

Invalid dates

Occasionally records have dates, such as 31 June, which cannot exist. These often result from simple typing errors, but they should be detectable with simple validation software.

Sometimes dates which have been converted from 1979 coded data with two digits for the years have the first two digits (19 or 20) omitted. In some cases the conversion has led to the quoted year being wrong by 100 years. This can lead to birds ringed in 1999 apparently being recovered in 1901. To overcome the problem ensure that years with a lower two-digit number than the current year (e.g. 07) become prefixed by 20 with all other years prefixed by 19. Schemes which have records more than 100 years old may need to convert some records 'by hand'

Where records have been manipulated in a spreadsheet, particularly Microsoft Excel, the year can be exported in a format which is completely different from that on the computer screen. Spreadsheets store dates as the number of days that have elapsed since a chosen start date - for Excel the start date is 01/01/1900. Thus a date of 01/03/2008 will be stored as the integer 39508. Sometimes exported dates will be this number, at other times dates might be exported in some other non-EURING coded format. This can be overcome, to some extent, by formatting the Excel columns to hold text, rather than numeric, values (using the Format - Cells route). Becareful, however, data imported to a spreadsheet may lose its formatting at the point of importing.

Species code - missing leading zeros

Again, this can be a problem with data exported from spreadsheets. Where codes are numeric and begin with zero, even if correctly formatted on the screen, they may be exported as an integer in its usual format without a leading zero. For example species code 00420 would be exported as just 420. Occasionally, they are exported as real numbers given to two decimal places. Species 00420 then becomes 420.00

Co-ordinates

Simple typing errors can introduce invalid co-ordinates, but there are many other, more subtle, ways of introducing errors. Many schemes store their data in their own national co-ordinate system. These data must be converted to geographical co-ordinates before submission. Similar problems may arise as for species codes - leading zeros can be lost. Thus an easting of 000°53'00'' will be given as 5300 rather than 0005300.

If minutes are entered as a separate field and leading zeros lost, co-ordinates such as 53°08' will become 53°8' and from there be treated as 538 rather than 5308.

Additional problems can arise if all the co-ordinates are treated as one field. In this case the spreadsheet may treat the co-ordinates as an addition so the valid co-ordinates entered as +531800-0011830 would be represented as 519970.

Another common error is to give decimal points of degrees rather than degrees, minutes and seconds. Thus 53°45' would appear as 5375 because 45' = 0.75°

Species not determined on finding

Often when a member of the public finds a bird, the species is not reported. In this case the first species code in the recovery record should be 00000 - for reported species unknown. However, the ringing scheme does know the species of the bird - it is the species given by the ringer when it was ringed. In the recovery record, the second species code, species as determined, must be this known species and not the unknown code 00000.

Ring with misplaced dots

The EURING code specifies a particular format for ring numbers. In general, the leading letters must be separated from the trailing numbers by dots, making the whole number 10 characters in length. Thus ring TC61417 should be given as TC...61417

In some cases leading zeroes can be missed. Thus TC06146 might be represented as TC....6146

Invalid sex codes

Some schemes are still using the 1979 codes of 0, 1 or 2 for U, M or F. Sometimes lower case letters have been used in place of capitals, giving f or m rather than F or M.

Incorrect codes for unknown data

Often a code is needed to indicate that some value is either unknown or unrecorded. For various reasons, the code for 'unknown or not recorded, is different in some fields from others. In any particular field, the manual makes the required code clear. Sometimes, however, the wrong codes are still used. For example For Manipulated (column 30) the code for unknown is U; for Catching Method (column 32) it is Z; for Condition (column 77) it is 0 and for Circumstances (columns78-79) it is 99. Common errors are to use an incorrect unknown code for a particular field. Sometimes the letter O is used in place of the digit 0.

Errors such as these can, very easily, be detected by simple verification checks.

If you need more information or help

contact the EDB co-ordinator at *edb@bto.org*

or consult the relevant EURING web pages (*Data and codes* or *Scheme login* options from the main web page *www.euring.org*).

The latest version of the **EURING code manual** can be downloaded from *www.euring.orgdata_and_codes/euring_code_list/index.htm*

The EURING Data bank holds an unparalleled resource for research into many aspects of pure and applied ornithology.

EURING is very grateful for the support of ringing schemes in making this data bank a possibility.

Submission of Ringing and Recovery Totals

For full analyses of recovery data, it is often important to know ringing totals. For this reason, EURING needs to have a full list of ringing totals for all schemes. Eventually it is hoped that these totals will be held in a single database and that schemes will be able to submit or edit data through an on-line application. These totals would then be freely available to all schemes in the schemes' private area of the EURING web site. For the time, however, submission to the EDB will be through spreadsheet or similar data files.

It is hoped that schemes will be able to submit their ringing and recovery totals annually, perhaps to coincide with publication of these figures in their annual ringing report.

At present, ringing totals are held for only two schemes, so any additional data sets will be very useful as they become available.

Historic ringing totals

Historical ringing totals will exist, for most schemes, only in printed form. Computerising of these historic totals would be a major task, beyond the resources of ringing centres. Some schemes have succeeded in finding volunteer help for computerisation of historic ringing data. Often, volunteers are early-retired people who wish to make use of their time for worthwhile causes. Schemes are encouraged to find such volunteer help.

Annual totals or complete data sets?

For submission of recoveries, schemes are asked to submit complete data sets annually. Ringing totals, however, present fewer problems than recovery data. Amendments to past records happen relatively infrequently (perhaps if errors are discovered or if a ringer has submitted details after the scheme's deadline for annual submissions).

The EDB will welcome submissions either of annual totals or, as with recovery data, complete data sets annually. Please state whether any submission consists of new records only, a complete data set or else annual totals and some earlier, corrected records.

Extinct schemes

Some schemes are curators of data from extinct schemes. The EDB will welcome data from these extinct schemes. Some schemes may have recoded constituent, extinct schemes' data with the modern scheme code (for instance, DFR records now all have the new DER code.) Other schemes have left extinct scheme codes as they were (for instance HGM records remain as HGM). The EDB will accept data with either convention according to schemes' own policies, but please make it clear if extinct schemes' totals have been included with the current scheme's totals.

Missing data and blank records

At present, some schemes may not be able to complete all the data columns. In such cases, please leave them blank.

Some rarer species will not be ringed or recovered in some years. In such cases, please do not submit nil records for that species in those years.

Submitting data

Send completed totals lists to edb@bto.org either in CSV format or as a spreadsheet file at a time convenient for the scheme.

Data format

Each line of data will give details of ringing of one species, in one year, by one scheme. Thus, a scheme which has been operating for 20 years and has ringed around 100 species would have about 2,000 line so information

The fields which will be included are given below.

Field	Notes
Scheme	Three letter scheme code
Year	Four digits
Species	Scientific name
EURING species code	Five digits, include subspecies within species totals.
Pulli	Number of pulli ringed during that year.
Full grown	Number of of fledged birds ringed during that year.
Grand total ringed	Total number of birds of that species ringed up-to and including those in that year since the scheme began.
Recoveries	Total number of recoveries reported during the year, irrespective of year of ringing.
Grand total recoveries	Total of all recoveries of that species up-to and including those in that year.

A blank spreadsheet with these column headings is available on the web site (give web address here)

Specimen records

Scheme	Year	Species	EURING	Pulli	Full Grown	Total	Grand Total Ringed	Recovery	Grand Total recovery
GBT	2006	Parus major	14640	24995	38764	63759	1549382	271	9541
GBT	2004	Parus major	14640	23637	33870	57507	1423918	179	8958
DER	2006	Regulus regulus	13140	0	149	149	11427	2	83