TRANSFERRING WADER RINGING DATA BETWEEN COMPUTERS.

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Various people have become involved in using computers to store and analyse data obtained from ringing waders. It may be that a need for transferring data, other than by written record, will make itself felt. If so, it will be useful to have an agreed format. This does not mean that we shall all have to use the same codes and format for our own individual purposes, merely that there will be an agreed system for transfer. Each of us will be able to write programs to interconvert our individual systems with the transfer system. Of course, some people may feel that the format outlined below would also be convenient for their own data storage, but this is not a requirement. For a few items, however, we have been unable to find a generally agreed scoring system (e.g. fat, plumage) and have tried to incorporate the best of various different methods known to have been used. These few items may affect the way data are recorded in the field and we hope that they will prove satisfactory.

The following has been worked out after consultations with other interested parties and we hope that it will prove acceptable. It is restricted to British localities but could easily be extended.

General Features

The medium will be 9-track magnetic tape, coding in IBM industry-compatible form. There will be one record per handling - i.e. a bird caught on two different dates will form two records. There will be 72 characters/record, 34 records/block, and a density of 1,600 bits/inch.

The data will be in fixed format with no spaces between items. The raw data will be a mixture of alphabetical and decimal numeric characters. Missing data will be coded with zeros. Data with fewer characters than are allowed for the item in question must have leading zeros - except for measurements (see below).

Details

Item	No. of Characters	Notes
SPECIES	3	Euring code MINUS the last digit (see, e.g. "Ringers' Manual").
RACE	1	See below.
LOCALITY	6	1-km National Grid Reference: 2 letters and 4 digits.
DAY	2	Day of month.
MONTH	2	January = 01.... December = 12.
YEAR	2	Last 2 digits only.
SCHEME	2	See below.
RING	8	Ring "number" including letters if used, with leading zeros if number has less than 8 characters. Do not leave spaces between any characters.
SECOND SCHEME	2	In case the bird carries two rings or if one is replaced by another. If not needed fill with zeros.
SECOND RING	8	

AGE	1	Euring code, omitting use of J. (Codes greater than 9 should not be necessary).
SEX	1	1 = male; 2 = female.
WING LENGTH	3)	All to 3 figures. If measured less accurate
BILL LENGTH	3)	use trailing zeros:; if more accurately,
BILL DEPTH	3)	round off to 3 figures. Do not use decimal
WEIGHT	3)	points. (Context will indicate whether
TARSUS LENGTH	3)	613 is, e.g., 61.3 or 6130).
OPTION A	3)	See below.
OPTION B	3)	
FAT SCORE	1	Modified standard score - see below.
MOULT	10	Modified moult scores of primaries, in order from 1st (innermost) to tenth -see be
PLUMAGE	1	See below.
CAPTURE METHOD	1	See below.

Notes on idividual items

Race

Up to 9 races can be coded. It will be necessary to have an agreed code for the races of each species. If you wish to code for race, write to the Editor of the Bulletin, who will publish all newly-established code-lists as the need arises, and maintain a file of established codes.

Scheme

We list below all schemes in Europe, Africa and America which seem to have the slightest chance of occuring in Europe. If anyone is fortunate enough to need codes for any other scheme, please write to the Editor of the Bulletin, who will publish the additions.

01	London, UK.	24	Donana, Spain.
02	Washington, USA.	25	Madrid, Spain.
03	Reykjavik, Iceland	26	San Sebastian, Spain
04	Stavanger, Norway	27	Oporto, Portugal
05	As, Norway	28	Warsaw, Poland
06	Oslo, Norway	29	Gdansk, Poland
07	Stockholm, Sweden	30	Matsulu, Estonian SSR
08	Goteborg, Sweden	31	Tartu, Estonian SSR
09	Helsinki, Finland	32	Riga, Latvian SSR
10	Copenhagen, Denmark	33	Moscow, USSR
11	Viborg, Denmark	34	Praha, Czechoslovakia
12	Kalø, Denmark	35	Budapest, Hungary
13	Arnhem, Holland	36	Sofia, Bulgaria
14	Leiden, Holland	37	Bucarest, Rumania
15	Helgoland, Germany	38	Zagreb, Yugoslavia
16	Radolfzell, Germany	39	Bologna, Italy
17	Rossiten, Germany	40	Valetta, Malta
18	Hiddensee, Germany	41	Cyprus
19	Sempach, Switzerland	42	Tunis, Tunisia
20	Bruxelles, Belgium	43	Jos, Nigeria
21	Jersey	44	Nairobi, Kenya
22	Paris, France	45	Livingstone, Zambia
23	Aranzadi, Spain	46	Pretoria, S.Africa

Options A and B

People working on some species may wish to code for items additional to those included here. They can do so, using the optional fields. If you wish to establish the use of one of these fields for a particular purpose, write to the Editor of the Bulletin, who will publish new code lists and maintain a file of those already established.

Fat Score

Coding given below is based on Helms and Drury (Bird-Banding 31:13) but has been modified slightly for waders. Further, 1 has been added to all scores to leave 0 to indicate "not recorded". The relationship of fat score to quantity of fat present is unknown but is unlikely to be linear.

0 No record.
1 None or trace; furcular (interclavicular) region concave. None in abdomen.
2 Fat present but furcular region concave and clavicles visible. Trace in abdomen.
3 Furcular region filling but still concave. Some covering of clavicles. Some between intestinal folds and/or in small patches.
4 Hollow filled; clavicles covered; some overflowing furculum but still concave. Pad of fat covering abdomen but not mounded.
5 Hollow filled; furcular fat nearly level with pectoralis muscle, overflowing up interclavicles, and subcutaneous fat in patches over pectoral muscles. Mounded pad over abdomen.
6 Convex pad overflowing the length of the furculum and subcutaneous fat covering entire ventral area. Abdomen pad well mounded.

Moult

To distinguish score 0 from "no record" the usual moult score for each feather should have 1 added to it. Thus moult not recorded codes as 0000000000, all old feathers as 1111111111, and all new feathers as 6666666666.

Plumage

The following scheme is based simply on what seems to be recorded at present; there is no suggestion that it is linearly related either to time of progression or quantity of plumage involved:-

0 No record
1 Full winter plumage
2 Trace of summer plumage
3 $\frac{1}{4}$ of summer plumage
4 $\frac{1}{2}$ of summer plumage
5 $\frac{3}{4}$ of summer plumage
6 Trace of winter plumage
7 Full summer plumage

Capture method

1 = cannon-net,　2 = mist-net,　3 = dazzling,　4 = cage-trap,
5 = clap-net,　6 = at nest,　7 = other.

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