

ICO Ringing Standards

Catalan ringing Office

Catalan Ornithological Institute

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Institut Català d'Ornitologia

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1. Introduction

Until a few years ago, ICO's (earlier called GCA) ringing data set only contained paper information: the only digital data were the ones referring to recoveries. Nowadays, the data set contains more than 150,000 digital records from the monitoring projects of Migració and SYLVIA, however, most of the information (more than 600,000 ringings) are still in paper format. Thus, and despite this huge amount of data, the usefulness of the Ringing Dataset is still very limited. In fact, the size, in these cases, can even become a problem rather than an advantage.

The usefulness of a dataset, especially in the long term, is to gather the best possible information and make it accessible. With computerization, the accessibility of information is solved, and, especially then, the quality and homogeneity of the information, another essential requirement, becomes particularly important. The amount and quality of information that can be stored in the Ringing Dataset is not excessively limited by space or technical reasons. The level of information it contains will essentially depend on what the ringers put into it.

ICO has been aware of this problem for several years, and has been working to find a solution. To achieve this, however, there were two fronts where work had to be done simultaneously and intensively: 1) in the dissemination of the data computerization process among the group of ringers, and 2) in the creation of working standards that would allow homogenizing and optimizing the information to the extent that it was reasonable that, ultimately, should be part of the dataset.

With regard to computerization, its diffusion has largely been achieved through the development of the NouBio program and its use by ringers, mainly collaborators in the ICO monitoring projects. The consequence is that, nowadays, most ringers use this program to computerize their data and to make the annual report. Among those who do not use NouBio, a considerable part computerizes the data with other systems (usually Excel or some database made at a private level). To sum up, currently only a minority of ICO ringers do not computerize their field data.

On the other hand, the creation of work standards has been developed over the last few years through the MIGRATION and SYLVIA projects, the two ICO monitoring programs that use ringing as a basic method of work. These projects have been the perfect framework to optimize and contrast the usefulness of the different work protocols thanks to the constant feedback with those responsible for the ringing stations and the rest of the collaborators. As a result of this work, all ICO ringing projects have been using the same work protocol for several years now: the basis of the standards we present here.

Currently, therefore, with the generalization of the computerization of data and with enough experience to be able to establish solid work protocols, we are in a position to transform the Ringing Dataset into a really useful and efficient Dataset. Considering this goal, and also considering that there must be a reasonable balance between what can be asked of the ringers and the effort this represents for each of them, we have made a critical re-reading of the information exchange protocols that existed until now (i.e. essentially the protocols linked to the annual report). As a result of these considerations, we have developed the program of standards presented here, which should be the reference framework for the exchange of information between ICO ringers and the Central Databank of the Catalan Ringing Office from now on.

The Standards basically have four functions: 1) establish what information (variables) must be part of the OCA Dataset and how it must be taken and coded; 2) delimit the different degrees of importance of each of these variables and, at the same time, establish different possible levels of involvement so that each ringer can choose his own; 3) establish the information exchange protocol between the OCA and the ringers; and 4) adapt the ICO regulations to the new operating protocols.

2. Synopsis

The standards give the possibility to work at three levels: mandatory, basic and extended. The mandatory standard refers to the information that ringers must provide to the OCA each year and how they must provide it (see Table 2.1): that is, it refers to the content of what we know as ringing annual report. The basic standard includes all mandatory information and essentially adds biometric and physical condition variables (Table 2.2). Finally, the extended standard is basically the standard used by the ICO monitoring projects (MIGRACIÓ and SYLVIA), and is the most complete and extensive of all (Table 2.3). In addition to what the basic standard already includes, the extended work standard provides much more information about the ringing session. Note that each higher standard contains all the information from the lower standards. The information that must be taken in each case and the form in which it must be taken is specified in section 3, while section 4 indicates how this information must be sent.

Finally, in Appendix IV you will find the description of variables that are not, strictly speaking, part of any of the predefined standards, but which may be useful in more specific projects.

Level of participation: which standard to choose?

All ringers must follow the protocols set by the mandatory standard (just as the minimum standard determined by the contents of the ICONA pink and blue sheets was followed until now), but they can choose to use higher standards or not. The selection of a standard does not need to be forever or for all ringing sessions. For example, a ringer may decide to follow the basic standard for a particular study or location, and use the mandatory for all other days and locations. Likewise, although it would be most advisable to use all the fields that make up a standard, the selection of the basic or extended standard does not oblige you to always use all its fields; it is enough to use some of them (remember that this is not possible in the case of the mandatory standard). What must be taken into account is that it is essential to always follow the protocols and encodings of the standard that is chosen and leave blank or use the "unknown" code in the fields that do not want to be used (if you use other codes in these fields could generate major errors in the system). For example, you can collaborate using the basic standard, but not using the "Muscle" variable. In this case, you would fill in the rest of the fields included in the standard and put a "9" in the "Muscle" field (the code that, in this case, indicates that this variable is unknown or not checked). What you should never do is use the "Muscle" field for another variable or to measure muscle with another system. If you collaborate on an ICO project, the standard to follow is always the extended one, and in this case it is indeed essential to always use it in its full extent and on all days that the study is carried out (e.g. all ringing sessions of a SYLVIA station). Finally, keep in mind that to collaborate following the basic or extended standards it is essential to computerize the data with the NouBio program (the use of other programs should be studied on a case-by-case basis).

Camp	Notes	Tipus d'informació
LLOCS D'ANELLAMENT		
Codi del lloc		Codi que identifica el lloc
Nom del lloc		Nom del lloc
Municipi		Nom del municipi
País		Nom del país
Coordenades UTM	1	Coordenades UTM del punt central
Extensió zona anellament		Grandària de la zona d'anellament/lloc confidencial
JORNADES D'ANELLAMENT		
Codi del lloc	2	Codi que identifica el lloc
Data		Data
Hora d'inici		Hora en què s'inicia el trampeig
Hora de finalització		Hora en què finalitza el trampeig
Hora d'interrupció		Si s'escau, hora en què s'ha interromput (momentàniament) el trampeig
Hora de reinici		Si s'escau, hora en què s'ha reiniciat el trampeig
Hàbitat 1		Hàbitat de la zona d'anellament
Hàbitat 2		Hàbitat de la zona d'anellament
Controls registrats		Indica quins controls s'han apuntat
Metres de xarxa	3	Metres de xarxa utilitzats
Ús de reclams	3	Indica si s'han utilitzat reclams a les xarxes
CAPTURES		
Condicció de la captura		Indica si és un anellament o un control
Tipus de captura		Tipologia de captura (normal, baixa, centre de recuperació...)
Remitent	4	Remitent de l'anella
Anella		Inscripció de l'anella
Codi de l'espècie		Codi de 6 lletres que identifica l'espècie
Codi de la subespècie	5	Codi de 3 lletres que identifica la subespècie
Subzona	6	Niu on s'ha anellat la pollada
Número de pollets	6	Número de pollets vius al niu
Mètode de captura		Forma de captura (o alliberament, en el cas de Centres de Recuperació)
Reclam	2,7	Indica si s'ha capturat amb reclam
Codi del lloc		Codi que identifica el lloc
Data		Data
Hora oficial	2	Hora de la captura
Edat		Codi EURING
Sexe		Sexe
Estat	2,8	Causa de la baixa
Marca especial	9	Indica si l'ocell porta o se li ha posat una marca especial
Codificació de la marca	9	Codificació de la marca especial

Notes:

- 1 Only for birds captured in Catalonia.
- 2 Rehabilitation centers don't need to fill in this information.
- 3 Only if mistnets were used.
- 4 Only in case of a foreign ring.
- 5 Only if it can be identified with certainty.
- 6 Only for nestlings.
- 7 Only for birds captured with mistnets.
- 8 Only for deceased birds.
- 9 Only if the bird has or we put it.

Table 2.1. Summary in catalan of the variables (fields) that make up the mandatory standard. The variables are grouped into three sections, depending on whether they refer to the ringing site, the ringing sessions or captures. The "Site code" and "Date" fields appear more than once, as they are the variables that link the different sections. As the notes show, some fields only need to be filled in in special cases (e.g. special markings, nestling ringing). Fields that were not part of the annual report in the old system are shown in red.

Camp	Notes	Tipus d'informació
CAPTURES		
Longitud de l'ala		Longitud de l'ala (corda màxima)
Longitud de la tercera primària		Longitud de la tercera primària més externa
Pes		Pes
Greix		Greix (escala 0-8)
Múscul		Múscul pectoral (escala 0-3)
Intensitat de la muda (estiu)	1	Intensitat de la muda postnupcial/postjuvenil
Intensitat de la muda (hivern)	1	Intensitat de la muda prenupcial
Extensió de la muda (estiu)	1	Extensió de la muda postnupcial/postjuvenil
Extensió de la muda (hivern)	1	Extensió de la muda prenupcial
Estat		Estat de l'ocell en ser alliberat
Codi de l'anellador		Codi que identifica la persona que ha processat l'ocell
ANELLADORS		
Codi de l'anellador		Codi que identifica la persona que ha processat l'ocell
Nom de l'anellador		Nom de l'anellador que ha processat l'ocell
1r cognom de l'anellador		1r cognom de l'anellador que ha processat l'ocell
2n cognom de l'anellador		2n cognom de l'anellador que ha processat l'ocell

Notes:

1 It is only necessary to take these data during specific periods of the year.

Table 2.2. Summary in catalan of the variables (fields) that make up the basic standard. Only those that are not also included in the mandatory standard are shown. The variables are grouped into two sections, depending on whether they refer to captures or ringers. The "Ringer code" field appears twice, as it is the variable that acts as a link between the two sections. Remember that in this standard, the "Status" field must be used in its entirety, not just for deceased birds.

Camp	Notes	Tipus d'informació
JORNADES D'ANELLAMENT		
Informació sobre les zones de trampeig		13 camps que delimiten l'horari, la forma de captura i l'hàbitat de la zones
Informació meteorològica		12 camps que donen informació sobre el vent, la nuvolositat, la precipitació i la temperatura del lloc d'anellament
Informació sobre l'ús de reclams		5 camps que descriuen quins reclams s'han utilitzat, a quina zona/xarxa i l'horari
CAPTURES		
Subzona		Subzona de trampeig (niu, xarxa, grups de xarxes...)

Table 2.3. Summary in catalan of the variables (fields) that make up the extended standard. Only those that are not also included in the mandatory and basic standards are shown. The variables are grouped into two sections, depending on whether they refer to the ringing session or the captures.

3. Variables

The different types of information that the standards collect are subdivided into four main sections: 1) information that refers to the location of ringing sites, 2) information that refers to ringing sessions, 3) the information on the captures (ringings, controls and recoveries) and 4) the information that refers to the ringers (i.e. the person who took the measurements). The variables (fields) that make up each of these four large sections for each of the three collaboration standards are detailed below.

Note that there is no variable that refers to the person whose data it is (i.e. the ringer who is responsible for the data), as this information is provided at the time the data is submitted (each person or group send their own data). This information is stored, however, in the OCA Dataset.

3.1. Mandatory standard

The information that must be taken in the case of this standard refers to three main sections: the ringing sites, the ringing sessions and the captures.

3.1.1. Ringing sites

Fields in relation to ringing sites are the following:

3.1.1.1 [camp]: Ringing site code

Code that identifies the ringing area and its geographic location (UTM coordinates; see below). It must always have four digits (i.e. "ST01"; "ST" would be incorrect). This code is freely chosen by each ringer, but it must be taken into account that it cannot vary from one year to another (i.e. the same code cannot be used to refer one year to one place and another year to another place) and that cannot refer to two different places in the same year. What is possible is to use different codes to identify different projects that are developed in the same place (e.g. the codes "ST01" and "ST02" could refer to the same place (same UTM coordinate), but the first one would identify the birds captured during a SYLVIA session and the second would identify birds captured outside the SYLVIA session). The important data for the ICO is the geographical reference (UTM). The station code is only necessary to be able to easily relate the location of the ringing area with the data of the ringing session and those referring to the captures (ringings and controls) which are on different sheets (tables).

In the case of birds transported to the place of release (i.e. captures of the "Rehabilitation Centre" type), the code that must be given is the one that refers to the place of release, and not to the ringing site (in case that is different).

3.1.1.2 [camp]: Name of the site

Name of the ringing site. Whenever possible, it is recommended to use the name assigned to the place in the most up-to-date Catalan cartography (e.g. Series 1:25,000 or 1:50,000 of the Catalan Cartographic Institute).

3.1.1.3 [camp]: Municipality

Municipality where the ringing site is located. If the site is located between two or more municipalities, it is only necessary to indicate the municipality where the central point of the ringing area is located (i.e. the point indicated in the "UTM" field).

3.1.1.4 [camp]: Province

Province to which the municipality where the ringing site is located belongs.

3.1.1.5 [camp]: Country

Country where the ringing site is located.

3.1.1.6 [camp]: UTM coordinates

UTM coordinates of the central point where the ringing site is located (approximation of 100 m). Use the numeric format "9999-99999" (e.g. "3083-45602"). "Central point" means the centre of the area where nets, nest boxes and/or other traps are usually placed. The UTM of the station should not be recalculated every time we use a different arrangement of mist nets. Once UTM coordinates have been assigned to a ringing site, they cannot be changed. If there is a really important change in the location of the ringing station, what should be done is to give a new code to the ringing site and assign it new coordinates.

While it is important to know the exact location of the site where any ringing or control has been carried out, the location of the sites by the name of the site (often known by more than one name, and sometimes by the one that does not appear to any cartography) or by the name of the municipality (often with a considerable extension) is quite inaccurate. Determining the exact coordinates of the site easily solves this problem.

Determining UTM coordinates to an approximation of 100 m is quite easy with any cartographic map at a scale of 1:50,000 or higher. The topographic cartography of the Cartographic Institute of Catalonia at 1:25,000 and 1:50,000 scale (Atlas topographic of Catalonia 1:50,000) and the 1:50,000 series of the Servicio Geográfico del Ejército indicate the UTM coordinates every km, while the series regional 1:50,000 of the ICC gives it every 5 km. Figure 3.1. shows an example of how to determine UTM coordinates. First you need to locate the X coordinate that the map indicates every km (indicated at the top or bottom of the map with three numbers, e.g. "311"; extrapolate the intermediate values in the case of the county map) and that is just to the left or in the centre of the point we want to determine, and make the approximation to 100 m by adding one more number (0-9) according to whether the point is more or less to the right (e.g. "3117" would indicate a point located on the right of "311" and near "312"). Similarly, you need to locate the Y coordinate that the map points to every km (indicated on the sides of the map with four numbers, e.g. "4565"; extrapolate the intermediate values in the case of the county map) and that is just below or in the centre of the point we want to determine, and make the approximation to 100 m by adding one more number (0-9) depending on whether the point is more or less above (e.g. "45652" would indicate a point located above "4565" and well below "4566"). In this case, the X-Y coordinates of the point would be "3117-45652".

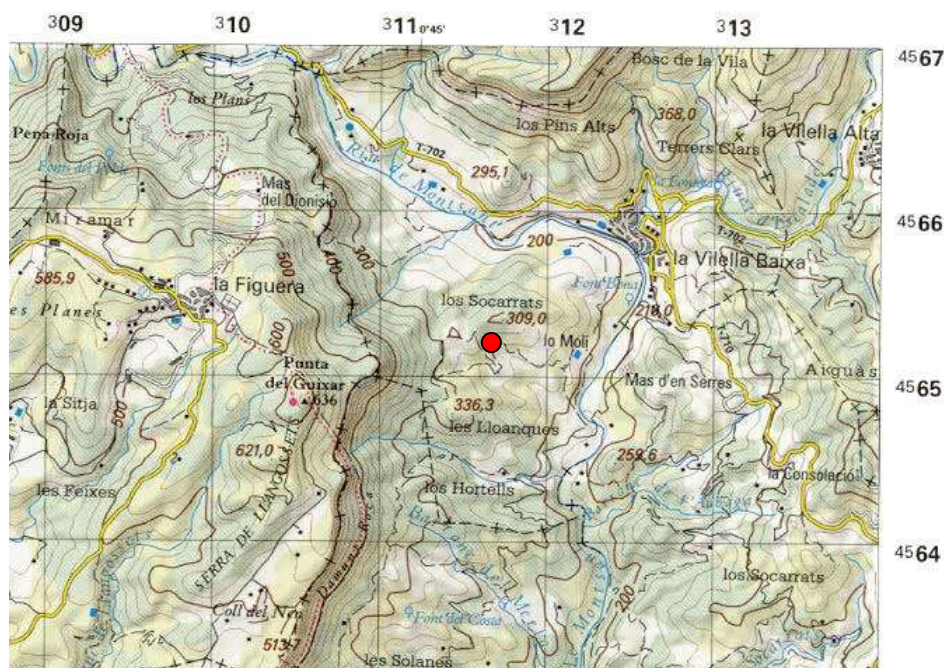


Figure 3.1. Example of locating the UTM coordinates of a point (the red dot indicates the location of the ringing station).

If you have any problems determining the UTM coordinates of a station, the Office can provide you with detailed mapping or locate the location ourselves (in any case, we hope to have a simple GIS application that allows UTMs to be located easily from the internet and from the ringing program itself). Although it may seem a little cumbersome the first time, keep in mind that we ringers usually only use a few ringing sites (often no more than 10) and they are usually the same every year. So, once the coordinates are well determined the first time, the job becomes much simpler in later years.

3.1.1.7 [camp]: Ringing area extension

This variable complements the previous one ("UTM coordinates") indicating the maximum distance from the central point of the ringing area within which the birds are captured. Use the codes detailed in Table 3.1. In the vast majority of cases, code "1" is the correct one. Codes "2" and "5" should be used sparingly and only if they are really appropriate (it should be borne in mind that by assigning a larger radius the geographical referencing of the place becomes more imprecise). These codes, for example, can be useful when describing a study area made up of nest boxes that is too wide and homogeneous to be subdivided into several stations.

The "C" code is reserved for cases where you want to maintain the confidentiality of the place where the captures are made (for example, the place where the nestlings of some endangered species have been ringed). It should be

kept in mind that it is only permissible to use this code in sufficiently substantiated cases. The consultation of geographical information related to these locations (e.g. place name and UTM coordinates) will be restricted.

Code	Extension
1	<1km
2	<2km
5	<5km
C	Confidential location

Table 3.1. Ringing station extension.

3.1.2. Ringing sessions

The variables that refer to the ringing sessions are detailed below. "Ringing session" means a different combination of place and date of ringing (of the same ringer). Keep in mind that you cannot repeat the same combination of place (ringing place code) and date. This section does not have to be filled in by the Rehabilitation Centres.

There may be cases where two different ringing sessions are held in the same place on the same day (i.e. with different characteristics regarding the use of lures or capture methods; e.g. a SYLVIA is done in the morning and a in the afternoon, nightjars are captured with using lures in the same place). In these cases, if you want to conveniently detail the characteristics of the two ringing sessions you should use different ringing site codes (see 3.1.1.1).

3.1.2.1 [camp]: Ringing site code

See section 3.1.1.1.

3.1.2.2 [camp]: Date

Date on which the ringing session was performed. Use the format "dd/mm/yy" (e.g. "30/03/03").

3.1.2.3 [camp]: Start time

In this field it is necessary to indicate the time (official time) when the bird trapping started. If the mist nets have been left open all night (option not recommended) the time "00:00" must always be entered as the start time.

3.1.2.4 [camp]: End time

In this field it is necessary to indicate the time (official time) in which the bird trapping has ended. If the mist nets have been left open all night (option not recommended) the time "23:59"¹ must always be entered as the end time.

¹Keep in mind that the time "24:00" does not exist: it corresponds to the time "00:00" of the following day.

3.1.2.5 [camp]: Interruption time

In this field it is necessary to indicate the time (official time) when the bird trapping was temporarily interrupted. This field should only be used if there has been an interrupting period of the trapping.

3.1.2.6 [camp]: Restart time

In this field it is necessary to indicate the time (official time) when the trapping was restarted after a period of interruption. This field should only be used if there has been an interrupting period of the trapping.

3.1.2.7 [camp]: Habitat (1)

This field and the next ("Habitat (2)") serve to describe very briefly the habitat of the ringing area. Consider the ringing area as the circular area that covers the entire area where the captures are made (mist nets, nest boxes...). Use the codes detailed in Table 3.2.

This field must always be completed. Use the "Habitat 2" field only if a single field is not enough to adequately describe the area. The habitat of a ringing station can change over time, although it usually does not change significantly enough (given the coding used) to detect relevant changes over the course of a year. So, in general, you will be able to directly reuse the habitat codes assigned during a ringing session on the other sessions in which you ring in that same place during that year. In other cases, however, significant and sudden disturbances can occur (e.g. a fire) that force the habitat codes to change from one session to the next.

Main environment	Code	Habitat
Aquatic environments		

Marine	A1	Open sea
	A2	Sea (coast)
	A3	Estuary/bay
	A4	Port
Not marine (natural)	A5	Coastal lagoon
	A6	Lake
	A7	Pond
	A8	Stream (<3 m wide)
	A9	River (>3 m wide)
Not marine (artificial)	A10	River dam
	A11	Artificial pond/small dam
	A12	Water source
	A13	Big canal (>5 m wide)
	A14	Small canal (<5 m wide)
	A15	Ditch (<1 m wide)
A16	Salt pans	
Rocks, mud, dunes, bare ground...		
	B1	Inland cliff
	B2	Coastal cliff
	B3	breakwater/dike
	B4	Quarry
	B5	Stone wall
	B6	Scree
	B7	Cave/mine
	B8	Snowdrift/glacier
	B9	Coastal pebble site
	B10	Muddy/riparian pebble site
	B11	Salt flats
	B12	Beach/dunes (without vegetation)
	B13	Bare ground (bad land, gravel pit...)
	B14	Burnt area without vegetation
	B15	Burnt area with very incipient vegetation
Herbaceous or non-woody vegetation		
Wetlands	C1	Rush pasture
	C2	Reed bed/cattail
	C3	Cane area
	C4	Wet grassland (often muddy)
	C5	Fen/bog
Non-wetlands	C6	Typical vegetation from dunes and beaches
	C7	Mediterranean dry meadow (Mediterranean false brome, stiff brome, Mauritanian grass...)
	C8	Medium mountain meadow with small bushes
	C9	Medium mountain herbaceous meadow
	C10	Alpine/subalpine meadow
	C11	Hay meadow (high meadow mown periodically)
Shrub vegetation		
Wetlands	D1	Glasswort or other succulent plants typical from salty environments
Mediterranean lowland	D2	Maquis shrub land (Strawberry tree, holly oak shrub...)
	D3	Lentisk and/or kermes oak shrub
	D4	Silicic scrub (dense scrub of rockrose and heaths...)
	D5	Calcareous scrub (rosemary, Mediterranean heath...)
	D6	Thyme scrub/continental or steppe moor
	D7	Lowland Spanish broom shrub
	D8	Very Young Aleppo pine forest (recolonization)
	D9	Heath of heather or similar
Medium/high mountain	D10	High mountain scrub (Alpen rose, juniper...)
	D11	Round shrub
	D12	Pyrenean broom shrub (high mountains)
	D13	Hedge (dog rose, bramble, blackthorn, redoul...)
	D14	Fern field
	D15	Box shrub
Forests		
Deciduous	E1	Beech forest
	E2	Oak forest
	E3	Birch forest
	E4	Hazel forest
	E5	Chestnut forest
	E6	Other deciduous forests
Conifers	E7	Fir forest
	E8	Bog pine forest
	E9	Baltic pine forest
	E10	Maritime pine forest
	E11	Black pine forest

	E12	Aleppo pine forest
	E13	Stone pine forest
	E14	Other coniferous forests
Sclerophylls	E15	Cork oak forest
	E16	Holly oak forest
Riparian/wetlands	E17	Alder forest
	E18	Natural poplar forest
	E19	Tamarix forest
	E20	Elm/ash forest (near waterbodies)
	E21	Other riparian forests (Willow forest...)
Mix	E22	Mixed forests of sclerophylls and coniferous trees
	E23	Mixed forests of deciduous and coniferous trees
Farmland		
Herbaceous crops	F1	Vegetable cultivation
	F2	Dryland cereal cultivation
	F3	Cultivation of irrigated herbaceous plants (alfalfa, corn...)
	F4	Paddy field
Shrub/tree crops	F5	Vineyard
	F6	Almond grove
	F7	Olive grove
	F8	Carob grove
	F9	Hazelnut grove
	F10	Other dryland orchards
	F11	Citrus orchard
	F12	Irrigated fruit orchard (apple tree, cherry tree, peach tree...)
	F13	Regular tree plantation (poplar, oriental plane...)
	F14	Regular exotic coniferous plantation (spruce,...)
	F15	Tree row/tree fence/isolated wood...
Fallow/ruderal vegetation	F16	Fallow/ruderal vegetation
Urban and peri-urban environments		
	G1	Urban core
	G2	Urbanization/scattered houses/hamlet
	G3	Urban park/garden
	G4	Green House or similar
	G5	Industrial area
	G6	Abandoned construction
	G7	Rubbish dump

Table 3.2. Habitat codes.

3.1.2.8 [camp]: Habitat (2)

This field and the previous one serve to describe very briefly the habitat of the ringing area. As a ringing area, consider the circular area that covers the entire area where the captures are made (mist nets, nest boxes...). Use the codes detailed in Table 3.2.

Use this field only if the previous field is not enough for you. If there are two dominant habitats, code in the "Habitat 1" field the one that is more dominant.

3.1.2.9 [camp]: Registered controls

This field is used to know which controls have been registered. Use the codes detailed in Table 3.3. At the moment, it is mandatory to send all controls to OCA except for the ones from the same day (see 3.1.3.). This field makes it possible to differentiate those ringing session in which all the controls have been recorded from those in which the controls from the same day have not been recorded (an important fact that must be taken into account when making some types of analysis).

Code	Registered controls
T	All
E	Except from the same day

Table 3.3. Registered controls.

3.1.2.10 [camp]: Mist net metres (only if you used mist nets)

Linear meters of mist nets used during the ringing session (integer number). Leave the field blank when not using mist nests.

3.1.2.11 [camp]: Use of lures (only if you used mist nets)

This field is used to know if lures have been used to attract birds to mist nets. Use the codes detailed in Table 3.4. Leave the field blank when not using mist nets.

"Lure" is understood from the recording of voices and songs, to the use of water, light or food, as long as it is water (e.g. temporary artificial troughs), light or food "set" in purpose to be used as a lure (e.g. a fig tree full of ripe figs attracts birds, but it is not a lure).

Code	Use of lures
0	No
1	Yes
9	Unknown

Table 3.4. Use of lures.

3.1.3. Captures

This section refers to the information obtained from each capture. In addition to ringed and deceased birds, it is also mandatory to record all controls except for controls of birds already caught previously during the same session. Although it is considered the most recommended option to always record the daily checks, doing so is optional. Keep in mind that you can never repeat the same combination of place (ringing site code), date, time and ring. The variables that need to be taken from each bird, whether they are ringings or controls, are the following:

3.1.3.1 [camp]: Capture condition

This field is simply used to determine whether the capture is a ringing or a control. Use the codes detailed in Table 3.5.

Keep in mind that ringings include unringed deceased birds (birds that died before they could be ringed) and lost rings (see also 3.1.3.2). The term control includes any capture of a bird that was already ringed, i.e. your own self-control and controls of birds ringed by another ringer or ringing scheme (recaptures).

Unlike what was done until now, it is not necessary to send the deaths separately. The deaths of birds that were not ringed arrive as captures with code "A" in the "Condition" field, code "B" in the "Type of capture" field (see next section) and with the cause of death coded in the "Status" field (see 3.1.3.17), while the deaths of already ringed birds are processed as captures with the code "C" in the "Condition" field and with the cause of death coded in the "Status" field.

Code	Condition
A	Ringing / not ringed deceased bird
C	Control or recovery

Table 3.5. Capture condition.

All controls and recoveries processed by ringers using the standards must be carried out by ringers in the course of their normal ringing activity. This may seem obvious, but it's not. These standards refer exclusively to the exchange of information generated by ringers while performing ringing activities and the OCA. Ringers, as everyone knows, are not the only ones who generate bird recoveries: hunters, for example, also send in data from ringed birds. These standards do not contemplate the coding of recoveries that take place outside of normal ringing activity. In other words: it is not the means to report the sighting of a bird with a PVC ring (e.g. a seagull) or to report a recovery of a bird found dead in the field. This type of recoveries must be communicated directly to the OCA, where they are processed and coded following a different route.

3.1.3.2 [camp]: Capture type

This field determines the basic capture type. Essentially, its function is to differentiate the birds that are part of the normal ringing activity ("Normal Captures") from those that come from "Rehabilitation Centres" or are "Non-ringed deceased" (birds that died before having ringed them). Use the codes detailed in Table 3.6.

Considerations:

1) Type "Normal capture"

It is not mandatory to indicate the subtype for normal type captures. In other words, if we do not want to indicate the subtype, all captures of this typology will be assigned the code "N".

2) Type "Rehabilitation centre"

This type is assigned to any bird that has been kept in captivity for more than 24 hours before its release or that has been released more than 10 km from the place of original capture. Keep in mind, therefore, that there may be cases

in which a capture must be assigned to "Rehabilitation Centre", despite not having been handled in what we know as a rehabilitation centre (e.g. the Vallcalent centers or Torreferrusa). Whenever the capture of a bird corresponds to this generic type of capture, the subtype that best fits must be indicated. If you find that more than one subtype applies (which is quite common) you should always assign the code found above in Table 3.6.

3) Type "Normal capture: with two rings"

This code should only be used in the extremely rare case of capturing a bird with more than one metal ring (remember that it is absolutely forbidden to put two metal rings on the same bird). If you are the one who mistakenly ringed the bird twice, but the data has not yet been sent to the OCA, you can fix the problem by removing the ring that was placed second and reporting the original ring. Sometimes, however, you may find that both rings are foreign, and in such cases it would not be lawful to remove either of them (we do not know which was put on first). In these cases strictly follow the following protocol: enter the two rings as if they were two different bird controls and assign the type code "2" to both cases. It is very important that you check that both controls are assigned the same capture date and time (which will allow you to later recognize that the two records refer to the same bird).

4) Type "Normal capture: ring changed"

This code should only be used in the extremely unusual case of having to exchange an old ring for a new one. Note that this is only allowed when absolutely justified: for example, when the old ring is so worn that it is very difficult to read, is so thin that it could break or could damage the bird. In these cases strictly follow the following protocol: enter the old ring as a control (condition code "C") assigning it the type code "C" and the new ring as a ringing (condition code "A"), but also with the "C" type code. It is very important that you check that both the control and the ringing have the same date and time of capture assigned to them (this will allow you to later recognize that the two records refer to the same bird).

5) Type "Normal capture: without ringing"

This code is used to identify birds that have been captured but could not be ringed due to physical problems (e.g. scabies on the legs) or because it is a species that cannot be ringed (because no suitable ring exists). In this case, the "Model" and "Ring" fields (see below) must be left empty.

Keep in mind that by not ringing them, these birds can be recaptured again without knowing that it is the same individual. In any case, it is important to register these cases in order to preserve the information obtained from them. Do not use this code for birds that have escaped your trap or while you were handling them (these types of captures should not be recorded).

6) Type "Deceased bird not ringed"

This code is used to identify birds that have died before being ringed (in this case, the "Model" and "Ring" fields (see below) should be left blank). Keep in mind that whenever it is a deceased bird, you must also indicate the reason in the "Status" field (see below).

Keep in mind that this code should not be used for previously ringed deceased birds (controls or recoveries). These deceased birds must be entered as any control (generally with the "N" type code) and choose the code from the "Status" field that is most appropriate.

7) Type "Ring lost"

This code is used to identify rings that have been removed before placement (due to poor condition) or that have been lost. In these cases, in addition to the "Type of capture" field, you only need to fill in the "Condition of the capture", "Ring" and "Date" fields.

Code	Type	Subtype
N	NORMAL CAPTURE	Without specifying subtype
NL	NORMAL CAPTURE	Apparently local
NP	NORMAL CAPTURE	Migrating, not local
NC	NORMAL CAPTURE	Breeding
NH	NORMAL CAPTURE	Apparently wintering
ND	NORMAL CAPTURE	In a rooster
NM	NORMAL CAPTURE	At the sea
NA	NORMAL CAPTURE	In a moult aggrupation
NR	NORMAL CAPTURE	In a breeding colony, not necessarily breeding
2	NORMAL CAPTURE: WITH TWO RINGS	Bird controlled with two different metal rings
C	NORMAL CAPTURE: RING CHANGED	Ring changed
S	NORMAL CAPTURE: WITHOUT RINGING	Bird not able to be ringed
RC	REHABILITATION CENTER	Bred in captivity

RM	REHABILITATION CENTER	Kept in captivity for more than 24 hours before being released
RT	REHABILITATION CENTER	Transported to the place that has been released (>10 km)
R	REHABILITATION CENTER	Without specifying subtype
B	DECEASED BIRD NOT RINGED	Died before being ringed (deceased bird not ringed)
E	RING LOST	Ring lost or discarded

Table 3.6. Capture type.

3.1.3.3 [camp]: Postal address

This field is used to assign the postal address of the ring. However, for practical reasons, you only need to indicate this on the field sheets in the case of recoveries of birds with foreign rings (when the data is computerized, the postal address must always be noted). Use the codes detailed in Table 3.7.

Code	Postal addresses	Country
ABT	Tirana	Albania
DEH	Hiddensee	Germany
DER	Radolfzell	Germany
DEW	Wilhelmshaven (Helgoland)	Germany
ALL	Luanda	Angola
ARR	Rhyiad	Saudi Arabia
AAC	Canberra	Australia
BLB	Bruxelles	Belgium
BYM	Minsk	Belarus
BAB	Brasilia	Brazil
BGS	Sofia	Bulgaria
NAW	Washington	Canada/USA
ESC	ICO-MUS. NAT. SCI BARCELONA	Catalonia
TXS	Korea	South Korea
HRZ	Zagreb (Ornit. Inst.)	Croatia (Hrvatska)
DKC	Copenhagen	Denmark
EGC	Cairo	Egypt
SKB	Bratislava	Slovakia
SLL	Ljubljana	Slovenia
ESI	Madrid (ICONA / Medio Ambiente)	Spain
ETM	Matsalu	Estonia
SFH	Helsinki Museum	Finland
FRP	Paris	France
FRS	Strasbourg	France
GHL	Legon	Ghana
GRA	Athens	Greece
HGB	Budapest	Hungary
CIJ	Jersey	Channel islands
INB	Bombay	India
IPT	Teheran	Iran
IQB	Bagdad Univ.	Iraq
ISR	Reykjavik	Iceland
ILT	Tel-Aviv Univ.	Israel
IAB	Bologna Ozzano (BO)	Italy
JHY	Yamashina Inst. O.Z.	Japan
JO.	Jordan	Jordan
YUB	Beograd	Yugoslavia
KZA	Almaty	Kazakhstan
GPN	Nairobi	Kenya
LVR	Riga	Latvia
LIK	Kaunas (Zool. Mus.)	Lithuania
MKS	Skopje	North Macedonia
FVK	Kuala Lumpur	Malaysia
MLV	Valletta	Malta
NOS	Stavanger	Norway
AJW	Wellington	New Zealand
ESA	San Sebastian (Aranzadi)	Basque country
NLA	Arnhem	Netherlands
PLG	Gdansk / Warsaw	Poland
POL	Lisbon	Portugal
GBT	London (British Museum/Thetford)	United Kingdom and Ireland
GBW	WAGBI / BASC	United Kingdom and Ireland
CZP	Praha	Czech republic
ROB	Bucharest	Romania
RUM	Moskva	Russia
RUP	St. Petersburg	Russia
FPP	Pretoria/Cape Town	South Africa

SVS	Stockholm Museum (des de 1960)	Sweden
HES	Sempach	Switzerland
CXT	Taipei	Taiwan
TUA	Ankara, University (ODTU KAD ANK TURKEY)	Turkey
UKK	Kiev	Ukraine
CPB	Beijing	China
CYC	Nicosia	Cyprus
CYK	Kuskor	Cyprus (North)

Table 3.7. Postal addresses.

3.1.3.4 [camp]: Ring

In this field you must write the complete inscription (except the postal address, obviously) of the ring (including the letters, if any). Do not leave blank spaces or put dashes between different parts of the ring (e.g. between letters and numbers). If it is a control and there are any digits that cannot be read (e.g. the ring is extremely old), use the symbol “*” to indicate the position of each number or letter that cannot be read (e.g. “ L456***”).

Table 3.8 shows the characteristics of the different models of existing rings with postal address “ICO-MUS. NAT. SCI BARCELONA”. Appendix II indicates which ring model is indicated for each species. Use the indicated model except in exceptional cases (e.g. excessively thick or thin tarsus).

Model	Diàmetre (mm)	Alçada (mm)	Gruix (mm)	Material	Inscripció	Empresa
A	1.8	5	0.35	Alumini	Lletra + 6	Mekaniska
A	1.8	5	0.3	Alumini	Lletra + 6	Aranea
B	2.3	5	0.35	Alumini	Lletra + 6	Mekaniska
B	2.3	5	0.4	Alumini	Lletra + 6	Aranea
C	2.5	5	0.5	Alumini	Lletra + 6	Mekaniska
C	2.5	5	0.4	Alumini	Lletra + 6	Aranea
D	2.8	5.5	0.6	Alumini	Lletra + 6	Mekaniska
D	2.8	5	0.6	Alumini	Lletra + 6	Aranea
DX	2.8	5	0.5	Acer	Lletra + 5	Mekaniska
DX	2.8	5	0.5	Acer	Lletra + 5	Aranea
EA	3	3.5	0.6	Alumini	Lletra + 5	Mekaniska
EA	3	3.5	0.6	Alumini	Lletra + 5	Aranea
E	3.3	5.5	0.6	Alumini	Lletra + 6	Mekaniska
E	3.3	6	0.6	Alumini	Lletra + 6	Aranea
EX	3.3	5	0.5	Acer	Lletra + 5	Mekaniska
EX	3.3	5	0.5	Acer	Lletra + 5	Aranea
FA	3.5	3.5	0.6	Alumini	Lletra + 5	Mekaniska
FA	3.5	4.5	0.7	Alumini	Lletra + 5	Aranea
FX	3.5	5	0.5	Acer	Lletra + 5	Mekaniska
FX	3.5	4.5	0.5	Acer	Lletra + 5	Aranea
G	4.2	7	0.7	Alumini	Lletra + 6	Mekaniska
G	4.2	6	0.7	Alumini	Lletra + 6	Aranea
GX	4.2	6.5	0.7	Acer	Lletra + 5	Mekaniska
GX	4.2	6	0.7	Acer	Lletra + 5	Aranea
HA	5	3.5	0.6	Alumini	Lletra + 5	Mekaniska
HA	4.8	3.5	0.8	Alumini	Lletra + 5	Aranea
HX	5	7	0.7	Acer	Lletra + 5	Mekaniska
HX	5	7	0.7	Acer	Lletra + 5	Aranea
J	6.5	4	1	Acer	Lletra + 6	Mekaniska
J	5.5	4.5	0.7	Acer	Lletra + 6	Aranea
K	6	7	0.7	Acer	Lletra + 6	Mekaniska
K	6.5	8.5	0.7	Acer	Lletra + 6	Aranea
L	7	7	1	Acer	Lletra + 6	Mekaniska
L	7	9	1	Acer	Lletra + 6	Aranea
P	8	7	1	Acer	Lletra + 6	Mekaniska
P	8	9	1	Acer	Lletra + 6	Aranea
R	9	10	1	Acer	Lletra + 6	Mekaniska
R	9	9	1	Acer	Lletra + 6	Aranea
S	11	10	1	Acer	Lletra + 6	Mekaniska
S	11	10	1.2	Acer	Lletra + 6	Aranea
T	13	10	1	Acer	Lletra + 5	Mekaniska
T	13	10	1.2	Acer	Lletra + 5	Aranea
V	16	12	1	Acer	Lletra + 5	Mekaniska
V	16	12	1.2	Acer	Lletra + 5	Aranea
X	19	12	1	Acer	Lletra + 5	Mekaniska
X	19	12	1.2	Acer	Lletra + 5	Aranea
Y	22	12	1.25	Acer	Lletra + 5	Mekaniska
Y	22	12	1	Acer + Rebló	Lletra + 5	Aranea
Z	26	12	1	Acer + Rebló	Lletra + 5	Mekaniska
Z	26	12	1	Acer + Rebló	Lletra + 5	Aranea

Table 3.8. Models of rings with Postal address "ICO-MUS. NAT. SCI BARCELONA". Only available in Catalan. Diàmetre = Diameter. Alçada = Height. Gruix = Thickness. Alumini = Aluminium. Acer = Steel, Rebló = rivet. Inscripció = Inscription. Lletra = Letter. Empresa = Firm.

3.1.3.5 [camp]: Species code

The species code must be indicated in this field. Use the six-letter code detailed in Appendix I. Do not make up codes: the number of coded species is very large. Even so, if you can't find the code for a certain species (e.g. an exotic), ask the OCA to provide it to you.

Follow exclusively the taxonomic sequence that appears in Appendix I (or updates that are subsequently made public). Any updates to the list will be announced in advance and will be effective from the first of January following the date on which they are made public. So, note that the taxonomic list to be used throughout the year will always be the same.

In the case of species considered as rarities at state or Catalan level, the way in which the record will end up being included in the OCA Dataset will be subject to the decision of the relevant homologation committee (SEO Rarities committee or Catalan Avifaunistic Committee). In these cases, it is mandatory to send the OCA a copy of the information that has been sent to the relevant approval committee.

Remember that, except in the case of juvenile spotless and common starling birds, it is not allowed to ring a bird if the species is not known. There is, however, a special case where the unknown species code "XXXXXX" is particularly pertinent: the deaths of unringed birds that, due to their condition, cannot be identified. Note, on the other hand, that there is a special code for spotless/common starling juveniles ("VULUNI"; see Appendix I).

3.1.3.6 [camp]: Subspecies code (only if it's possible to identify)

In this field you must indicate the code of the subspecies (only if it can be identified with sufficient reliability). Use the three letter code detailed in Appendix III. Don't invent codes: if you can't find the code for a subspecies, ask the OCA to provide it.

Note that the vast majority of the time it is impossible to identify the subspecies to which an individual belongs. Never assign a bird to a breed for geographic reasons (i.e. taking into account where the bird was captured). It is only lawful to indicate the subspecies when the bird presents characters that allow us to identify it at a subspecific level unequivocally. Keep in mind that for the determination of subspecies to be of any use, it is essential to be as careful in their identification as we are when it comes to a species.

Follow exclusively the taxonomic sequence that appears in Appendix III (or updates that are subsequently made public). Any updates to the list will be announced in advance and will be effective from the first of January following the date on which they are made public. So, note that the taxonomic list to be used throughout the year will always be the same.

In the case of subspecies data considered as rarities at state or Catalan level, their inclusion in the OCA Dataset will be subject to the decision of the relevant approval committee (SEO Rarities Committee or Catalan Avifaunistic Committee). In these cases it is mandatory to send the OCA a copy of the information that has been sent to the relevant homologation committee or complete the rarities sheet provided by the OCA.

3.1.3.7 [camp]: Subzone (only for broods)

This field is used to indicate the subzone (net/s, trap/s or nest/s where the bird was captured). In this standard, however, it is only mandatory to use it to indicate which nestlings belong to the same brood. Its function is the same as the key previously drawn on the report sheets and which linked the nestlings that were part of the same brood. You can use up to 4 digits (letters and numbers) to identify the nest. Use different combinations for each nest, so that there can be no confusion when determining which nestlings belong to each nest (for example, avoid repeating the same combination in the same year or use them on different days: e.g. for first and second broods from the same nest box).

3.1.3.8 [camp]: Number of nestlings (only for broods)

This field is used to indicate the number of live nestlings that were present in the nest when the birds were ringed. The field must be filled in for all ringed nestlings. Keep in mind that the number of ringed nestlings and the number of live nestlings do not always have to match.

3.1.3.9 [camp]: Capture method

In this field you must indicate the method used to capture the bird. Use the codes detailed in Table 3.9. Rehabilitation centres do not have to indicate how the bird was captured, but the way it was released. Codes starting with "R" are reserved for these cases.

Code	Capture method
XP	Mist net - passerines (mesh hole <=1,6 cm)
XL	Mist net - Shorebirds (mesh hole >1,6 cm)
YU	Yunick trap or similar
BA	Claptrap
HE	Helgoland or similar
MP	Feeder trap (like the type for tits) or similar

NA	Funnel traps (like the type for waders) or similar
CA	Cannon net or similar
LL	Bal-chatri traps or similar
TE	Ground net
TR	Horizontal net or gillnets
AL	Other traps
NI	At the nest (nest box or similar)
NV	Because it could not fly
DO	While it was sleeping
MA	With bare hands (butterfly net, blinding the bird with bright light)
RH	Hacking (only rehabilitation centres)
RS	Cross-fostering (only rehabilitation centres)
RF	Fostering (only rehabilitation centres)
RG	acclimatization cage (only rehabilitation centres)
RA	Other methods (only rehabilitation centres)

Table 3.9. Capture method. In the case of rehabilitation centres, the method refers to the form of release (codes starting with "R").

3.1.3.10 [camp]: Lure (only for birds capture with mist net)

In this field it is necessary to indicate whether the bird has been caught with the help of a lure or not. It is only necessary to indicate this when the bird has been caught with mist nets (leave the field blank when not using mist nets). This field does not need to be completed by rehabilitation centres. Use the codes detailed in Table 3.10 always following the following considerations:

- Code "2" should only be used to identify birds caught in the net (or contiguous nets, if it is a battery of nets) where a voice recording (or live lure) is used and which, moreover, belong to the same species (or group of species) as the one used as a lure. Obviously, it is impossible to know whether all these birds have actually been caught thanks to the lure; however, all must be assigned a "2".
- You must assign a "1" to all birds that you think have probably been attracted by the lure and for which what is specified in the previous section does not apply. Here you must include birds caught in nets where there was no lure, but which you believe were still likely to have been attracted by the lure (whether or not they belonged to the species used as the lure). Birds caught in the net where the lure is located and which, although not of the same species as the one used as the lure, you think are likely to have been attracted by the lure must also be included (e.g. Sand martins caught using Barn swallow lure). Obviously, birds that you think have probably been caught thanks to the use of food or water (e.g. artificial watering hole) should also be assigned as "1".

Both the recording of voices and songs as well as the use of water, light or food are considered lures, as long as the water (e.g. artificial troughs), light or food have been specifically placed to be used as a lure (e.g. a fig tree full of ripe figs attracts birds, but it is not a lure).

Code	Lure
0	Apparently it has not been attracted by the lure
1	Apparently it has been attracted by the lure
2	Captured in the net of the lure attracted by its own specific lure (e.g. playback of its singing)
9	Unknown

Table 3.10. Lure.

3.1.3.11 [camp]: Ringing site code

See section 3.1.1.1.

3.1.3.12 [camp]: Date

In this field you must indicate the date of the day the bird was captured (in the case of "Rehabilitation Centre" captures, you must indicate the date of the day of release). Use the format "dd/mm/yy" (e.g. "30/03/23").

3.1.3.13 [camp]: Official time

In this field you must indicate the official time of capture of the bird (never use solar time). For reasons of homogenization, the start time of the net check in which the bird is caught must be considered as the time of capture. Enter the time in "hh:mm" format (e.g. "18:30"). This field does not need to be completed by rehabilitation centres.

3.1.3.14 [camp]: Age

In this field you must indicate the age of the bird. Use the code detailed in Table 3.11.

Code	Age
0	Unknown
1	Nestling
2	Bird fully grown. It's unknown if the bird was born during the current year
3	Born during the current year
4	Born before the current year
5	Born last year
6	Born before last year
7	Born two years ago
8	Born before than two years ago
9	Born three years ago
A	Born before than three years ago
B	Born four years ago
C	Born before than four years ago
D	Born five years ago
E	Born before than five years ago
F	Born six years ago
G	Born before than six years ago

Table 3.11. Ageing codes (EURING codes).

3.1.3.15 [camp]: Sex

In this field you must indicate the sex of the bird. Use the codes detailed in Table 3.12. Leave the field blank if you don't know the sex of the bird.

Code	Sex
M	Male
F	Female

Table 3.12. Sexing codes.

3.1.3.16 [camp]: State (only mandatory for deceased birds)

In this field it is necessary to indicate the state of the bird at the time of release. It is recommended to use this code on all captures, but it is only mandatory to do so in the case of deceased birds. When it is not a deceased bird, if you do not use the rest of the codes (i.e. do not use this field for the rest of the cases) leave the field blank (keep in mind that it would be completely wrong to use the code "B0" indiscriminately for all birds that are not deceased: the condition of these birds need not always be completely good). Use the codes detailed in Table 3.13. This field does not need to be completed by rehabilitation centres.

Code		State
B0	In good shape	Apparently in good condition
B1	In good shape	Held during the previous night before releasing
F0	Old healed injury or disease	Old healed injury or in process of healing
F1	Old healed injury or disease	With a malformation (e.g. bill extremely curved)
F2	Old healed injury or disease	Ticks
F3	Old healed injury or disease	Presence of other parasites
F4	Old healed injury or disease	Scabies or fungi
F5	Old healed injury or disease	Injury to the leg caused by the ring
F9	Old healed injury or disease	Other
E0	Injury due to manipulation	Injury due to blood sample extractions
E1	Injury due to manipulation	Extraction of tissues / biopsies
E2	Injury due to manipulation	Use of wing tags or devices (geolocators, etc.)
E3	Injury due to manipulation	Feeding studies
E9	Injury due to manipulation	Other manipulation involving injuries or risk
L0	Slight wound	Tongue
L1	Slight wound	Leg (e.g. superficial wound)
L2	Slight wound	Eye
L3	Slight wound	Body
L4	Slight wound	Tail lost
L5	Slight wound	Wing
L6	Slight wound	Plumage soaked
L7	Slight wound	Hypothermia
L8	Slight wound	Sunstroke or extremely hot
L9	Slight wound	Other

G0	Serious injury (though bird is able to fly)	Internal injury (e.g. blood coming out from its mouth)
G1	Serious injury (though bird is able to fly)	Tongue (e.g. amputated)
G2	Serious injury (though bird is able to fly)	Leg (e.g. broken or dislocated). Cramp (waders)
G3	Serious injury (though bird is able to fly)	Eye (e.g. eye lost)
G4	Serious injury (though bird is able to fly)	Body (e.g. deep injury)
G9	Serious injury (though bird is able to fly)	Other
V0	Unable to fly	Serious injury to the wing (e.g. broken or dislocated)
V1	Unable to fly	Stress or shock
V2	Unable to fly	Serious injury to the body
V3	Unable to fly	Extremely bad physical condition
V4	Unable to fly	Hypothermia
V5	Unable to fly	Suffocated
V6	Unable to fly	Internal injury (e.g. takes blood from the mouth)
V9	Unable to fly	Other
X0	Dead	Wind (e.g. strangled on the net)
X1	Dead	Depredated (cat/dog)
X2	Dead	Depredated (other)
X3	Dead	Hypothermia
X4	Dead	Suffocated
X5	Dead	Ringers manipulation
X6	Dead	Action or misuse of the trap
X7	Dead	Drowned
X8	Dead	Internal injury
X9	Dead	Other

Table 3.13. State of the bird codes.

3.1.3.17 [camp]: Special mark

In this field it is necessary to indicate what type of special mark was or has been placed on the bird (indicate the code in the "Special mark coding" field; see the next section). Use the codes detailed in Table 3.14. If the bird does not have special marks, leave the field blank. Please note that this field is mandatory whether you are the one placing the special marks or if you are controlling a bird that already had them. The code starts with an "A" if the mark was put on by you and with a "C" if it was already placed. Remember that to make any special marking you need an authorization from the ICO.

Code	Mark placed by you/found already placed	Type of mark
AA	Placed by you	Ring
AC	Placed by you	Collar
AD	Placed by you	Feather bleaching
AM	Placed by you	Wing tag
AN	Placed by you	Nasal disk
AP	Placed by you	Marks or cuts on feathers
AI	Placed by you	Chest medal
AT	Placed by you	Tinctures
A2	Placed by you	More than one special mark
CA	Found already placed	Ring
CC	Found already placed	Collar
CD	Found already placed	Feather bleaching
CM	Found already placed	Wing tag
CN	Found already placed	Nasal disk
CP	Found already placed	Marks or cuts on feathers
CI	Found already placed	Chest medal
CT	Found already placed	Tinctures
C2	Found already placed	More than one special mark

Table 3.14. Special mark type codes.

3.1.3.18 [camp]: Special mark codification

In this field you must code the special mark. Unfortunately, there is no universal system for coding special marks. Each marking project often follows different coding protocols and, in many cases, uses formulas that cannot be conveniently computerized. For reasons of homogenization, regardless of what coding system you use in your work (whether it's personal or part of a larger project), when transmitting special marking information to the OCA, use only the encoding described here. If you tag a lot of birds and have been using other coding systems, contact the OCA to see how your system can be eased into the standard.

To code the marks always follow the following protocol (see the codes in Tables 3.15-3.18 and the examples described below): 1) indicate the place and, if necessary, the side¹ (always in this order) where a mark or the official ring is (keep in mind that the location of the official metal ring must also always be indicated), 2) put a colon ":", 3) indicate the colour and, only if necessary, the shape² of the mark (always in this order), 4) indicate in brackets (normal

or square) the inscription of the special mark, if present. Use square brackets for alphanumeric entries and regular brackets for barcode entries.

Other considerations to keep in mind:

- 1) If there is more than one mark per place and side, indicate first the upper mark, and then, followed by a comma “,” (and without repeating steps 1 and 2), the lower mark.
- 2) Separate the mark encoding of each site and side with a semicolon “;”.
- 3) When the same mark has more than one colour, each colour must be indicated starting from the top and separating the different colours with the "-" sign. If there is a colour band that is thicker than the others, this must be indicated by adding a "+" sign after the colour code.
- 4) If the mark inscription is not alphanumeric (letters and/or numbers), but is in the form of a barcode (sequence of thin and thick bars similar to barcode labels), use a "1" to indicate a thin bar, a "2" for a thick bar and a "0" to indicate the absence of a bar. Always start at the top of the mark.
- 5) Note that the type of special mark is given by position (see Table 3.15). For the coding of tinctures and other types of markings that cannot be conveniently coded using the system described here contact the OCA.
- 6) If you cannot conveniently code the special mark with this coding, contact the OCA to find out how to do it.

¹ It is always necessary to indicate the actual side of the mark on the bird (i.e. its right leg, its left wing...).

² The shape is only used in very specific cases, such as in certain types of wing or nasal markings.

Code	Place (type of mark)
T	Tarsus (ring)
I	Tibia (ring)
A	Wing (wing tag)
C	Neck (collar or chest medal)
N	Nose (nasal tag or disk)

Table 3.15. Mark position.

Code	Side
D	Right
E	Left

Table 3.16. Site where you place the mark.

Code	Shape
Q	Square
R	Rectangle
T	Triangle
C	Circle
H	Hexagon
O	Octagon
E	Star

Table 3.17. Shape of the mark.

Code	Colours
&	Official metal ring
ME	Metal ring
BN	White
GR	Yellow
TA	Orange
VM	Red
VI	Violet
RS	Pink
BC	Light blue
BF	Navy blue
VC	Light green
VF	Dark green
MA	Brown
GS	Grey
NE	Black

Table 3.18. Colour of the mark.

3.2. Basic standard

The basic standard incorporates all the information fields contained in the mandatory standard and adds a series of biometric variables. All the information included in this standard refers to four different sections: ringing sites, ringing sessions, captures and ringers.

3.2.1. Ringing sites

Follow the mandatory standard (see section 3.1.1.).

3.2.2. Ringing sessions

Follow the mandatory standard (see section 3.1.2.).

3.2.3. Captures

It is necessary to follow the protocol described by the mandatory standard (see section 3.1.3.) and add the variables described below. However, keep the following considerations in mind:

1. In this standard it is mandatory to record all captures, including controls on the same day (keep in mind that in the case of the mandatory standard it is optional to register the daily controls, even though it is the recommended option).
2. All the variables described in this section must be taken from all the birds, whether it is ringing or controls. The only exception is same-day controls: in this case, follow the instructions in Table 3.19.

Variable	Circumstances in which the data must be taken (daily controls)
Wing length	Not necessary to take it again
Third primary length	Not necessary to take it again
Weight	Only if the last time you took it was more than 3 hours ago
Fat score	Only if the last time you took it was more than 3 hours ago
Muscle score	Only if the last time you took it was more than 3 hours ago
Breeding state	Only if the last time you took it was more than 3 hours ago
Intensity/extension of moult	Only if the last time you took it was more than 3 hours ago
State	Always
Ringer code	Always

Table 3.19. Circumstances in which it is necessary to take each variable in the case of daily controls. *If you have time (e.g. there are few birds) and you are not in a delicate moment (e.g. breeding season) it may be useful to take these variables more frequently.*

3. When retaking the variables described in this section on the same bird (control) you should never look at the data taken previously (the data taking runs should be as independent as possible).

3.2.3.1 [camp]: Wing length (maximum chord)

The maximum chord is the maximum distance, when the wing is closed, between the elbow (proximal end of the carpus-metacarpus) and the tip of the longest primary. Note that when the wing is closed in its natural position, the "hand" (metacarpal head) and the "arm" of the wing (radius and ulna) form an acute angle (Figure 3.1). A very common mistake consists in measuring the length of the wing without keeping it closed and creating a right angle between the "hand" and the "arm" (Figure 3.1). This way of measuring the wing always gives higher values than the maximum chord (approximately 2-2.5 mm more in small passerines!). It has been observed that many ringers make this mistake, believing that by obtaining higher numbers, their measurements are closer to the maximum chord.

To measure the maximum chord correctly, the following steps must be followed scrupulously (the numbers in parentheses refer to the numbers that appear in Figure 3.2):

1. Grab the bird in the standard way (Figure 3.3).
2. Place the wing, keeping it in its natural closed position and separating it as little as possible from the body of the bird, on the ruler with stopper. Slide it up until the elbow of the wing touches the stopper of the ruler. Use the thumb of the hand holding the bird to keep the wing flat on the ruler and to ensure that the elbow of the wing is in contact with the ruler stopper (1) at all times.

3. Press with the index finger of the hand that is not holding the bird on the primary coverts in the direction of the bird's body, so that the natural curvature of the outer edge of the wing is reduced (2). Use your ring and little fingers to keep the wing from coming off the ruler (3).
4. With the thumb of the hand that is not holding the bird, straighten the longest primaries, pulling them towards the tip while pressing them against the ruler, so that you get their maximum length.
5. Read the measurement value to the nearest 0.5 mm. It is essential that at all times 1) the wing remains flat and its elbow touches the ruler stopper, 2) that the lateral pressure on the primary covers reduces as much as possible the lateral curvature of the wing, 3) that the primaries are well stretched and 4) that the wing is held in the closed position as naturally as possible: the "hand" and "arm" of the wing must form an acute angle, and all the remiges (including tertiary) must be within the rule.

When measuring the wing keep the following considerations in mind:

1. This measure should not be taken when the primaries that form the tip of the wing are growing (moult or juvenile growth) or when the tips of the feathers are broken or excessively worn.
2. Never take this measurement holding the bird upside down; in this position the movements of the bird's body are not so well controlled and, consequently, the manipulation of the wing entails more danger.
3. Do not use rulers without a stopper to take the maximum chord. While the index finger could be used as a stopper on a tail ruler, it is clear that the flesh of the finger does not form as flat and hard a surface as the metal stopper of the ruler, and it is therefore a way of increasing the possibility of error.

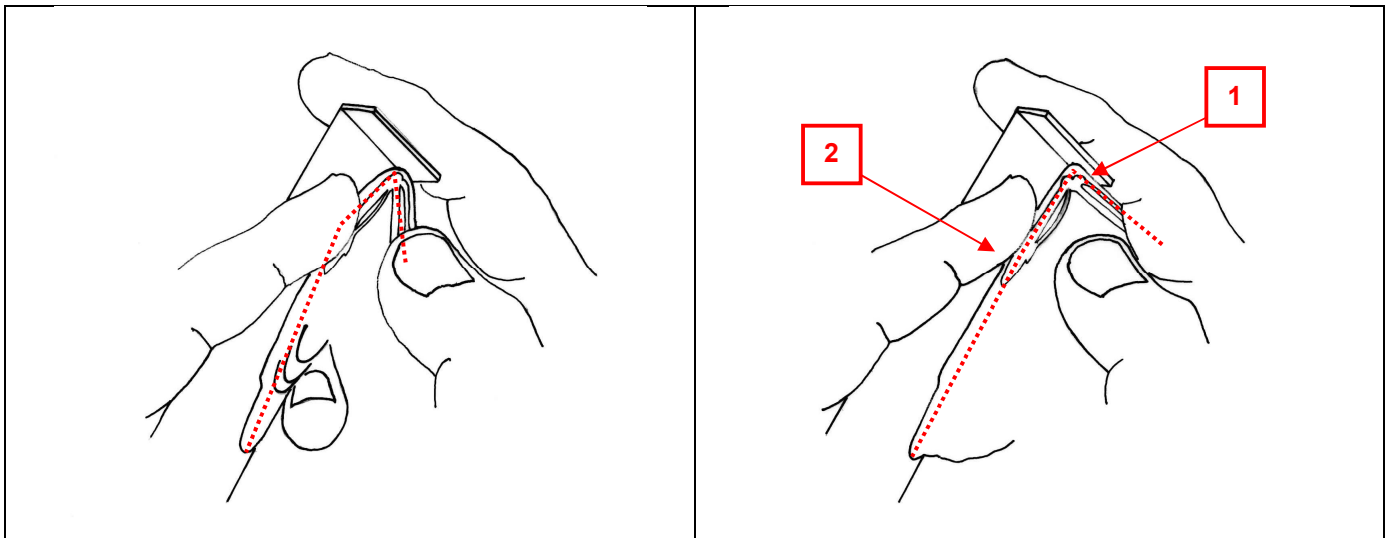


Figure 3.1. Position of the "hand" and "arm" bones of the wing when the length of the wing is measured holding it closed in the natural position (left; correct way to take the maximum chord), and when measured holding the wing open (right; incorrect way). Note that when the length of the wing is taken incorrectly, the radius is placed above the "elbow" (1) and the natural curvature of the outer edge of the wing disappears completely (2; an impossible fact if the wing is closed). This is the reason why the wing length can give markedly higher values when this type of error is made.

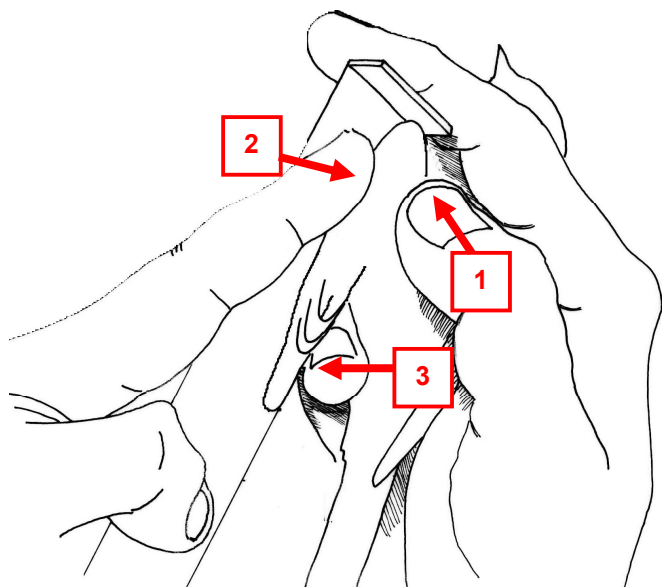


Figure 3.2. Correct way to measure wing length (maximum chord).



Figure 3.3. Standard way of grabbing a bird.

3.2.3.2 [camp]: Third primary length

The length of the third primary is the distance between the tip of the outermost third primary and its base (the point where it is inserted into the skin).

To measure the third primary correctly, you must follow the following steps (the numbers in parentheses refer to the numbers that appear in Figure 3.4):

1. Grab the bird in the standard way (Figure 3.3).
2. Grasp the wing between the elbow and the base of the primaries using the thumb and forefinger of the hand holding the bird and keeping the outer primaries slightly apart (1).
3. Insert a ruler (without a stopper) between the second and third primary (counting from the outside) until it touches the skin of the base of the primaries (2). The base of the primaries is a well-defined and easy-to-locate point - do not apply more pressure than necessary to ensure that the ruler touches this point, or you could damage the base of the feathers. Make sure that the ruler does not get stuck with the primary covers, and especially that it does not rest at the base of the outermost primary cover instead of touching the base of the second and third primaries.
4. Straighten the third primary by pulling it towards the tip while flattening it against the ruler, so that its maximum length is obtained (3). Don't pull too hard, as it could tear the feather off.
5. Read the measurement value to the nearest 0.5 mm. Make sure that the ruler always touches the base of the primary and that the third primary is straight and stretched.

¹ It is necessary to use a ruler without a stopper, flush at 0, with a thickness of 0.5 mm.

When taking this measure, the following considerations must be taken into account:

1. This measure should not be taken when the outermost third primary is growing (moulting or juvenile growth) or when the tip is broken or excessively worn.
2. Avoid taking this measurement by holding the bird upside down; in this position the movements of the bird's body are not so well controlled and, consequently, the manipulation of the wing entails more danger.
3. Do not use nail rules. It is well known that nail rules damage the membranes of the outer primaries and the rachis of the primary coverts. In small birds – with very little space between the bases of the second and third primaries – the excessive thickness of the nail (1.4 mm) can damage the feather bases (as Lars Svensson says, apply pressure with a metal nail of 30mm thick between a person's fingers in order to measure their finger length doesn't seem like it should be comfortable at best! (Svensson, L. 1992. *Identification Guide to European Passerines*. Stockholm). Thin (up to 0.5 mm thick) rulers (without a stopper) allow measuring the length of the third primary without separating the membranes of the primaries or damaging the primary covers, while their smaller thickness prevents the bases of the second and third primary beyond what would be acceptable.

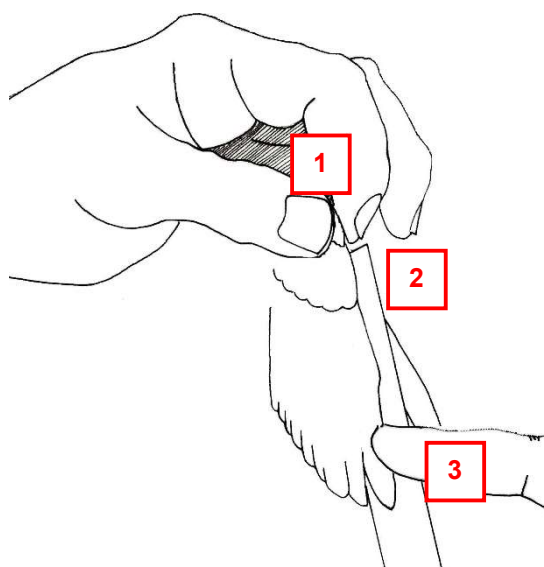


Figure 3.4. Correct way to measure the third primary.

3.2.3.3 [camp]: Weight

Record the weight to the accuracy detailed in Table 3.20. Keep in mind, however, that the accuracy of weight recording will depend on the scale used. It is necessary to use scales that match the type of birds that are captured or to use scales of different capacities and resolutions.

Ranges	accuracy
0-50	0,1
50-100	0,5
100-300	1,0
300-1.000	5,0
1.000-10.000	50,0

Table 3.20. Recommended minimum accuracy according to different weight ranges (in grams).

When it comes to weighing birds, there are two main options: use spring scales (dynamometers) or electronic scales. Spring scales are highly recommended for their good quality/price ratio and for their robustness and ease of use. Electronic scales are a more expensive option and require greater care, both in terms of use and maintenance. In prolonged campaigns and in those situations where we have a stable, well-conditioned ringing site, electronic scales are the best option, as they allow the birds to be weighed more quickly.

In any case, when weighing a bird, the following considerations must be taken into account:

1. Read the instructions on your scale - you will avoid many mistakes.
2. Always remember to subtract the weight of the cone or paper envelope when using a spring scale that does not have a tare option. If you use an electronic scale, remember to tare it whenever necessary.
3. Check what tare capacity your scale has. Not taking into account the tare capacity of the scales is one of the most common and important sources of weighing error. All scales have a tare limit: the weight of the container we use to put the birds on the scale cannot exceed the tare capacity of the scale. Otherwise, the weights we get will be completely wrong. Fortunately, spring scales don't tend to cause major upsets (nor do they have great tare facilities). Unfortunately, however, it is common to see calibration errors among users of electronic scales.
4. All scales must be calibrated regularly.
5. Wind affects all scales, and especially electronic scales (the flat and relatively large surface on which birds are weighed is extremely sensitive to wind). Always weigh the birds out of the wind (e.g. by placing the scale inside a box).
6. The position of the scale is very important. In the case of electronic scales, be careful to place them on completely flat surfaces. If you use a spring scale, always hold it by the hook or ring, never by the tube.

3.2.3.4 [camp]: Fat score

This field allows you to code the amount of fat reserves that the bird has. To conveniently estimate fat, follow these steps:

1. Place the bird with its back resting on the palm of your hand.

2. Pull its head back and slightly separate its neck by holding its beak between thumb and forefinger. In this way, the wishbone space is conveniently exposed.
3. With the hand that is not holding the bird, spread the legs to the sides (not back or up, as the fat deposits could be moved).
4. Estimate the score corresponding to the wishbone and abdominal regions separately following the codes described in Figure 3.5, then average it and round it to a whole number. Remember that fat has a yellowish coloration while flesh is reddish. It is important to have good light conditions to be able to appreciate fat deposits.


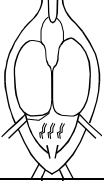
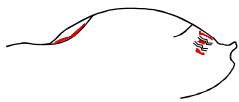
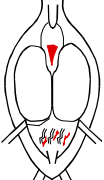
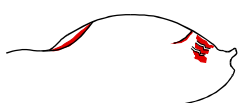
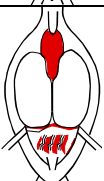

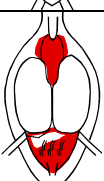
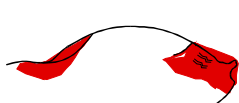
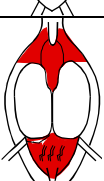
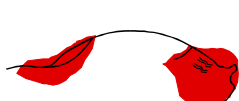
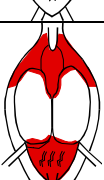

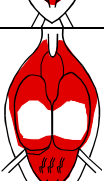
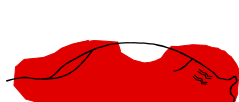
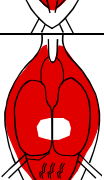

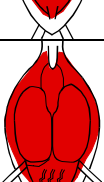
			Wishbone depression	Abdomen
0			No fat/barest trace, very narrow stripe	No fat
1			About half of the area is covered with fat	Trace, stripes smaller than intestinal loops
2			Area completely covered / deeply concave shape	Slips of visceral fat, area between intestinal loops completely filled
3			Moderate fat reserves cover ends of interclavicles concave	The fat forms a continuous thin plate (part of the liver and intestines still visible)
4			Filled up to distal portion of interclavicles	Conspicuously bulging (liver sometimes visible)
5			Convex bulge, just covering flight muscles	Extreme convex bulge, increasing thickness
6				Fat covering the top and bottom flight muscles
7				3/4 of the flight muscles covered
8				Flight muscles not visible and fully covered
9			Unknown	

Figure 3.5. Fat scores.

3.2.3.5 [camp]: Muscle score

This field allows you to code the size of the pectoral muscle. Use the scores detailed in Figure 3.6. The muscle can be measured by visual inspection (recommended option) or by passing the tip of the thumb over the sternum. Avoid using this option whenever possible, as excessive pressure on the breast can be dangerous for the bird.

Keep in mind that when the bird has a lot of fat (more than a code 5), determining the muscle may not be feasible. If you cannot estimate it with sufficient certainty, use the code "9" (unknown).

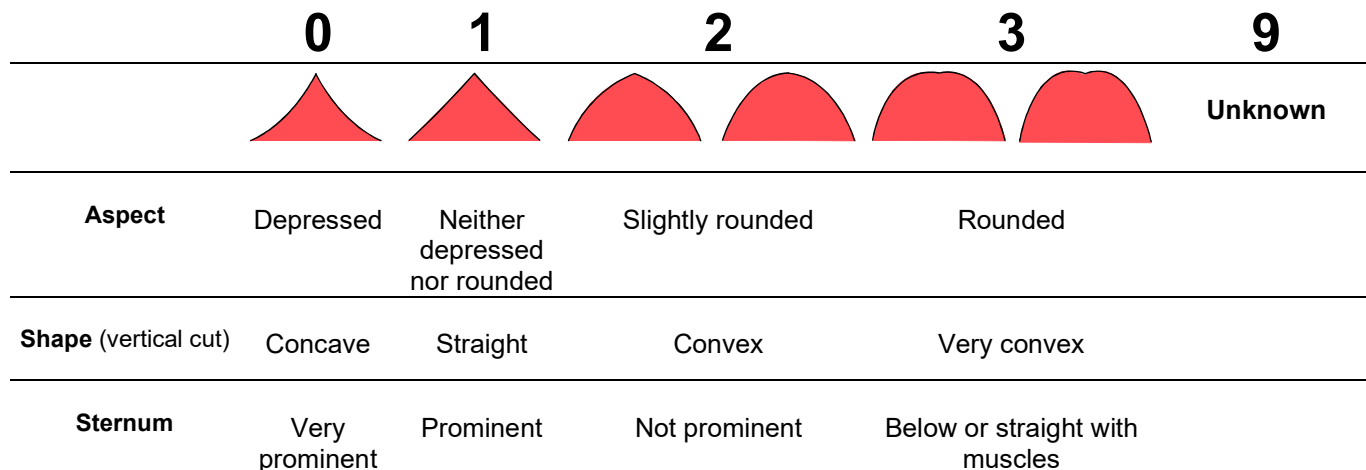


Figure 3.6. Pectoral muscle coding. The drawings represent a vertical cut of the pectoral area.

3.2.3.6 [camp]: Breeding status

This field allows you to indicate the breeding status of the bird. Use the coding detailed in Table 3.21, taking into account the following considerations:

1. Except for code "7" (which refers to the cloacal protuberance), the rest of the codes refer to the degree of development of the brood patch.
2. Code "6" ("Signs of having an egg") takes preference over the rest of the codes. In other words, whatever the state of the brood patch, whenever a bird shows signs of carrying an egg it should be assigned the code "6".
3. If a male has a cloacal protuberance and has also developed a brood patch, enter the brood patch code.
4. Code "7" refers only to a well-developed cloacal protuberance. It is understood as such a large, bulb-shaped protuberance with a centre wider than or as wide as the base. Note that the code "0" only indicates that the bird has no brood patch (it says nothing about the protuberance). Therefore, it must be taken into account that this coding only allows the identification of birds that have a cloacal protuberance, but not those that do not.
5. Do not confuse the "nest patch" of juvenile birds (ventral area without feathers that the juveniles of many species of birds have when they leave the nest) with a brood patch. In this field, the state of the "nest patch" of the juveniles must not be indicated.
6. Don't leave the field blank. If you have not determined breeding status, use code "9" to indicate that it is unknown.

Code	Description
0	No brood patch present (nor evidence of having an egg)
1	Without feathers in the ventral area but with smooth and dark red skin
2	Evident vascularization, some wrinkles present and some fluid is shown under the skin; skin pale pink
3	Vascularization extreme with many thick wrinkles and with much fluid under the skin; colour pale pink. This is the maximum stage of development of the brood patch
4	Vascularization and fluid under the skin mostly gone. Skin largely dry in appearance and with many contracted thin and dry wrinkles
5	Vascularization, fluid and most of the wrinkles have disappeared. Ventral feathers starting to grow
6	The bird shows clear signs of carrying an egg: abdominal area extremely enlarged
7	Noticeable cloacal protuberance (base narrower than or equal to the centre)
9	Unknown

Table 3.21. Breeding State codes.

3.2.3.7 [camp]: Moulting intensity - summer

This field allows you to indicate the intensity of the post-juvenile/post-nuptial moult and, in the case of juvenile birds, it also allows you to collect some information about their degree of development (code "6"). Use the coding detailed in Table 3.22.

This field only needs to be filled in between May 1 and December 15. During this period, however, it is important to always look at the moulting intensity of all birds. Keep in mind that species such as the long-tailed tit *Aegithalos caudatus* can start the post breeding moult at the end of May! If you do not check at the moulting status of a bird, use the code "9". Do not assign the code "0" to a bird that you assume has not started moulting when in fact you have not checked!

"Summer moult" means the post-juvenile/post-breeding moult of the current year. For example, during the summer of 2023 the summer moult that is coded is the one that can take place in the summer/autumn of 2023, not the one in 2022!

Do not confuse the post-juvenile moult with the growth of juvenile feathers. When leaving the nest, juvenile birds of many species have the ventral area and sides of the body (under the armpits) without feathers; later, they grow feathers in these areas, but this is not a moult and therefore should not be taken into account when determining the number of feathers that are moulting (i.e. growing)! Note that it is not uncommon for juvenile feather growth and the onset of post-juvenile moult to overlap. Remember that the post-juvenile moult often starts on the sides of the chest or in the middle of the back.

Code	Moult intensity
0	Moult has not been initiated
1	<20 feathers growing
2	<1/3 of body feathers in moult and without flight feathers in moult
3	>1/3 of all the feathers growing or flight feathers growing
4	Primaries in complete active moult
5	Moult finished
6	Juvenile primaries still growing
7	No feathers growing but unknown whether the bird has not initiated moult or finished it
9	Unknown

Table 3.22. Moult intensity codes.

Notes:

- "Flight feathers" are understood to mean the tail feathers and remiges (tertiary, secondary and primary). All non-flight feathers (body feathers, wing coverts, etc.) are considered to belong to the "body".
- "Complete moult sequence" means a moult that has been initiated by the innermost primary during the moult period being coded (post-juvenile/post-breeding or pre-breeding) and from there has progressed towards on the outside of the wing feather by feather (i.e. in strict descending sequence).
- Codes 1-4 are designed in such a way that, if there is more than one that applies to the same bird, you must always assign the highest one (e.g. you must always assign a code "4" to a bird that moults primaries following the full moult sequence, regardless of whether codes "1", "2" or "3" also apply to it).
- Code "6" (growing youth primaries) has priority over the rest of the codes (e.g. if a bird has started the post-juvenile moult, but still has juvenile primaries growing, the indicated code is "6"). This code refers to juveniles who still have some growing juvenile primaries. Do not confuse this with the growth of feathers that are moulting.
- It should be noted that, regardless of its age, as long as a bird is actively moulting primaries following the typical sequence of complete moult, it will need to be assigned the code "4". Also, regardless of its age, if the bird has a primary moult in any other way (e.g. an eccentric moult) it will need to be assigned the code "3".
- In some species, when the birds are not in active moult, it is difficult to know whether the moult has already finished or has not started (e.g. the genera *Hippolais* and *Acrocephalus*...). In such cases do not try to go beyond what you can see: you have the option of using the code "8" ("Not in active moult. It is unknown if they have not started or if they have finished").

3.2.3.8 [camp]: Moult intensity - winter

This field allows you to indicate the intensity of the prebreeding moult. Use the coding detailed in Table 3.22.

This field only needs to be filled in between September 1 and May 31. During this period, however, it is important to always look at the moulting intensity of all birds. Bear in mind that species such as the Penduline tit *Remiz pendulinus* may start prebreeding moulting in early autumn, while the Cisticola *Cisticola juncidis* may still be moulting well into spring! If you don't check at a bird's moulting status use code "9", don't code "0" for a bird you assume hasn't started moulting when in fact you haven't checked! "Winter moult" means the prebreeding moult that can take place between September 1 and May 30. For example, during the winter of 2022-2023, the prebreeding moult that is coded is the one that can take place between the autumn/winter of 2022 and the spring of 2023.

It should be noted that the prebreeding moult is much more difficult to detect than the post-juvenile/post-breeding moult. In fact, it is often only apparent when there are growing feathers. Use code "8" whenever you are not sure (which is quite common) whether the prebreeding moult has not started or has already finished.

3.2.3.9 [camp]: Moult extension - summer

This field allows you to indicate the post-juvenile/post-breeding moult progression status (i.e. how much of the bird's plumage has already been moulted, this includes feathers that are growing or that have finished to grow during the corresponding moult).

This field only needs to be filled in between May 1 and December 15. During this period, however, it is important to always check at the moulting extent of all birds. "Summer moult" means the post-juvenile/post-breeding moult of the current year. For example, during the summer of 2023 the summer moult that is coded is the one that can take place in the summer/autumn of 2023, not the one in 2022!

The assignment of the extension code varies depending on whether the birds are in a typical complete moult¹ or a partial moult¹. If the moult is complete, follow the coding detailed in Table 3.23. According to this coding, if the bird has, for example, 7 moulted primaries (including, of course, those that are growing), its extension code would be "4". If the bird does a partial moult, the code must be assigned according to the diagram in Figure 3.7.

In some species it is very difficult to determine the extent of moult (e.g. members of the genera *Hippolais* and *Acrocephalus*...). Do not assign extension codes by deducing them from what would be usual for the species: if you cannot correctly determine a bird's moult extension, assign the code "9". It is better to use this code often (even always, in the case of species in which you do not have enough experience or when it is practically impossible to determine) than to put wrong or deduced codes.

¹ "Complete moult" means a moult that has been initiated by the innermost primary during the moult period being coded (post-juvenile/post-breeding or prebreeding) and, from here, has progressed towards the outside of the wing feather by feather (i.e. in strict descending sequence). "Partial moult" means any other type of moult.

Code	Number of primaries moulted
0	0
1	1
2	2-3
3	4-6
4	7-8
5	9-10
9	Unknown

Table 3.23. Extension moult codes for birds that do a complete moult.

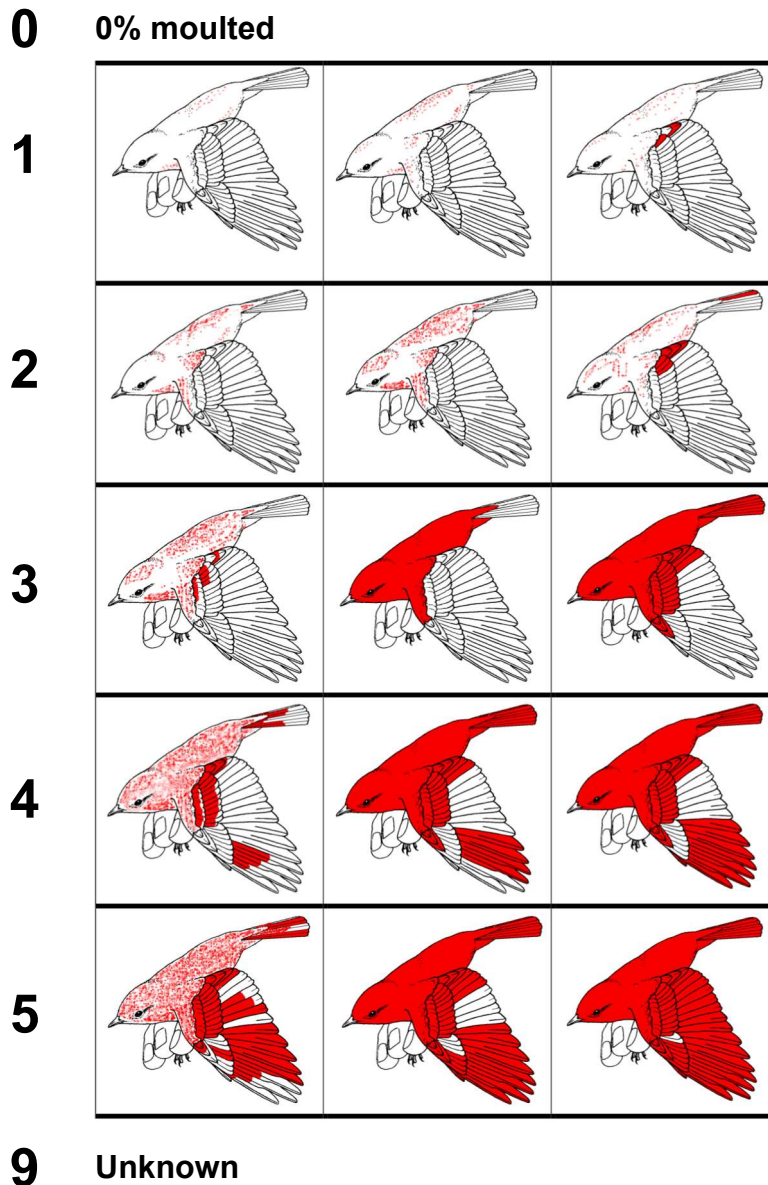


Figure 3.7. Extension moult codes for birds that do a partial moult. Use the code "0" to indicate no feathers have been moulted and "9" when you do not know its extension.

3.2.3.10 [camp]: Moult extension - winter

This field allows you to indicate the progress status of the pre-breeding moult (i.e. the part of the bird's plumage that has already been moulted, this includes feathers that are growing or have already finished growing during the relevant moult).

This field only needs to be filled in between September 1 and May 31. During this period, however, it is important to always look at the moulting extension of all birds. "Winter moult" means the prebreeding moult that can take place between September 1 and May 30. For example, during the winter of 2022-2023, the prebreeding moult that is coded is the one that can take place between the autumn/winter of 2022 and the spring of 2023.

The assignment of the extension code varies depending on whether the birds are in a typical full moult¹ or a partial moult¹. If the moult is complete, follow the coding detailed in Table 3.23, while if it is partial, assign a code according to the diagram in Figure 3.7.

¹ "Complete moult" means a moult that has been initiated by the innermost primary during the moult period being coded (post-juvenile/post-breeding or prebreeding) and, from here, has progressed towards the outside of the wing feather by feather (i.e. in strict descending sequence). "Partial moult" means any other type of moult.

3.2.3.11 [camp]: State

In this field you must indicate the state of the bird at the time of release. Use the codes detailed in Table 3.14. Unlike the mandatory standard, in this standard it is necessary to use the coding in its entire extent (i.e. not only for the deceases). Do not use the code "B0" as default. Use this code only when you have checked that the bird is really well and no other code corresponds to it; otherwise we would artificially increase the number of birds that are in "good conditions".

If there is more than one code that applies to the same bird, assign the code that determines the most severe condition (usually the one found further down in Table 3.13). If you forgot to rate the condition of a bird, leave the field blank.

3.2.3.12 [camp]: Ringer's code

In this field you must enter the code of the person who measured the bird. Use the same codes assigned to you in the Annual Bird Report of Catalonia. If you do not have a code assigned, code your name following the following protocol. The coding system is based on the first and last name, and is made up of four digits. The code for each observer is constructed using the initials of the first and last names - for example, Joan Carles Fortuny i Torras would be coded as "JFTA". The fourth digit is reserved for cases of repetition; if it is not known whether they exist or if there are none, the letter "A" must be used. When the repetitions are known, each observer must be assigned a different letter, following alphabetical order. If one of the observer's last names is unknown, use the character "?" in the appropriate place - for example, Joan Font would be coded as "JF?A". All codes must always consist of four digits and must be unique (logically, you cannot use the same code for different people).

3.2.4. Ringers

The fields related to the ringer (person who takes the measurements) are detailed below. Remember that the same ringer code cannot be used to identify two different people.

3.2.4.1 [camp]: Ringer's code

See section 3.2.3.12.

3.2.4.2 [camp]: Ringer's name

In this field you must indicate the name of the person who measured the bird.

3.2.4.3 [camp]: Ringer's first surname

In this field you must indicate the first surname of the person who measured the bird.

3.2.4.4 [camp]: Ringer's second surname

In this field you must indicate the second surname of the person who measured the bird.

3.3. Extended standard

The extended standard incorporates all the fields of information contained in the mandatory and basic standards, and a series of variables that allow each ringing session to be described in much more detail. The information to be taken is set out below, grouped into four main sections: ringing sites, ringing sessions, captures and ringers.

3.3.1. Ringing sites

Follow the mandatory standard (see section 3.1.1).

3.3.2. Ringing sessions

It includes the same variables as the mandatory standard (see section 3.1.2), and the following fields are added, grouped in three different sections (trapping subzones, meteorology and use of lures):

3.3.2.1. Information about the subzones

Information on trapping subzones is subdivided into 13 different variables. These variables make it possible to describe in detail what each subzone is like, which capture method has been used and what the trapping schedule has been. Keep in mind that it is very important to record information on all subzones used on each ringing session, and not just those where birds have been captured.

3.3.2.1.1 [camp]: Subzone

This field is used to identify different trapping sub-units within the same ringing station/site. You can use up to four digits (letters and numbers) to identify each trap zone or unit. A subzone can consist of a single net or a set of nets or other traps, but may also identify different natural nests or nest boxes. What is not possible is to create a subzone where different trapping methods are used. If you use mist nets, it is most common to subdivide the ringing area so that each mist net or battery of mist nets forms a single subzone. In the ICO monitoring programs (SYLVIA and MIGRACIÓ), each mist net identifies a different subzone (e.g. subzones 1,2,3,4...).

3.3.2.1.2 [camp]: Capture method

In this field it is necessary to indicate the method used to capture birds in each subzone. Use the codes detailed in Table 3.9. It should be noted that different capture methods cannot be mixed in the same subzone.

If you divide the ringing site into different subzones and determine the capture method used in each of them in the ringing session section of the field sheet, you do not need to indicate on the capture sheet which method was used to capture each bird: it is sufficient to indicate in which subzone it was captured. When the data is computerized with the NouBio, once the data is entered in the "Subzone" field, the "Capture method" field is automatically filled in with the code that has been assigned to this subzone in the corresponding section at the ringing sessions. This saves time in the data collection and computerization processes.

3.3.2.1.3 [camp]: Number of traps

In this field it is necessary to indicate the number of traps that have been used in each subzone (the type of trap will be indicated by what has been put in the previous field).

3.3.2.1.4 [camp]: Net meters (only if you used mist nets)

In this field, you must indicate the total net meters used in each subzone.

3.3.2.1.5 [camp]: Start time (subzone)

In this field it is necessary to indicate the time (official time) when bird trapping in the subzone began. If the mist nets have been left open all night (option not recommended) the time "00:00" must always be entered as the start time. You do not need to fill in this field if it matches the schedule detailed in the "Schedule" section (section 3.1.2.3).

3.3.2.1.6 [camp]: End time (subzone)

In this field it is necessary to indicate the time (official time) in which bird trapping in the subzone has ended. If the mist nets are left open all night (option not recommended) the time "23:59" must always be entered as the end time. You do not need to fill in this field if it matches the schedule detailed in the "Schedule" section (section 3.1.2.4).

3.3.2.1.7 [camp]: Interruption time (subzone)

In this field it is necessary to indicate the time (official time) when bird trapping in the subzone was temporarily suspended. This field should only be used if there has been a period of interruption during trapping. You do not need to fill in this field if it matches the schedule detailed in the "Schedule" section (section 3.1.2.5).

3.3.2.1.8 [camp]: Restart time (subzone)

In this field it is necessary to indicate the time (official time) when trapping was restarted after a period of interruption. This field should only be used if there has been a period of interruption of trapping. You do not need to fill in this field if it matches the schedule detailed in the "Schedule" section (section 3.1.2.6).

3.3.2.1.9 [camp]: Habitat of the subzone (1)

This field is used to describe the predominant habitat of the trapping subzone. The area that is less than 20 m from any trap (or nest) that makes up a sub-zone is considered a trapping subzone. Use the codes detailed in Table 3.2.

3.3.2.1.10 [camp]: Habitat of the subzone (2)

This field is used to complement the previous field when describing the habitat of the trapping subzone. The area that is less than 20 m from any trap (or nest) that makes up a sub-zone is considered a trapping sub-zone. Use this field only if the previous field is insufficient to adequately describe the trapping subzone. If there are two dominant habitats, code the most dominant one in the field "Habitat of the subzone (1)".

3.3.2.1.11 [camp]: Water availability

This field is used to determine if there is water in the trapping subzone and in what condition. Use the codes detailed in Table 3.24.

Code	Water presence
0	Area without water
1	Sporadic water point: rain pond
2	Stagnant water (e.g. dam): 1-10 cm deep
3	Stagnant water: 10-30 cm deep
4	Stagnant water: 30-100 cm deep
5	Stagnant water: >100 cm deep
6	Running water (e.g. river): <20 cm deep
7	Running water: >20 cm depth
8	Spring (e.g. cistern or fount where birds can drink)
9	Unknown

Table 3.24. Trapping subzone water presence codes.

3.3.2.1.12 [camp]: Presence of fruits

This field is used to determine if there are ripe fruits in the trapping subzone and in what abundance. Use the codes detailed in Table 3.25.

Code	Presence of fruits
0	No ripe fruits
1	Some ripe fruits (<100)
2	Many ripe fruits (>100)
9	Unknown

Table 3.25. Trapping subzone ripe fruits presence codes.

3.3.2.1.13 [camp]: Plant species with fruits

This field is used to determine which plant species with mature fruits dominates the trapping subzone. Use the codes detailed in Table 3.26.

Code	Scientific name	English name
AMEOVA	Amelanchier ovalis	snowy mespilus
ARBUNE	Arbutus unedo	strawberry tree
ARCUVA	Arctostaphylos uva-ursi	bearberry
ARUITA	Arum italicum	Italian arum
ASPACU	Asparagus acutifolius	wild asparagus
BERVUL	Berberis vulgaris	barberry
BRYCRE	Bryonia cretica dioica	red bryony
CELAUS	Celtis australis	mediterranean hackberry

CORMYR	<i>Coriaria myrtifolia</i>	redoul
CORSAN	<i>Cornus sanguinea</i>	dogwood
CRAMON	<i>Crataegus monogyna</i>	common hawthorn
CYDOBL	<i>Cydonia oblonga</i>	quince
DAPGNI	<i>Daphne gnidium</i>	flax-leaved daphne
DAPLAU	<i>Daphne laureola</i>	spurge-laurel
DAPMEZ	<i>Daphne mezereum</i>	mezereum
DIOKAK	<i>Diospyros kaki</i>	oriental persimmon
FICCAR	<i>Ficus carica</i>	wild fig
FRAVES	<i>Fragaria vesca</i>	strawberry
HEDHEL	<i>Hedera helix</i>	ivy
ILEAQU	<i>Ilex aquifolium</i>	holly
JASFRU	<i>Jasminum fruticans</i>	wild jasmine
JUNCOM	<i>Juniperus communis</i>	common juniper
JUNOXY	<i>Juniperus oxycedrus</i>	cade juniper
JUNPHO	<i>Juniperus phoenicea</i>	phoenicean juniper
LAUNOB	<i>Laurus nobilis</i>	bay laurel
LIGLUC	<i>Ligustrum lucidum</i>	broad-leaf privet
LIGVUL	<i>Ligustrum vulgare</i>	wild privet
LONETR	<i>Lonicera etrusca</i>	etruscan honeysuckle
LONIMP	<i>Lonicera implexa</i>	evergreen honeysuckle
LONJAP	<i>Lonicera japonica</i>	japanese honeysuckle
LONPER	<i>Lonicera periclymenum</i>	common honeysuckle
LONPYR	<i>Lonicera pyrenaica</i>	pyrenean honeysuckle
LONSPP	<i>Lonicera sp.</i>	honeysuckle sp.
LONXYL	<i>Lonicera xylostium</i>	fly honeysuckle
MALSYL	<i>Malus sylvestris</i>	Apple tree
MESGER	<i>Mespilus germanica</i>	medlar
MYRCOM	<i>Myrtus communis</i>	common myrtle
OLEEUR	<i>Olea europaea</i>	Olive tree
OSYALB	<i>Osyris alba</i>	osyris
PHIANG	<i>Phillyrea angustifolia</i>	narrow-leaved mock privet
PHILAT	<i>Phillyrea latifolia</i>	mock privet
PISLEN	<i>Pistacia lentiscus</i>	lentisk
PISTER	<i>Pistacia terebinthus</i>	terebinth
POLMUL	<i>Polygonatum multiflorum</i>	Solomon's seal
POLODO	<i>Polygonatum odoratum</i>	angular Solomon's seal
PRUAVI	<i>Prunus avium</i>	Cherry tree
PRUDOM	<i>Prunus domestica</i>	Plum tree
PRUMAH	<i>Prunus mahaleb</i>	St Lucie cherry
PRUSPI	<i>Prunus spinosa</i>	blackthorn
PUNGRA	<i>Punica granatum</i>	Pomegranate tree
PYRCOC	<i>Pyracantha coccinea</i>	scarlet firethorn
PYRPYR	<i>Pyrus pyraster</i>	Pear tree
PYRSPI	<i>Pyrus spinosa</i>	almond-leaved pear
RHAALA	<i>Rhamnus alaternus</i>	mediterranean buckthorn
RHAALP	<i>Rhamnus alpinus</i>	alpine buckthorn
RHACAT	<i>Rhamnus catharticus</i>	common buckthorn
RHAFRA	<i>Rhamnus frangula</i>	alder buckthorn
RHALYC	<i>Rhamnus lycioides</i>	black hawthorn
RHASAX	<i>Rhamnus saxatilis</i>	Rock Buckthorn
RIBALP	<i>Ribes alpinum</i>	mountain currant
ROSAGR	<i>Rosa agrestis</i>	small-leaved sweet briar
ROSARV	<i>Rosa arvensis</i>	field rose
ROSCAN	<i>Rosa canina</i>	dog rose
ROSMIC	<i>Rosa micrantha</i>	small-flowered sweet briar
ROSPIM	<i>Rosa pimpinellifolia</i>	burnet rose
ROSPOU	<i>Rosa pouzinii</i>	Pouzin's rose
ROSRUB	<i>Rosa rubiginosa</i>	sweet briar
ROSSEM	<i>Rosa sempervirens</i>	evergreen rose
ROSSIC	<i>Rosa sicula</i>	Mediterranean rose
ROSSPP	<i>Rosa sp.</i>	Rose sp.
ROSTOM	<i>Rosa tomentosa</i>	harsh downy-rose
RUBPER	<i>Rubia peregrina</i>	wild madder
RUBCAE	<i>Rubus caesius</i>	European dewberry
RUBCAN	<i>Rubus canescens</i>	Wolly blackberry
RUBGLA	<i>Rubus glandulosi</i>	
RUBIDA	<i>Rubus idaeus</i>	raspberry
RUBSPP	<i>Rubus sp.</i>	Bramble sp.
RUBULM	<i>Rubus ulmifolius</i>	elmleaf blackberry
RUSACU	<i>Ruscus aculeatus</i>	butcher's-broom
SAMEBU	<i>Sambucus ebulus</i>	danewort
SAMNIG	<i>Sambucus nigra</i>	elderberry

SAMRAC	Sambucus racemosa	red elderberry
SMIASP	Smilax aspera	common smilax
SOLCHE	Solanum chenopodioides	whitetip nightshade
SOLDUL	Solanum dulcamara	bittersweet nightshade
SOLLUT	Solanum luteum	hairy nightshade
SOLLYC	Solanum lycopersicum	tomato
SOLNIG	Solanum nigrum	black nightshade
SOLSPP	Solanum sp.	nightshade sp.
SORARI	Sorbus aria	whitebeam
SORAUC	Sorbus aucuparia	rowan
SORDOM	Sorbus domestica	sorb tree
SORTOR	Sorbus torminalis	service tree
TAMCOM	Tamus communis	black bryony
TAXBAC	Taxus baccata	common yew
VACMYR	Vaccinium myrtillus	blueberry
VIBLAN	Viburnum lantana	wayfarer
VIBTIN	Viburnum tinus	laurustine
VISALB	Viscum album	mistletoe
VITVIN	Vitis vinifera	grape vine
ZIZJUJ	Ziziphus jujuba	jujube
XXXXXX	Unknown	
AAAAAA	Other fruits	

Table 3.26. Coding of plant species that produce fruits.

3.3.2.2. Weather information

The weather information is subdivided into 12 different variables. These variables make it possible to describe the prevailing weather conditions during the ringing day.

3.3.2.2.1 [camp]: Dominant wind strength - morning

This field is used to determine what the dominant wind force was during the morning. Use the codes detailed in Table 3.27.

Code	Wind	Description	Speed (km/h)
0	Calm	Smoke rises vertically	<1
1	Light air	Smoke drift indicates wind direction	1-5
2	Light breeze	Leaves rustle	6-11
3	Gentle breeze	Leaves constantly moving	12-19
4	Moderate breeze	Small branches begin to move	20-28
5	Fresh breeze	Small trees in leaf begin to sway	29-38
6	Strong breeze	Large branches in motion	39-49
7	High wind	Whole trees in motion	50-61
8	Gale	Some broken twigs from trees	62-74
9	Strong gale	Slight damage to homes	75-88
10	Storm	Broken or uprooted trees	89-102
11	Violent storm	Extensive damage	103-117
12	Hurricane	Catastrophic damage	>117

Table 3.27. Wind force coding.

3.3.2.2.2 [camp]: Dominant wind force - afternoon

This field is used to determine what has been the dominant force of the wind during the afternoon. Use the codes detailed in Table 3.27.

3.3.2.2.3 [camp]: Dominant wind direction - morning

This field is used to determine which has been the dominant direction of the wind during the morning. Use the codes detailed in Table 3.28.

Code	Wind direction
E	East
N	North
NE	North-east
NO	North-west
O	West
S	South
SE	South-east
SO	South-west
V	Variable

Table 3.28. Wind direction coding.

3.3.2.2.4 [camp]: Dominant wind direction - afternoon

This field is used to determine which has been the dominant direction of the wind during the afternoon. Use the codes detailed in Table 3.28.

3.3.2.2.5 [camp]: Cloudiness - morning

This field is used to determine cloudiness during the morning or if there was fog. Use the codes detailed in Table 3.29.

Code	Cloudiness
0	Cloudless
1	Mostly clear sky
2	Partly cloudy
3	Mainly cloudy
4	Cloudy
5	Fog

Table 3.29. Cloudiness coding.

3.3.2.2.6 [camp]: Cloudiness - afternoon

This field is used to determine cloudiness during the afternoon or if there was fog. Use the codes detailed in Table 3.29.

3.3.2.2.7 [camp]: Precipitation - morning

This field is used to determine what precipitation (in the form of rain or snow) has been collected during the morning. Use the codes detailed in Table 3.30.

Code	Precipitation	l/m2
0	Not at all	0
1	Negligible	<0,1
2	Weak	0,1-1
3	Moderate	2-10
4	Strong	11-49
5	Very strong	50-100
6	Storm	>100

Table 3.30. Precipitation coding.

3.3.2.2.8 [camp]: Precipitation - afternoon

This field is used to determine what precipitation (in the form of rain or snow) has been collected during the afternoon. Use the codes detailed in Table 3.30.

3.3.2.2.9 [camp]: Maximum temperature - morning

This field is used to determine the maximum temperature recorded during the morning.

3.3.2.2.10 [camp]: Maximum temperature - afternoon

This field is used to determine the maximum temperature recorded during the afternoon.

3.3.2.2.11 [camp]: Minimum temperature - morning

This field is used to determine the minimum temperature recorded during the morning.

3.3.2.2.12 [camp]: Minimum temperature - afternoon

This field is used to determine the minimum temperature recorded during the afternoon.

3.3.2.3. Information about the use of lures (only if you used mist nets)

The information on the use of lures is subdivided into 5 different variables. These variables make it possible to determine which lures have been used and when and where they have been used. Note that it is only necessary to determine which lure was used in the case you used mist nets. It is not necessary to fill in these fields if no lures have been used.

In the ICO monitoring programs (SYLVIA and MIGRATION), the use of lures is absolutely prohibited. However, this section is included in the extended standard so that ringers following this standard outside of the ICO monitoring programs can encode information regarding the use of lures.

3.3.2.3.1 [camp]: Subzone

This field is used to indicate the subzone (see 3.3.2.2.1) where the lure is located.

3.3.2.3.2 [camp]: Lure

This field is used to indicate which method of attraction has been used. Use the codes detailed in Table 3.31.

Code	Lure
E	Song recordings
L	Light
A	Water
V	Lure bird caged
M	Food
S	Other
2	More than one method
D	Unknown

Table 3.31. Coding of lure.

3.3.2.3.3 [camp]: Code of the species used as a lure

This field is used to indicate which species of bird has been used as a lure. Use the codes detailed in Appendix I.

3.3.2.3.4 [camp]: Start time (lure)

In this field it is necessary to indicate the time (official time) in which the use of the lure has started.

3.3.2.3.5 [camp]: End time (lure)

In this field it is necessary to indicate the time (official time) in which the use of the lure has finished.

3.3.3. Captures

It includes the same variables as the basic standard (see section 3.2.3), and the following is added:

3.3.3.1 [camp]: Subzone

This field is used to indicate the subzone where the bird was captured (see 3.3.2.2.1).

3.3.4. Ringers

Follow the basic standard (see section 3.2.4).

4. Sending the information

Basically, there are two types of information that must be sent to the OCA: 1) the information that forms part of the traditional annual report (i.e. that was collected in the mandatory standard), and – at the decision of the ringer – 2) the optional information (i.e. the information contained in the variables that incorporate the basic and extended standards but not the mandatory). See in the following section how to send the annual report and how to do it with the optional information in section 4.2.

4.1. Annual report

4.1.1. Content

The annual report is the set of information that must be sent to the Catalan Ringing Office (OCA). This information is subdivided into 5 different sections:

- 1) Information on the location of ringing areas
- 2) Information on ringing sessions
- 3) Captures data (ringings, controls and recoveries)
- 4) Summary of the data sent
- 5) Remaining rings available at the end of the year

The first three sections constitute the mandatory standard information (see section 3.1). The fourth section is a summary of the information contained in the annual report and, among other things, serves both the ringer and the OCA to verify that the content of the data lists are complete. Finally, the remaining rings allows the OCA to know the stock of rings that each ringer has at the beginning of the year and, in addition, helps to finish balancing the annual report.

4.1.2. Terms and periodicity of delivery

The annual report must include the information of an entire calendar year and must be sent to the OCA before January 31 of the year following the year to which the data refer. Keep in mind that each ringer or group of ringers (if desired) must make their own annual report. If you do it as a group, keep in mind that the data archived in the OCA Dataset will refer to the group and not to the people who make it up.

4.1.3. Delivery format

It is mandatory to send the annual report in digital format whenever the number of captures included in the report is greater than 100. Ringers who generate an annual report that does not exceed this number of captures can choose between sending the computerized data (recommended option) or fill the annual report papers sheets.

4.1.3.1. Paper format

To send the annual report on paper, you must fill in the following sheets:

- 1) Information sheet on the situation of the ringing areas.
- 2) Information sheet on ringing sessions.
- 3) Captures sheet.
- 4) Summary sheet.
- 5) Sheet of remaining rings.

You will find copies of all these forms and instructions for completing them on the ICO website.

4.1.3.2. Digital format

The recommended and easiest way to computerize the data is through the NouBio application, available through the ICO. If you do not use NouBio, you can send the data in any database or spreadsheet format (Excel, db4...) following the specifications detailed in section 4.1.3.2.2.

4.1.3.2.1. NouBio program (recommended option)¹

If you use NouBio, you only need to send the annual report file that the program generates automatically to the OCA, by email or by regular mail (see the program manual). This file already contains all the information about the ringing stations, the ringing sessions and the captures, as well as the remaining rings and the balance.

4.1.3.2.2. Other digital formats

If you use another ringing data management application or a database or spreadsheet (Excel, Db4...) it must include, at least, all the fields that must be sent with the annual report, and that the coding be the same or homologous (or in any case that can be transformed into the standard format when processing the data).

In total, 5 different tables must be sent to the OCA with the content and specifications detailed below. The OCA has at the disposal of ringers standard templates of all these tables in Excel and Db4. Remember that in all these tables the standard codes must always be used (see section 3.1).

4.1.3.2.2.1. Ringing station table

This table contains information on the location of the ringing stations. The table must have 7 fields with the names and characteristics detailed below. If you are using a spreadsheet, the first row of the spreadsheet must contain the field names.

Field name	Variable	Digits	Type	Content	Example
CODI	Ringing site code	4	Text	Alphanumeric	ST01
NOME	Name of the site	30	Text	Full name	Can Jordà
MUNI	Municipality	30	Text	Full name	Santa Susanna
PROV	Province	30	Text	Full name	Barcelona
PAIS	Country	30	Text	Full name	Catalunya
UTMC	UTM Coordinates	10	Text	Numeric code	2673-56783
EXTE	Ringing area extension	10	Text	Numeric code	1

4.1.3.2.2.2. Ringing sessions table

This table contains the information about the ringing sessions. The table must have 7 fields with the names and characteristics detailed below. If you are using a spreadsheet, the first row of the spreadsheet must contain the field names.

Field name	Variable	Digits	Type	Content	Example
CODI	Ringing site code	4	Text	Alphanumeric	ST01
DATA	Date	8	Date	dd/mm/aa	12/04/04
HAB1	Habitat 1	3	Text	→ Code Table 3.3	B12
HAB2	Habitat 2	3	Text	→ Code table3.3	A3
CONT	Registered controls	1	Text	→ Code table 3.4	T
METR	Meters of mist nets used	3	Numeric	Whole number	120
RECL	Lures used	1	Text	→ Code table 3.5	N

4.1.3.2.2.3. Captures table

This table contains information on captures (rings, controls, recoveries and non-ringed deaths). The table must have 19 fields with the names and characteristics detailed below. If you are using a spreadsheet, the first row of the spreadsheet must contain the field names.

Field name	Variable	Digits	Type	Content	Example
COND	Condition	1	Text	→ Code table 3.6	A
TIPU	Capture type	2	Text	→ Code table 3.7	N
REMI	Postal address code	3	Text	→ Code table3.8	ESI
MODE	Ring model	4	Text	Text	2
ANEL	Ring	10	Text	Text	L908345
ESPE	Species code	6	Text	→ Code Appendix I	MUSTR
SUBE	Subspecies code	3	Text	→ Code Appendix III	BAL
SUBZ	Subzone trapping	4	Text	Alphanumeric code	12
POLL	Number of nestlings	2	Numeric	Whole number	6
METO	Capture method	2	Text	→ Code table 3.10	X1
RECL	Lure	1	Numeric	→ Code table 3.11	0
CODI	Station code	4	Text	Alphanumeric code	ST01
DATA	Date	8	Date	dd/mm/aa	12/04/04
HORA	Time	5	time	hh:mm	10:30
EDAT	Age (EURING code)	1	Text	→ Code table 3.12	3

SEXE	Sex	1	Text	→ Code table 3.13	M
ESTA	State	2	Text	→ Code table 3.14	X1
MARC	Special mark	2	Text	→ Code table 3.15	AA
COMA	Special mark coding	50	Text	Alphanumeric code	TD:&;TE:BC

4.1.3.2.2.4. Summary table

This table contains a summary of the data included in the annual report. For each species you must give the total of: 1) ringings, 2) controls and recoveries and 3) non-ringed deceased birds. The table should have 4 fields with the names and characteristics detailed below. If you are using a spreadsheet, the first row of the spreadsheet must contain the field names.

Field name	Variable	Digits	Type	Content	Example
ESPE	Species	6	Text	→ Code Appendix I	SYLATR
NUMA	Total number of ringing	5	Numeric	Whole number	57
NUMC	Total number of controls/recoveries	5	Numeric	Whole number	15
NUMB	Total number of deceased birds not ringed	5	Numeric	Whole number	1

4.1.3.2.2.5. Remaining rings table

This table contains the information about the remaining rings. You must indicate which rings you have left and their number. The table should have 4 fields with the names and characteristics detailed below. If you are using a spreadsheet, the first row of the spreadsheet must contain the field names.

Field name	Variable	Digits	Type	Content	Example
MODE	Ring model	4	Text	→ Code table 3.9	2
ANE1	Initial ring	10	Text	Text	2908301
ANE2	Last ring	10	Text	Text	2908450
ROMA	Remaining	6	Numeric	Text	150

4.2. Sending optional information

The optional information (i.e. the information that the basic and extended standards incorporate, but not the mandatory) can only be sent to the OCA through the NouBio. If you participate in one of the ICO projects (e.g. SYLVIA) you must follow the terms of the protocol stipulated for the same projects to send the information. The rest of the data can be sent at the end of the year when the annual report is sent (see section 4.1.3.2.1). When generating the annual report file, NouBio incorporates in the export file, in addition to the mandatory data, the variables corresponding to the basic and extended standards in accordance with what has been predefined in the application.

Please note that each ringer or group of ringers (if desired) must submit their own data file. If you do it as a group, keep in mind that the data archived in the OCA Database will refer to the group and not to the people who make it up. The NouBio program allows the option of managing the data of more than one person (independent ringer) within the same database.

5. Regulations

The development of these new ringing standards has necessitated the modification of part of the Internal Regulations: specifically, section 3.6.1, which refers to the documentation that must be delivered annually to the OCA. From the year 2004 (i.e. the 2004 annual report), the documentation that makes up the ringing annual report and the processing protocol for this documentation will be established by what is specified in these *Ring Standards*.

Appendix I. Species codes

The following list is ordered alphabetically by the scientific name of the species. The taxonomic sequence used is the same as that followed by The Birds of the Western Palearctic, Concise edition (Perrins 1998) with some subsequent modifications, in accordance with the AERC (Association of European Rarities Committee), and also includes all species considered escapees from captivity and exotics that have been observed in the Catalan Countries (Clavell, J. 2002. Catàleg dels Ocells dels Països Catalans. Linx Edicions, Barcelona). The code "XXXXXX" (unknown species) is at the end of the list.

CODE	SPECIES
ACCBAD	<i>Accipiter badius</i>
ACCBRE	<i>Accipiter brevipes</i>
ACCGEN	<i>Accipiter gentilis</i>
ACCNIS	<i>Accipiter nisus</i>
ACRTRI	<i>Acridotheres tristis</i>
ACRAED	<i>Acrocephalus aedon</i>
ACRAGR	<i>Acrocephalus agricola</i>
ACRARU	<i>Acrocephalus arundinaceus</i>
ACRBRE	<i>Acrocephalus brevipennis</i>
ACRDUM	<i>Acrocephalus dumetorum</i>
ACCGRI	<i>Acrocephalus griseldis</i>
ACRMEL	<i>Acrocephalus melanopogon</i>
XXMESC	<i>Acrocephalus melanopogon</i> x <i>A.schoenobaenus</i>
ACRORI	<i>Acrocephalus orientalis</i>
ACROLA	<i>Acrocephalus paludicola</i>
ACRRIS	<i>Acrocephalus palustris</i>
ACRSCH	<i>Acrocephalus schoenobaenus</i>
ACRSCI	<i>Acrocephalus scirpaceus</i>
ACRSTE	<i>Acrocephalus stentoreus</i>
ACTHYP	<i>Actitis hypoleucos</i>
ACTMAC	<i>Actitis macularia</i>
AEGCAU	<i>Aegithalos caudatus</i>
AEGFUN	<i>Aegolius funereus</i>
AEGMON	<i>Aegyptius monachus</i>
AETCRI	<i>Aethia cristatella</i>
AGAFIS	<i>Agapornis fischeri</i>
AGAPER	<i>Agapornis personatus</i>
AGAROS	<i>Agapornis roseicollis</i>
AGEPHO	<i>Agelaius phoeniceus</i>
AIXGAL	<i>Aix galericulata</i>
AIXSPO	<i>Aix sponsa</i>
ALAALA	<i>Alaemon alaudipes</i>
ALAARV	<i>Alauda arvensis</i>
ALAGUL	<i>Alauda gulgula</i>
ALARAZ	<i>Alauda razae</i>
ALCTOR	<i>Alca torda</i>
ALCATT	<i>Alcedo atthis</i>
ALEBAR	<i>Alectoris barbara</i>
ALECHU	<i>Alectoris chukar</i>
ALEGRA	<i>Alectoris graeca</i>
ALERUF	<i>Alectoris rufa</i>
ALLALL	<i>Alle alle</i>
ALOAEG	<i>Alopochen aegyptiacus</i>
AMAFAS	<i>Amadina fasciata</i>
AMAAMA	<i>Amandava amandava</i>
AMASUB	<i>Amandava subflava</i>
AMAAES	<i>Amazona aestiva</i>
AMMCIN	<i>Ammomanes cincturus</i>
AMMDES	<i>Ammomanes deserti</i>
AMMGRI	<i>Ammoperdix griseogularis</i>
AMMHEY	<i>Ammoperdix heyi</i>
ANAACU	<i>Anas acuta</i>
ANAAME	<i>Anas americana</i>
ANABAH	<i>Anas bahamensis</i>
ANACAP	<i>Anas capensis</i>
ANACAR	<i>Anas carolinensis</i>
ANACLY	<i>Anas clypeata</i>
ANACRE	<i>Anas crecca</i>

ANACYA	<i>Anas cyanoptera</i>
ANADIS	<i>Anas discors</i>
ANAERY	<i>Anas erythrorhyncha</i>
ANAFAL	<i>Anas falcata</i>
ANAFOR	<i>Anas formosa</i>
ANAPEN	<i>Anas penelope</i>
ANAPLA	<i>Anas platyrhynchos</i>
ANAQUE	<i>Anas querquedula</i>
ANARUB	<i>Anas rubripes</i>
ANASIB	<i>Anas sibilatrix</i>
ANASMI	<i>Anas smithii</i>
ANASTR	<i>Anas strepera</i>
ANHRUF	<i>Anhinga rufa</i>
ANOMIN	<i>Anous minutus</i>
ANOSTO	<i>Anous stolidus</i>
ANSALB	<i>Anser albifrons</i>
ANSANS	<i>Anser anser</i>
ANSBRA	<i>Anser brachyrhynchus</i>
ANSCAE	<i>Anser caerulescens</i>
ANSERY	<i>Anser erythropus</i>
ANSFAB	<i>Anser fabalis</i>
ANSIND	<i>Anser indicus</i>
ANSROS	<i>Anser rossii</i>
ANTMET	<i>Anthreptes metallicus</i>
ANTPLA	<i>Anthreptes platurus</i>
ANTPAR	<i>Anthropoides paradisaea</i>
ANTVIR	<i>Anthropoides virgo</i>
ANTBER	<i>Anthus berthelotii</i>
ANTCAM	<i>Anthus campestris</i>
ANTCER	<i>Anthus cervinus</i>
ANTGOD	<i>Anthus godlewskii</i>
ANTGUS	<i>Anthus gustavi</i>
ANTHOD	<i>Anthus hodgsoni</i>
ANTPET	<i>Anthus petrosus</i>
ANTPRA	<i>Anthus pratensis</i>
ANTRIC	<i>Anthus richardi</i>
ANTRUB	<i>Anthus rubescens</i>
ANTSIM	<i>Anthus similis</i>
ANTSPI	<i>Anthus spinoletta</i>
ANTTRI	<i>Anthus trivialis</i>
APUAFF	<i>Apus affinis</i>
APUALE	<i>Apus alexandri</i>
APUAPU	<i>Apus apus</i>
APUCAF	<i>Apus caffer</i>
APUMEL	<i>Apus melba</i>
APUPAC	<i>Apus pacificus</i>
APUPAL	<i>Apus pallidus</i>
APUUNI	<i>Apus unicolor</i>
AQUADA	<i>Aquila adalberti</i>
AQUCHR	<i>Aquila chrysaetos</i>
AQUCLA	<i>Aquila clanga</i>
AQUHEL	<i>Aquila heliaca</i>
AQUNIP	<i>Aquila nipalensis</i>
AQUPOM	<i>Aquila pomarina</i>
AQURAP	<i>Aquila rapax</i>
AQUVER	<i>Aquila verreauxii</i>
ARAARA	<i>Ara ararauna</i>
ARASEV	<i>Ara severa</i>
ARAACU	<i>Aratinga acuticaudata</i>
ARAAUR	<i>Aratinga aurea</i>

ARAERY	<i>Aratinga erythrogenys</i>
ARAHOL	<i>Aratinga holochlora</i>
ARALEU	<i>Aratinga leucophthalmus</i>
ARAMIT	<i>Aratinga mitrata</i>
ARDCIN	<i>Ardea cinerea</i>
ARDGOL	<i>Ardea goliath</i>
ARDHER	<i>Ardea herodias</i>
ARDMEL	<i>Ardea melanocephala</i>
ARDPUR	<i>Ardea purpurea</i>
ARDSTU	<i>Ardeirallus sturmii</i>
ARDBAC	<i>Ardeola bacchus</i>
ARDGRA	<i>Ardeola grayii</i>
ARDRAL	<i>Ardeola ralloides</i>
ARDARA	<i>Ardeotis arabs</i>
AREINT	<i>Arenaria interpres</i>
ASICAP	<i>Asio capensis</i>
ASIFLA	<i>Asio flammeus</i>
ASiotu	<i>Asio otus</i>
ATHNOC	<i>Athene noctua</i>
AYTAFF	<i>Aythya affinis</i>
AYTCOL	<i>Aythya collaris</i>
AYTFER	<i>Aythya ferina</i>
AYTFUL	<i>Aythya fuligula</i>
AYTMAR	<i>Aythya marila</i>
AYTNYR	<i>Aythya nyroca</i>
AYTVAL	<i>Aythya valisineria</i>
BALPAV	<i>Balearica pavonina</i>
BARLON	<i>Bartramia longicauda</i>
BOMCED	<i>Bombycilla cedrorum</i>
BOMGAR	<i>Bombycilla garrulus</i>
BONBON	<i>Bonasa bonasia</i>
BOTLEN	<i>Botaurus lentiginosus</i>
BOTSTE	<i>Botaurus stellaris</i>
BRABER	<i>Branta bernicla</i>
BRACAN	<i>Branta canadensis</i>
BRALEU	<i>Branta leucopsis</i>
BRARUF	<i>Branta ruficollis</i>
BUBBUB	<i>Bubo bubo</i>
BUBIBI	<i>Bubulcus ibis</i>
BUCGIT	<i>Bucanetes githagineus</i>
BUCMON	<i>Bucanetes mongolicus</i>
BUCALB	<i>Bucephala albeola</i>
BUCCLA	<i>Bucephala clangula</i>
BUCISL	<i>Bucephala islandica</i>
BUCABY	<i>Bucorvus abyssinicus</i>
BULBUL	<i>Bulweria bulwerii</i>
BULFAL	<i>Bulweria fallax</i>
BUROED	<i>Burhinus oedicephalus</i>
BURSEN	<i>Burhinus senegalensis</i>
BUTBUT	<i>Buteo buteo</i>
BUTHEM	<i>Buteo hemilasius</i>
BUTLAG	<i>Buteo lagopus</i>
BUTLIN	<i>Buteo lineatus</i>
BUTRUF	<i>Buteo rufinus</i>
BUTSWA	<i>Buteo swainsoni</i>
BUTSTR	<i>Butorides striatus</i>
BUTVIR	<i>Butorides virescens</i>
CACOPH	<i>Cacatua ophthalmica</i>
CAIMOS	<i>Cairina moschata</i>
CALRIS	<i>Calandrella acutirostris</i>
CALBRA	<i>Calandrella brachydactyla</i>
CALCHE	<i>Calandrella cheleensis</i>
CALENS	<i>Calandrella rufescens</i>
CALLAP	<i>Calcarius lapponicus</i>
CALATA	<i>Calidris acuminata</i>
CALALB	<i>Calidris alba</i>
CALALP	<i>Calidris alpina</i>
CALBAI	<i>Calidris bairdii</i>
CALCAN	<i>Calidris canutus</i>
CALFER	<i>Calidris ferruginea</i>
CALFUS	<i>Calidris fuscicollis</i>
CALMAR	<i>Calidris maritima</i>
CALMAU	<i>Calidris mauri</i>

CALMEL	<i>Calidris melanotos</i>
CALUTA	<i>Calidris minuta</i>
CALLA	<i>Calidris minutilla</i>
CALPUS	<i>Calidris pusilla</i>
CALLIS	<i>Calidris ruficollis</i>
CALSUB	<i>Calidris subminuta</i>
CALTEM	<i>Calidris temminckii</i>
CALTEN	<i>Calidris tenuirostris</i>
CALCAL	<i>Callipepla californica</i>
CALDIO	<i>Calonectris diomedea</i>
CALEDW	<i>Calonectris edwardsii</i>
CALLEU	<i>Calonectris leucomelas</i>
CAPAEG	<i>Caprimulgus aegyptius</i>
CAPEUR	<i>Caprimulgus europaeus</i>
CAPEXI	<i>Caprimulgus eximius</i>
CAPNUB	<i>Caprimulgus nubicus</i>
CAPRUF	<i>Caprimulgus ruficollis</i>
CARCAB	<i>Carduelis cabaret</i>
CARCAN	<i>Carduelis cannabina</i>
CARCAR	<i>Carduelis carduelis</i>
CARCHL	<i>Carduelis chloris</i>
CARMEA	<i>Carduelis flammea</i>
CARRIS	<i>Carduelis flavirostris</i>
CARHOR	<i>Carduelis hornemanni</i>
CARPIN	<i>Carduelis pinus</i>
CARSPI	<i>Carduelis spinus</i>
CARYAR	<i>Carduelis yarrellii</i>
CARERY	<i>Carpodacus erythrinus</i>
CARROS	<i>Carpodacus roseus</i>
CARRUB	<i>Carpodacus rubicilla</i>
CARSYN	<i>Carpodacus synoicus</i>
CATANT	<i>Catharacta antarctica</i>
CATMAC	<i>Catharacta maccormicki</i>
CATSKU	<i>Catharacta skua</i>
CATFUS	<i>Catharus fuscescens</i>
CATGUT	<i>Catharus guttatus</i>
CATMIN	<i>Catharus minimus</i>
CATUST	<i>Catharus ustulatus</i>
CATSEM	<i>Catoptrophorus semipalmatus</i>
CENSEN	<i>Centropus senegalensis</i>
CEPGRY	<i>Cepphus grylle</i>
CERMEL	<i>Cercomela melanura</i>
CERGAL	<i>Cercotrichas galactotes</i>
CERPOD	<i>Cercotrichas podobe</i>
CERBRA	<i>Certhia brachydactyla</i>
CERFAM	<i>Certhia familiaris</i>
CERALC	<i>Ceryle alcyon</i>
CERRUD	<i>Ceryle rudis</i>
CETCET	<i>Cettia cetti</i>
CHAPEL	<i>Chaetura pelagica</i>
CHAALB	<i>Charadrius alexandrinus</i>
CHAASI	<i>Charadrius asiaticus</i>
CHADUB	<i>Charadrius dubius</i>
CHAHIA	<i>Charadrius hiaticula</i>
CHALES	<i>Charadrius leschenaultii</i>
CHAMON	<i>Charadrius mongolus</i>
CHAMOR	<i>Charadrius morinellus</i>
CHAPEC	<i>Charadrius pecuarius</i>
CHASEM	<i>Charadrius semipalmatus</i>
CHATRI	<i>Charadrius tricollaris</i>
CHAVOC	<i>Charadrius vociferus</i>
CHEJUB	<i>Chenonetta jubata</i>
CHEDUP	<i>Chersophilus duponti</i>
CHLUND	<i>Chlamydotis undulata</i>
CHLHYB	<i>Chlidonias hybrida</i>
CHLLEU	<i>Chlidonias leucopterus</i>
CHLNIG	<i>Chlidonias niger</i>
CHOGRA	<i>Chondestes grammacus</i>
CHOMIN	<i>Chordeiles minor</i>
CHRCAP	<i>Chrysococcyx caprius</i>
CHRAMH	<i>Chrysolophus amherstiae</i>
CHRPIC	<i>Chrysolophus pictus</i>
CICCIC	<i>Ciconia ciconia</i>

CICNIG	<i>Ciconia nigra</i>
CINCIN	<i>Cinclus cinclus</i>
CIRGAL	<i>Circaetus gallicus</i>
CIRAER	<i>Circus aeruginosus</i>
CIRCYA	<i>Circus cyaneus</i>
CIRMAC	<i>Circus macrourus</i>
CIRPYG	<i>Circus pygargus</i>
CISJUN	<i>Cisticola juncidis</i>
CLAGLA	<i>Clamator glandarius</i>
CLAJAC	<i>Clamator jacobinus</i>
CLAHYE	<i>Clangula hyemalis</i>
COCCOC	<i>Coccothraustes coccothraustes</i>
COCAME	<i>Coccyzus americanus</i>
COCERY	<i>Coccyzus erythrophthalmus</i>
COLAUR	<i>Colaptes auratus</i>
COLVIR	<i>Colinus virginianus</i>
COLBOL	<i>Columba bollii</i>
COLEVE	<i>Columba eversmanni</i>
COLJUN	<i>Columba junoniae</i>
COLLIV	<i>Columba livia</i>
COLOEN	<i>Columba oenas</i>
COLPAL	<i>Columba palumbus</i>
COLTRO	<i>Columba trocaz</i>
CORABY	<i>Coracias abyssinicus</i>
CORBEN	<i>Coracias benghalensis</i>
CORGAR	<i>Coracias garrulus</i>
CORALB	<i>Corvus albus</i>
CORRAX	<i>Corvus corax</i>
CORONE	<i>Corvus corone</i>
CORDAU	<i>Corvus dauuricus</i>
CORFRU	<i>Corvus frugilegus</i>
CORMON	<i>Corvus monedula</i>
CORRHI	<i>Corvus rhipidurus</i>
CORRUF	<i>Corvus ruficollis</i>
CORSPL	<i>Corvus splendens</i>
COTCOT	<i>Coturnix coturnix</i>
COTJAP	<i>Coturnix japonica</i>
CRECRE	<i>Crex crex</i>
CUCCAN	<i>Cuculus canorus</i>
CUCSAT	<i>Cuculus saturatus</i>
CURCUR	<i>Cursorius cursor</i>
CURTEM	<i>Cursorius temminckii</i>
CYAPAT	<i>Cyanoliseus patagonus</i>
CYACYA	<i>Cyanopica cyanus</i>
CYCPSI	<i>Cyclorhynchus psittacula</i>
CYGATR	<i>Cygnus atratus</i>
CYGCOL	<i>Cygnus columbianus</i>
CYGCYG	<i>Cygnus cygnus</i>
CYGOLO	<i>Cygnus olor</i>
CYPPAR	<i>Cypsiurus parvus</i>
DAPCAP	<i>Daption capense</i>
DELURB	<i>Delichon urbica</i>
DENLEU	<i>Dendrocopos leucotos</i>
DENMAJ	<i>Dendrocopos major</i>
DENMED	<i>Dendrocopos medius</i>
DENMIN	<i>Dendrocopos minor</i>
DENSYR	<i>Dendrocopos syriacus</i>
DENAUT	<i>Dendrocygna autumnalis</i>
DENBIC	<i>Dendrocygna bicolor</i>
DENJAV	<i>Dendrocygna javanica</i>
DENVID	<i>Dendrocygna viduata</i>
DENCAE	<i>Dendroica caerulescens</i>
DENCOR	<i>Dendroica coronata</i>
DENFUS	<i>Dendroica fusca</i>
DENMAG	<i>Dendroica magnolia</i>
DENPAL	<i>Dendroica palmarum</i>
DENPEN	<i>Dendroica pensylvanica</i>
DENPET	<i>Dendroica petechia</i>
DENSTR	<i>Dendroica striata</i>
DENTIG	<i>Dendroica tigrina</i>
DENVIR	<i>Dendroica virens</i>
DIOEPO	<i>Diomedea epomophora</i>
DIOEXU	<i>Diomedea exulans</i>

DOLORY	<i>Dolichonyx oryzivorus</i>
DROARD	<i>Dromas ardeola</i>
DRYMAR	<i>Dryocopus martius</i>
DUMCAR	<i>Dumetella carolinensis</i>
ECTMIG	<i>Ectopistes migratorius</i>
EGRALB	<i>Egretta alba</i>
EGRARD	<i>Egretta ardesiaca</i>
EGRCAE	<i>Egretta caerulea</i>
EGRGAR	<i>Egretta garzetta</i>
EGRGUL	<i>Egretta gularis</i>
EGRINT	<i>Egretta intermedia</i>
EGRTHU	<i>Egretta thula</i>
EGRTRI	<i>Egretta tricolor</i>
ELACAE	<i>Elanus caeruleus</i>
EMBAUR	<i>Emberiza aureola</i>
EMBBRU	<i>Emberiza bruniceps</i>
EMBBUC	<i>Emberiza buchanani</i>
EMBCAE	<i>Emberiza caesia</i>
EMBCHR	<i>Emberiza chrysophrys</i>
EMBCIA	<i>Emberiza cia</i>
EMBCIN	<i>Emberiza cineracea</i>
EMBCIO	<i>Emberiza cioides</i>
EMBCIR	<i>Emberiza cirius</i>
EMBCIT	<i>Emberiza citrinella</i>
EMBHOR	<i>Emberiza hortulana</i>
EMBLEU	<i>Emberiza leucocephalos</i>
EMBMEL	<i>Emberiza melanocephala</i>
EMBPAL	<i>Emberiza pallasi</i>
EMBPUS	<i>Emberiza pusilla</i>
EMBRUS	<i>Emberiza rustica</i>
EMBRUT	<i>Emberiza rutila</i>
EMBSCH	<i>Emberiza schoeniclus</i>
EMBSPO	<i>Emberiza spodocephala</i>
EMBSTE	<i>Emberiza stewarti</i>
EMBSTR	<i>Emberiza striolata</i>
EMBTAH	<i>Emberiza tahapisi</i>
EMPVIR	<i>Empidonax virescens</i>
EOPMIG	<i>Eophona migratoria</i>
EOPPER	<i>Eophona personata</i>
EREDUN	<i>Eremalauda dunnii</i>
EREALP	<i>Eremophila alpestris</i>
EREBIL	<i>Eremophila bilopha</i>
ERENIG	<i>Eremopterix nigriceps</i>
ERESIG	<i>Eremopterix signata</i>
ERIRUB	<i>Erithacus rubecula</i>
ESTAST	<i>Estrilda astrild</i>
ESTCAE	<i>Estrilda caerulescens</i>
ESTMEL	<i>Estrilda melpoda</i>
ESTTRO	<i>Estrilda troglodytes</i>
EUOCAN	<i>Euodice cantans</i>
EUOMAL	<i>Euodice malabarica</i>
EUPCAR	<i>Euphagus carolinensis</i>
EUPAFE	<i>Euplectes afer</i>
EUPAXI	<i>Euplectes axillaris</i>
EUPFRA	<i>Euplectes franciscanus</i>
EUPHOR	<i>Euplectes hordeaceus</i>
EUPJAC	<i>Euplectes jacksoni</i>
EUPORY	<i>Euplectes oryx</i>
FALBIA	<i>Falco biarmicus</i>
FALCHE	<i>Falco cherrug</i>
FALCOL	<i>Falco columbarius</i>
FALCON	<i>Falco concolor</i>
FALELE	<i>Falco eleonorae</i>
FALNAU	<i>Falco naumanni</i>
FALPEL	<i>Falco peregrinoides</i>
FALPER	<i>Falco peregrinus</i>
FALRUS	<i>Falco rusticolus</i>
FALSPA	<i>Falco sparverius</i>
FALSUB	<i>Falco subbuteo</i>
FALTIN	<i>Falco tinnunculus</i>
FALVES	<i>Falco vespertinus</i>
FICALB	<i>Ficedula albicollis</i>
FICHYP	<i>Ficedula hypoleuca</i>

FICPAR	<i>Ficedula parva</i>
FICSEM	<i>Ficedula semitorquata</i>
FRABIC	<i>Francolinus bicalcaratus</i>
FRAERC	<i>Francolinus erckelii</i>
FRAFRA	<i>Francolinus francolinus</i>
FRAARC	<i>Fratercula arctica</i>
FREMAG	<i>Fregata magnificens</i>
FREGRA	<i>Fregetta grallaria</i>
FRICOE	<i>Fringilla coelebs</i>
FRIMON	<i>Fringilla montifringilla</i>
FRITEY	<i>Fringilla teydea</i>
FULAME	<i>Fulica americana</i>
FULATR	<i>Fulica atra</i>
FULCRI	<i>Fulica cristata</i>
FULGLA	<i>Fulmarus glacialis</i>
GALCRI	<i>Galerida cristata</i>
XXCRTH	<i>Galerida cristata</i> x <i>Galerida theklae</i>
GALTHE	<i>Galerida theklae</i>
GALGAL	<i>Gallinago gallinago</i>
GALMED	<i>Gallinago media</i>
GALMEG	<i>Gallinago megala</i>
GALSTE	<i>Gallinago stenura</i>
GALCHL	<i>Gallinula chloropus</i>
GARGLA	<i>Garrulus glandarius</i>
GAVADA	<i>Gavia adamsii</i>
GAVARC	<i>Gavia arctica</i>
GAVIMM	<i>Gavia immer</i>
GAVSTE	<i>Gavia stellata</i>
GELNIL	<i>Gelochelidon nilotica</i>
GEOTRI	<i>Geothlypis trichas</i>
GERERE	<i>Geronticus eremita</i>
GLAMAL	<i>Glareola maldivarum</i>
GLANOR	<i>Glareola nordmanni</i>
GLAPRA	<i>Glareola pratincola</i>
GLAPAS	<i>Glaucidium passerinum</i>
GRAREL	<i>Gracula religiosa</i>
GRUCAN	<i>Grus canadensis</i>
GRUGRU	<i>Grus grus</i>
GRULEU	<i>Grus leucogeranus</i>
GUICAE	<i>Guiraca caerulea</i>
GYPBAR	<i>Gypaetus barbatus</i>
GYPBEN	<i>Gyps bengalensis</i>
GYPFUL	<i>Gyps fulvus</i>
GYPRUE	<i>Gyps rueppellii</i>
HAEMEA	<i>Haematopus meadewaldoi</i>
HAEOST	<i>Haematopus ostralegus</i>
HALALA	<i>Halcyon leucocephala</i>
HALSMY	<i>Halcyon smyrnensis</i>
HALALB	<i>Haliaeetus albicilla</i>
HALHUS	<i>Haliaeetus leucoryphus</i>
HALVOC	<i>Haliaeetus vocifer</i>
HESVES	<i>Hesperiphona vespertina</i>
HETBRE	<i>Heteroscelus brevipes</i>
HIEFAS	<i>Hieraetus fasciatus</i>
HIEPEN	<i>Hieraetus pennatus</i>
HIMHIM	<i>Himantopus himantopus</i>
HIPCAL	<i>Hippolais caligata</i>
HIPICT	<i>Hippolais icterina</i>
HIPLAN	<i>Hippolais languida</i>
HIPOLI	<i>Hippolais olivetorum</i>
HIPPAL	<i>Hippolais pallida</i>
HIPPOL	<i>Hippolais polyglotta</i>
HIRCAU	<i>Hirundapus caudacutus</i>
HIRAET	<i>Hirundo aethiops</i>
HIRDAU	<i>Hirundo daurica</i>
HIRPYR	<i>Hirundo pyrrhonota</i>
HIRRUS	<i>Hirundo rustica</i>
XXRUUR	<i>Hirundo rustica</i> x <i>Delichon urbica</i>
HISHIS	<i>Histrionicus histrionicus</i>
HYDPEL	<i>Hydrobates pelagicus</i>
HYLMUS	<i>Hylocichla mustelina</i>
HYPAMP	<i>Hypocolius ampelinus</i>
ICTGAL	<i>Icterus galbula</i>

ICTWAG	<i>Icterus wagleri</i>
IRAGUT	<i>Irania gutturalis</i>
IXOEUR	<i>Ixobrychus eurhythmus</i>
IXOEXI	<i>Ixobrychus exilis</i>
IXOMIN	<i>Ixobrychus minutus</i>
JUNHYE	<i>Junco hyemalis</i>
JYNTOR	<i>Jynx torquilla</i>
KETZEY	<i>Ketupa zeylonensis</i>
LAGSEN	<i>Lagonosticta senegala</i>
LAGLAG	<i>Lagopus lagopus</i>
LAGMUT	<i>Lagopus mutus</i>
LAMCAU	<i>Lamprotnornis caudatus</i>
LAMCHA	<i>Lamprotnornis chalybaeus</i>
LAMPUR	<i>Lamprotnornis purpureus</i>
LANCOL	<i>Lanius collurio</i>
LANCRI	<i>Lanius cristatus</i>
LANTOR	<i>Lanius excubitor</i>
LANIUS	<i>Lanius excubitorius</i>
LANISA	<i>Lanius isabellinus</i>
LANMER	<i>Lanius meridionalis</i>
LANMIN	<i>Lanius minor</i>
LANNUB	<i>Lanius nubicus</i>
LANSCH	<i>Lanius schach</i>
LANSEN	<i>Lanius senator</i>
LOPCUC	<i>Laphodytes cucullatus</i>
LARARG	<i>Larus argentatus</i>
LARARM	<i>Larus arcticus</i>
LARATR	<i>Larus atricilla</i>
LARAUD	<i>Larus audouinii</i>
LARBRU	<i>Larus brunnicephalus</i>
LARCAC	<i>Larus cachinnans</i>
LARCAN	<i>Larus canus</i>
LARCIR	<i>Larus cirrocephalus</i>
LARDEL	<i>Larus delawarensis</i>
LARFUS	<i>Larus fuscus</i>
LARGEN	<i>Larus genei</i>
LARENS	<i>Larus glaucescens</i>
LARDES	<i>Larus glaucoides</i>
LARHEM	<i>Larus hemprichii</i>
LARHYP	<i>Larus hyperboreus</i>
LARICH	<i>Larus ichthyaetus</i>
LARLEU	<i>Larus leucophthalmus</i>
LARMAR	<i>Larus marinus</i>
LARMEL	<i>Larus melanocephalus</i>
LARMIN	<i>Larus minutus</i>
LARPHI	<i>Larus philadelphia</i>
LARPIP	<i>Larus pipixcan</i>
LARRID	<i>Larus ridibundus</i>
LARSAB	<i>Larus sabini</i>
LEILUT	<i>Leiothrix lutea</i>
LEPCRU	<i>Leptoptilos crumeniferus</i>
LIMFAL	<i>Limicola falcinellus</i>
LIMFLA	<i>Limnocorax flavirostris</i>
LIMGRI	<i>Limnodromus griseus</i>
LIMSCO	<i>Limnodromus scolopaceus</i>
LIMHAE	<i>Limosa haemastica</i>
LIMLAP	<i>Limosa lapponica</i>
LIMLIM	<i>Limosa limosa</i>
LOCCER	<i>Locustella certhiola</i>
LOCFAS	<i>Locustella fasciolata</i>
LOCFLU	<i>Locustella fluviatilis</i>
LOCLAN	<i>Locustella lanceolata</i>
LOCLUS	<i>Locustella luscinioides</i>
LOCNAE	<i>Locustella naevia</i>
LONATR	<i>Lonchura atricapilla</i>
LONBIC	<i>Lonchura bicolor</i>
LONMAJ	<i>Lonchura maja</i>
LONICA	<i>Lonchura malabarica</i>
LONCCA	<i>Lonchura malacca</i>
LONPUN	<i>Lonchura punctulata</i>
LONSTR	<i>Lonchura striata</i>
LOPNYC	<i>Lophura nycthemera</i>
LORGAR	<i>Lorius garrulus</i>

LOXCUR	<i>Loxia curvirostra</i>
LOXLEU	<i>Loxia leucoptera</i>
LOXPYT	<i>Loxia pytyopsittacus</i>
LOXSCO	<i>Loxia scotica</i>
LULARB	<i>Lullula arborea</i>
LUNCIR	<i>Lunda cirrhata</i>
LUSCAL	<i>Luscinia calliope</i>
LUSCYA	<i>Luscinia cyane</i>
LUSLUS	<i>Luscinia luscinia</i>
LUSMEG	<i>Luscinia megarhynchos</i>
LUSSVE	<i>Luscinia svecica</i>
LYMMIN	<i>Lymnocyptes minimus</i>
MACGIG	<i>Macronectes giganteus</i>
MACHAL	<i>Macronectes halli</i>
MARANG	<i>Marmaronetta angustirostris</i>
MELFUS	<i>Melanitta fusca</i>
MELNIG	<i>Melanitta nigra</i>
MELPER	<i>Melanitta perspicillata</i>
MELBIM	<i>Melanocorypha bimaculata</i>
MELCAL	<i>Melanocorypha calandra</i>
MELLEU	<i>Melanocorypha leucoptera</i>
MELYEL	<i>Melanocorypha yeltoniensis</i>
MELGAL	<i>Meleagris gallopavo</i>
MELMET	<i>Melierax metabates</i>
MELUND	<i>Melopsittacus undulatus</i>
MERALB	<i>Mergus albellus</i>
MERMER	<i>Mergus merganser</i>
MERSER	<i>Mergus serrator</i>
MERAPI	<i>Merops apiaster</i>
MERORI	<i>Merops orientalis</i>
MERPER	<i>Merops persicus</i>
MICGAB	<i>Micronisus gabar</i>
MICHIM	<i>Micropalama himantopus</i>
MILCAL	<i>Miliaria calandra</i>
MILMIG	<i>Milvus migrans</i>
MILMIL	<i>Milvus milvus</i>
MIMPOL	<i>Mimus polyglottos</i>
MIRCOR	<i>Mirafra cordofanica</i>
MNIVAR	<i>Mniotilta varia</i>
MOLATE	<i>Molothrus ater</i>
MONSAX	<i>Monticola saxatilis</i>
MONSOL	<i>Monticola solitarius</i>
MONNIV	<i>Montifringilla nivalis</i>
MOTAGU	<i>Motacilla aguimp</i>
MOTALB	<i>Motacilla alba</i>
MOTCIN	<i>Motacilla cinerea</i>
MOTCIT	<i>Motacilla citreola</i>
MOTFLA	<i>Motacilla flava</i>
MUSDAU	<i>Muscicapa dauurica</i>
MUSSTR	<i>Muscicapa striata</i>
MYCIBI	<i>Mycteria ibis</i>
MYIMON	<i>Myiopsitta monachus</i>
MYRAET	<i>Myrmecocichla aethiops</i>
NANNEN	<i>Nandayus nenday</i>
NECMON	<i>Necrosyrtes monachus</i>
NECOSE	<i>Nectarinia osea</i>
NEOPER	<i>Neophron percnopterus</i>
NEODEN	<i>Neotis denhami</i>
NEONUB	<i>Neotis nuba</i>
NETRUF	<i>Netta rufina</i>
NETCOR	<i>Nettapus coromandelianus</i>
NUCCAR	<i>Nucifraga caryocatactes</i>
NUMARQ	<i>Numenius arquata</i>
NUMBOR	<i>Numenius borealis</i>
NUMMIN	<i>Numenius minutus</i>
NUMPHA	<i>Numenius phaeopus</i>
NUMTEN	<i>Numenius tenuirostris</i>
NUMMEL	<i>Numida meleagris</i>
NYCSCA	<i>Nyctea scandiaca</i>
NYCNYC	<i>Nycticorax nycticorax</i>
NYMHOL	<i>Nymphicus hollandicus</i>
OCEOCE	<i>Oceanites oceanicus</i>
OCECAS	<i>Oceanodroma castro</i>

OCELEU	<i>Oceanodroma leucorhoa</i>
OCEMON	<i>Oceanodroma monorhis</i>
OENCAP	<i>Oena capensis</i>
OENALB	<i>Oenanthe alboniger</i>
OENCYP	<i>Oenanthe cyprica</i>
OENDES	<i>Oenanthe deserti</i>
OENFIN	<i>Oenanthe finschii</i>
OENHIS	<i>Oenanthe hispanica</i>
OENISA	<i>Oenanthe isabellina</i>
OENYGA	<i>Oenanthe leucopyga</i>
OENURA	<i>Oenanthe leucura</i>
OENLUG	<i>Oenanthe lugens</i>
OENMOE	<i>Oenanthe moesta</i>
OENMON	<i>Oenanthe monacha</i>
OENOEN	<i>Oenanthe oenanthe</i>
OENPIC	<i>Oenanthe picata</i>
OENPLE	<i>Oenanthe pleschanka</i>
OENXAN	<i>Oenanthe xanthopyrna</i>
ONYTRI	<i>Onychognathus tristramii</i>
ORIORI	<i>Oriolus oriolus</i>
OTITAR	<i>Otis tarda</i>
OTUBRU	<i>Otus brucei</i>
OTUSCO	<i>Otus scops</i>
OXYJAM	<i>Oxyura jamaicensis</i>
OXYLEU	<i>Oxyura leucocephala</i>
PADORY	<i>Padda oryzivora</i>
PAGEBU	<i>Pagophila eburnea</i>
PANHAL	<i>Pandion haliaetus</i>
PANBIA	<i>Panurus biarmicus</i>
PARCOR	<i>Paroaria coronata</i>
PARAME	<i>Parula americana</i>
PARATE	<i>Parus ater</i>
PARCAE	<i>Parus caeruleus</i>
PARCIN	<i>Parus cinctus</i>
PARCRI	<i>Parus cristatus</i>
PARCYA	<i>Parus cyanus</i>
PARLUG	<i>Parus lugubris</i>
PARMAJ	<i>Parus major</i>
PARMON	<i>Parus montanus</i>
PARPAL	<i>Parus palustris</i>
PASDOM	<i>Passer domesticus</i>
XXDOHI	<i>Passer domesticus x Passer hispaniolensis</i>
XXDOMO	<i>Passer domesticus x Passer montanus</i>
PASHIS	<i>Passer hispaniolensis</i>
PASIAG	<i>Passer iagoensis</i>
PASLUT	<i>Passer luteus</i>
PASMOA	<i>Passer moabiticus</i>
PASMON	<i>Passer montanus</i>
PASSIM	<i>Passer simplex</i>
PASAMO	<i>Passerina amoena</i>
PASCIR	<i>Passerina ciris</i>
PASCYA	<i>Passerina cyanea</i>
PELMAR	<i>Pelagodroma marina</i>
PELCRI	<i>Pelecanus crispus</i>
PELONO	<i>Pelecanus onocrotalus</i>
PELRUF	<i>Pelecanus rufescens</i>
PERDAU	<i>Perdix dauurica</i>
PERPER	<i>Perdix perdix</i>
PERINF	<i>Perisoreus infaustus</i>
PERAPI	<i>Pernis apivorus</i>
PERPTI	<i>Pernis ptilorhynchus</i>
PETBRA	<i>Petronia brachydactyla</i>
PETPET	<i>Petronia petronia</i>
PETXAN	<i>Petronia xanthocollis</i>
PHAAET	<i>Phaethon aethereus</i>
PHAAFR	<i>Phalacrocorax africanus</i>
PHAARI	<i>Phalacrocorax aristotelis</i>
PHAAUR	<i>Phalacrocorax auritus</i>
PHACAR	<i>Phalacrocorax carbo</i>
PHANIG	<i>Phalacrocorax nigrogularis</i>
PHAPYG	<i>Phalacrocorax pygmeus</i>
PHAFUL	<i>Phalaropus fulicarius</i>
PHALOB	<i>Phalaropus lobatus</i>

PHATRI	<i>Phalaropus tricolor</i>
PHACOL	<i>Phasianus colchicus</i>
PHELUD	<i>Pheucticus ludovicianus</i>
PHIPUG	<i>Philomachus pugnax</i>
PHONIG	<i>Phoebastria nigripes</i>
PHOMIN	<i>Phoenicopus minor</i>
PHORUB	<i>Phoenicopus ruber</i>
PHOTER	<i>Phoenicurus erythrogaster</i>
PHOTUS	<i>Phoenicurus erythronotus</i>
PHOMOU	<i>Phoenicurus moussieri</i>
PHOOCH	<i>Phoenicurus ochruros</i>
PHOPHO	<i>Phoenicurus phoenicurus</i>
PHYBON	<i>Phylloscopus bonelli</i>
PHYBOR	<i>Phylloscopus borealis</i>
PHYCAN	<i>Phylloscopus canariensis</i>
PHYCOL	<i>Phylloscopus collybita</i>
PHYCOR	<i>Phylloscopus coronatus</i>
PHYFUS	<i>Phylloscopus fuscatus</i>
PHYHUM	<i>Phylloscopus humei</i>
PHYIBE	<i>Phylloscopus ibericus</i>
PHYINO	<i>Phylloscopus inornatus</i>
PHYNEG	<i>Phylloscopus neglectus</i>
PHYORI	<i>Phylloscopus orientalis</i>
PHYPRO	<i>Phylloscopus proregulus</i>
PHYSCH	<i>Phylloscopus schwarzi</i>
PHYSIB	<i>Phylloscopus sibilatrix</i>
PHYSIN	<i>Phylloscopus sindianus</i>
PHYSUB	<i>Phylloscopus subviridis</i>
PHYDES	<i>Phylloscopus trochiloides</i>
PHYLUS	<i>Phylloscopus trochilus</i>
PICPIC	<i>Pica pica</i>
PICTRI	<i>Picoides tridactylus</i>
PICCAN	<i>Picus canus</i>
PICVAI	<i>Picus vaillanti</i>
PICVIR	<i>Picus viridis</i>
PINIMP	<i>Pinguinus impennis</i>
PINENU	<i>Pinicola enucleator</i>
PIOMAX	<i>Pionus maximiliani</i>
PIPERY	<i>Pipilo erythrophthalmus</i>
PIROLI	<i>Piranga olivacea</i>
PIRRUB	<i>Piranga rubra</i>
PLAALB	<i>Platalea alba</i>
PLALEU	<i>Platalea leucorodia</i>
PLENIV	<i>Plectrophenax nivalis</i>
PLEGAM	<i>Plectropterus gambensis</i>
PLECHI	<i>Plegadis chihi</i>
PLEFAL	<i>Plegadis falcinellus</i>
PLOCUC	<i>Ploceus cucullatus</i>
PLOGAL	<i>Ploceus galbula</i>
PLOINT	<i>Ploceus intermedius</i>
PLOMAN	<i>Ploceus manyar</i>
PLOMEL	<i>Ploceus melanocephalus</i>
PLOVIT	<i>Ploceus vitellinus</i>
PLUAPR	<i>Pluvialis apricaria</i>
PLUDOM	<i>Pluvialis dominica</i>
PLUFUL	<i>Pluvialis fulva</i>
PLUSQU	<i>Pluvialis squatarola</i>
PLUAEG	<i>Pluvianus aegyptius</i>
PODAUR	<i>Podiceps auritus</i>
PODCRI	<i>Podiceps cristatus</i>
PODGRI	<i>Podiceps grisegena</i>
PODMAJ	<i>Podiceps major</i>
PODNIG	<i>Podiceps nigricollis</i>
PODPOD	<i>Podilymbus podiceps</i>
POEGUT	<i>Poephila guttata</i>
POISEN	<i>Poicephalus senegalus</i>
POLSTE	<i>Polysticta stelleri</i>
PORRIO	<i>Porphyrio porphyrio</i>
PORALL	<i>Porphyryla alleni</i>
PORICA	<i>Porphyryla martinica</i>
PORCAR	<i>Porzana carolina</i>
PORLIS	<i>Porzana marginalis</i>
PORPAR	<i>Porzana parva</i>

PORANA	<i>Porzana porzana</i>
PORPUS	<i>Porzana pusilla</i>
PRIGRA	<i>Prinia gracilis</i>
PRUATR	<i>Prunella atrogularis</i>
PRUCOL	<i>Prunella collaris</i>
PRUMOD	<i>Prunella modularis</i>
PRUMON	<i>Prunella montanella</i>
PRUOCU	<i>Prunella ocularis</i>
PSIKRA	<i>Psittacula krameri</i>
PSIERI	<i>Psittacus erithacus</i>
PTEALC	<i>Pterocles alchata</i>
PTECOR	<i>Pterocles coronatus</i>
PTEEXU	<i>Pterocles exustus</i>
PTELIC	<i>Pterocles lichtensteinii</i>
PTEORI	<i>Pterocles orientalis</i>
PTESEN	<i>Pterocles senegallus</i>
PTEFEA	<i>Pterodroma feae</i>
PTEHAS	<i>Pterodroma hasitata</i>
PTEINC	<i>Pterodroma incerta</i>
PTEMAD	<i>Pterodroma madeira</i>
PTEMOL	<i>Pterodroma mollis</i>
PTENEG	<i>Pterodroma neglecta</i>
PTYFUL	<i>Ptyonoprogne fuligula</i>
PTYRUP	<i>Ptyonoprogne rupestris</i>
PUFASS	<i>Puffinus assimilis</i>
PUFCAR	<i>Puffinus carneipes</i>
PUFGRA	<i>Puffinus gravis</i>
PUFGRI	<i>Puffinus griseus</i>
PUFLHE	<i>Puffinus lherminieri</i>
PUFMAU	<i>Puffinus mauretanicus</i>
PUFPAC	<i>Puffinus pacificus</i>
PUFPUF	<i>Puffinus puffinus</i>
PUFYEL	<i>Puffinus yelkouan</i>
PYCBAR	<i>Pycnonotus barbatus</i>
PYCCAF	<i>Pycnonotus cafer</i>
PYCLEU	<i>Pycnonotus leucogenys</i>
PYCXAN	<i>Pycnonotus xanthopygus</i>
PYRGRA	<i>Pyrrhonorax graculus</i>
PYRRAX	<i>Pyrrhonorax pyrrhonorax</i>
PYRERY	<i>Pyrrhula erythaca</i>
PYRMUR	<i>Pyrrhula murina</i>
PYRULA	<i>Pyrrhula pyrrhula</i>
QUEQUE	<i>Quelea quelea</i>
QUIQUI	<i>Quiscalus quiscula</i>
RALAAQU	<i>Rallus aquaticus</i>
RAMCLO	<i>Ramphocoris clotbey</i>
RECAVO	<i>Recurvirostra avosetta</i>
REGCAL	<i>Regulus calendula</i>
REGIGN	<i>Regulus ignicapilla</i>
REGREG	<i>Regulus regulus</i>
REGSAT	<i>Regulus satrapa</i>
REGTEN	<i>Regulus teneriffae</i>
REMPEN	<i>Remiz pendulinus</i>
RHOSAN	<i>Rhodopechys sanguinea</i>
RHOBS	<i>Rhodospiza obsoleta</i>
RHOROS	<i>Rhodostethia rosea</i>
RIPCIN	<i>Riparia cincta</i>
RIPPAL	<i>Riparia paludicola</i>
RIPRIP	<i>Riparia riparia</i>
XXRIUR	<i>Riparia riparia x Delichon urbica</i>
RISTR	<i>Rissa tridactyla</i>
ROSBEN	<i>Rostratula benghalensis</i>
RYNFLA	<i>Rynchops flavirostris</i>
SARCAL	<i>Sarcogyps calvus</i>
SAXCAP	<i>Saxicola caprata</i>
SAXDAC	<i>Saxicola dacotiae</i>
SAXRUB	<i>Saxicola rubetra</i>
SAXTOR	<i>Saxicola torquata</i>
SAYPHO	<i>Sayornis phoebe</i>
SCORUS	<i>Scolopax rusticola</i>
SCOINQ	<i>Scotocerca inquieta</i>
SEIAUR	<i>Seiurus auroparvulus</i>
SEINOV	<i>Seiurus noveboracensis</i>

SERCAN	<i>Serinus canaria</i>
SERCIT	<i>Serinus citrinella</i>
SERCOR	<i>Serinus corsicana</i>
SERDOR	<i>Serinus dorsostriatus</i>
SERMOZ	<i>Serinus mozambicus</i>
SERPUS	<i>Serinus pusillus</i>
SERSER	<i>Serinus serinus</i>
SERSYR	<i>Serinus syriacus</i>
SETRUT	<i>Setophaga ruticilla</i>
SITCAN	<i>Sitta canadensis</i>
SITEUR	<i>Sitta europaea</i>
SITKRU	<i>Sitta krueperi</i>
SITLED	<i>Sitta ledanti</i>
SITNEU	<i>Sitta neumayer</i>
SITTEP	<i>Sitta tephronota</i>
SITWHI	<i>Sitta whiteheadi</i>
SOMFIS	<i>Somateria fischeri</i>
SOMMOL	<i>Somateria mollissima</i>
SOMSPE	<i>Somateria spectabilis</i>
SPHVAR	<i>Sphyrapicus varius</i>
SPICLA	<i>Spiloptila clamans</i>
SPIAME	<i>Spiza americana</i>
SPIPUS	<i>Spizella pusilla</i>
STESEA	<i>Steganura paradisea</i>
STELON	<i>Stercorarius longicaudus</i>
STECUS	<i>Stercorarius parasiticus</i>
STEPOM	<i>Stercorarius pomarinus</i>
STEALB	<i>Sterna albifrons</i>
STEALE	<i>Sterna aleutica</i>
STEANA	<i>Sterna anaethetus</i>
STEBEN	<i>Sterna bengalensis</i>
STEBER	<i>Sterna bergii</i>
STECAS	<i>Sterna caspia</i>
STEDOU	<i>Sterna dougallii</i>
STEELE	<i>Sterna elegans</i>
STEFOR	<i>Sterna forsteri</i>
STEFUS	<i>Sterna fuscata</i>
STEHIR	<i>Sterna hirundo</i>
STEMAX	<i>Sterna maxima</i>
STEAEA	<i>Sterna paradisaea</i>
STEREP	<i>Sterna repressa</i>
STESAN	<i>Sterna sandvicensis</i>
STESAU	<i>Sterna saundersi</i>
STRCHI	<i>Streptopelia chinensis</i>
STRDEC	<i>Streptopelia decaocto</i>
STRORI	<i>Streptopelia orientalis</i>
STRSEN	<i>Streptopelia senegalensis</i>
STRTUR	<i>Streptopelia turtur</i>
STRROS	<i>Streptopelia roseogrisea</i>
STRALU	<i>Strix aluco</i>
STRBUT	<i>Strix butleri</i>
STRNEB	<i>Strix nebulosa</i>
STRURA	<i>Strix uralensis</i>
STRCAM	<i>Struthio camelus</i>
STUMAG	<i>Sturnella magna</i>
STUMAL	<i>Sturnus malabaricus</i>
STUROS	<i>Sturnus roseus</i>
STUSIN	<i>Sturnus sinensis</i>
STUSTU	<i>Sturnus sturninus</i>
STUUNI	<i>Sturnus unicolor</i>
XXUNVU	<i>Sturnus unicolor</i> x <i>Sturnus vulgaris</i>
STUVUL	<i>Sturnus vulgaris</i>
VULUNI	<i>Sturnus vulgaris/unicolor</i>
SULBAS	<i>Sula bassana</i>
SULCAP	<i>Sula capensis</i>
SULDAC	<i>Sula dactylatra</i>
SULLEU	<i>Sula leucogaster</i>
SULSUL	<i>Sula sula</i>
SURULU	<i>Surnia ulula</i>
SYLATR	<i>Sylvia atricapilla</i>
SYLBOR	<i>Sylvia borin</i>
SYLCAN	<i>Sylvia cantillans</i>
SYLCOM	<i>Sylvia communis</i>

SYLCON	<i>Sylvia conspicillata</i>
SYLCUR	<i>Sylvia curruca</i>
SYLOLA	<i>Sylvia deserticola</i>
SYLHOR	<i>Sylvia hortensis</i>
SYLLEU	<i>Sylvia leucomelaena</i>
SYLALA	<i>Sylvia melanocephala</i>
SYLRAX	<i>Sylvia melanothorax</i>
SYLMYS	<i>Sylvia mystacea</i>
SYLNAN	<i>Sylvia nana</i>
SYLNIS	<i>Sylvia nisoria</i>
SYLRUE	<i>Sylvia rueppelli</i>
SYLSAR	<i>Sylvia sarda</i>
SYLUND	<i>Sylvia undata</i>
SYNANT	<i>Synthliboramphus antiquus</i>
SYRREE	<i>Syrnaticus reevesii</i>
SYRPAR	<i>Syrnaticus paradoxus</i>
TACRUF	<i>Tachybaptus ruficollis</i>
TACBIC	<i>Tachycineta bicolor</i>
TADFER	<i>Tadorna ferruginea</i>
TADRAD	<i>Tadorna radjah</i>
TADTAD	<i>Tadorna tadorna</i>
TARCYA	<i>Tarsiger cyanurus</i>
TCHSEN	<i>Tchagra senegala</i>
TERECA	<i>Terathopius ecaudatus</i>
TETMLO	<i>Tetrao mlokosiewiczzi</i>
TETRIX	<i>Tetrao tetrix</i>
TETURO	<i>Tetrao urogallus</i>
TETCAS	<i>Tetraogallus caspius</i>
TETCAU	<i>Tetraogallus caucasicus</i>
TETRAX	<i>Tetrax tetrax</i>
THACAU	<i>Thalassarche cauta</i>
THACHL	<i>Thalassarche chlororhynchos</i>
THACHR	<i>Thalassarche chrysostoma</i>
THAMEL	<i>Thalassarche melanophris</i>
THRAET	<i>Threskiornis aethiopicus</i>
THRMOL	<i>Threskiornis molucca</i>
TICMUR	<i>Tichodroma muraria</i>
TORTRA	<i>Torgos tracheliotus</i>
TOXRUF	<i>Toxostoma rufum</i>
TRIERY	<i>Tringa erythropus</i>
TRIFLA	<i>Tringa flavipes</i>
TRIGLA	<i>Tringa glareola</i>
TRIMEL	<i>Tringa melanoleuca</i>
TRINEB	<i>Tringa nebularia</i>
TRIOCH	<i>Tringa ochropus</i>
TRISOL	<i>Tringa solitaria</i>
TRISTA	<i>Tringa stagnatilis</i>
TRITOT	<i>Tringa totanus</i>
TROTRO	<i>Troglodytes troglodytes</i>
TRYSUB	<i>Tryngites subruficollis</i>
TURALT	<i>Turdoides altirostris</i>
TURCAU	<i>Turdoides caudatus</i>
TURFUL	<i>Turdoides fulvus</i>
TURSQU	<i>Turdoides squamiceps</i>
TURILI	<i>Turdus iliacus</i>
TURMER	<i>Turdus merula</i>
TURMIG	<i>Turdus migratorius</i>
TURNAU	<i>Turdus naumanni</i>
TUROBS	<i>Turdus obscurus</i>
TURPHI	<i>Turdus philomelos</i>
TURPIL	<i>Turdus pilaris</i>
TURRUF	<i>Turdus ruficollis</i>
TURTOR	<i>Turdus torquatus</i>
TURUNI	<i>Turdus unicolor</i>
TURVIS	<i>Turdus viscivorus</i>
TURSYL	<i>Turnix sylvatica</i>
TYTALB	<i>Tyto alba</i>
UPUEPO	<i>Upupa epops</i>
URABEN	<i>Uraeginthus bengalus</i>
URASIB	<i>Uragus sibiricus</i>
URIAAL	<i>Uria aalge</i>
URILOM	<i>Uria lomvia</i>
UROMAC	<i>Urocolius macrourus</i>

VANGRE	<i>Vanellus gregarius</i>
VANIND	<i>Vanellus indicus</i>
VANLEU	<i>Vanellus leucurus</i>
VANSPI	<i>Vanellus spinosus</i>
VANTEC	<i>Vanellus tectus</i>
VANVAN	<i>Vanellus vanellus</i>
VERBAC	<i>Vermivora bachmanii</i>
VERCHR	<i>Vermivora chrysoptera</i>
VERPER	<i>Vermivora peregrina</i>
VIDCHA	<i>Vidua chalybeata</i>
VIDMAC	<i>Vidua macroura</i>
VIRFLA	<i>Vireo flavifrons</i>
VIROLI	<i>Vireo olivaceus</i>
VIRPHI	<i>Vireo philadelphicus</i>
WILCAN	<i>Wilsonia canadensis</i>
WILCIT	<i>Wilsonia citrina</i>
WILPUS	<i>Wilsonia pusilla</i>
XANXAN	<i>Xanthocephalus xanthocephalus</i>
XENCIN	<i>Xenus cinereus</i>
ZONALB	<i>Zonotrichia albicollis</i>
ZONGEO	<i>Zonotrichia georgiana</i>
ZONILI	<i>Zonotrichia iliaca</i>
ZONLEU	<i>Zonotrichia leucophrys</i>
ZONMEL	<i>Zonotrichia melodia</i>
ZOODAU	<i>Zoothera dauma</i>
ZOONAE	<i>Zoothera naevia</i>
ZOOSIB	<i>Zoothera sibirica</i>
XXXXXX	Unknown

Appendix II. Ring model recommended for each species

The following list of species is arranged alphabetically. When there is more than one suitable ring model for the same species, the preferred option is listed first, and the second option is listed next, separated by a comma. The symbol “(t)” after the model indicates that it is recommended to ring the bird at the tibiotarsus (tibia) and the symbol “(o)” indicates that you need to oval the ring. See the characteristics of the different ring models in Table 3.8.

Espècie	Model	Espècie	Model
<i>Acanthis cabaret</i>	B	<i>Asio otus</i>	R,S
<i>Accipiter gentilis</i>	T	<i>Athene noctua</i>	L
<i>Accipiter nisus</i>	L♀,J♂	<i>Aythya ferina</i>	S
<i>Acrocephalus agricola</i>	B	<i>Aythya fuligula</i>	P,R
<i>Acrocephalus arundinaceus</i>	E	<i>Aythya nyroca</i>	L,P
<i>Acrocephalus dumetorum</i>	B	<i>Botaurus stellaris</i>	S
<i>Acrocephalus melanopogon</i>	B	<i>Bubo bubo</i>	V,X
<i>Acrocephalus paludicola</i>	B	<i>Bubulcus ibis</i>	P,R
<i>Acrocephalus palustris</i>	B	<i>Bucanetes githagineus</i>	B,C
<i>Acrocephalus schoenobaenus</i>	B	<i>Burhinus oedicephalus</i>	P,R
<i>Acrocephalus scirpaceus</i>	B	<i>Buteo buteo</i>	S,T
<i>Actitis hypoleucos</i>	EX(t)	<i>Calandrella brachydactyla</i>	B,C
<i>Aegithalos caudatus</i>	A	<i>Calidris alba</i>	EX(t)
<i>Aegolius funereus</i>	L	<i>Calidris alpina</i>	EX(t)
<i>Aegyptius monachus</i>	Z	<i>Calidris canutus</i>	GX
<i>Alauda arvensis</i>	C	<i>Calidris ferruginea</i>	EX(t)
<i>Alaudala rufescens</i>	B	<i>Calidris maritima</i>	EX(t)
<i>Alca torda</i>	P(t)	<i>Calidris melanotos</i>	EX(t)
<i>Alcedo atthis</i>	EA(t)	<i>Calidris minuta</i>	EX(t)
<i>Alectoris rufa</i>	R♀,S♂	<i>Calidris minutilla</i>	EX(t)
<i>Anas acuta</i>	R,P	<i>Calidris pugnax</i>	J(t)♀,GX(t)♂
<i>Anas crecca</i>	L	<i>Calidris temminckii</i>	EX(t)
<i>Anas platyrhynchos</i>	S(t)	<i>Calonectris diomedea</i>	P,R
<i>Anser anser</i>	V(t),X(t)	<i>Caprimulgus europaeus</i>	FA
<i>Anser fabalis</i>	V♀,X♂	<i>Caprimulgus ruficollis</i>	FA
<i>Anthus campestris</i>	C,D	<i>Carduelis carduelis</i>	B
<i>Anthus cervinus</i>	B	<i>Carduelis citrinella</i>	B
<i>Anthus petrosus</i>	B	<i>Carpodacus erythrinus</i>	B
<i>Anthus pratensis</i>	B	<i>Cecropis daurica</i>	B
<i>Anthus richardi</i>	B,C	<i>Cercotrichas galactotes</i>	C
<i>Anthus spinoletta</i>	B	<i>Certhia brachydactyla</i>	A
<i>Anthus trivialis</i>	B	<i>Certhia familiaris</i>	A
<i>Apus apus</i>	FA	<i>Cettia cetti</i>	B
<i>Apus pallidus</i>	FA	<i>Charadrius alexandrinus</i>	EX(t)
<i>Aquila chrysaetos</i>	X,Z	<i>Charadrius dubius</i>	EX(t)
<i>Aquila fasciata</i>	X♀,V♂	<i>Charadrius hiaticula</i>	EX(t)
<i>Ardea alba</i>	T(t),V(t)	<i>Charadrius morinellus</i>	HX
<i>Ardea cinerea</i>	T(t)	<i>Chersophilus duponti</i>	E
<i>Ardea purpurea</i>	V(t),T(t)	<i>Chlidonias hybrida</i>	GX
<i>Ardeola ralloides</i>	L	<i>Chlidonias leucopterus</i>	GX
<i>Arenaria interpres</i>	GX(t)	<i>Chlidonias niger</i>	DX
<i>Asio flammeus</i>	P,R,S	<i>Chloris chloris</i>	D,C

Espècie	Model	Espècie	Model
<i>Chroicocephalus genei</i>	P	<i>Elanus caeruleus</i>	R
<i>Chroicocephalus ridibundus</i>	K,L	<i>Emberiza calandra</i>	E
<i>Ciconia ciconia</i>	R(octogonal)	<i>Emberiza cia</i>	C
<i>Ciconia nigra</i>	R(octogonal)	<i>Emberiza cirius</i>	C
<i>Cinclus cinclus</i>	E,FA	<i>Emberiza citrinella</i>	C
<i>Circaetus gallicus</i>	V	<i>Emberiza hortulana</i>	C
<i>Circus aeruginosus</i>	S	<i>Emberiza melanocephala</i>	C
<i>Circus cyaneus</i>	K,L	<i>Emberiza pusilla</i>	B
<i>Circus macrourus</i>	K,L	<i>Emberiza rustica</i>	B
<i>Circus pygargus</i>	K,L	<i>Emberiza schoeniclus</i>	B,C
<i>Cisticola juncidis</i>	A	<i>Erithacus rubecula</i>	B
<i>Clamator glandarius</i>	J	<i>Estrilda astrild</i>	A
<i>Coccothraustes coccothraustes</i>	EX	<i>Falco columbarius</i>	J
<i>Coloeus monedula</i>	K,L	<i>Falco eleonora</i>	L
<i>Columba livia</i>	K,L	<i>Falco naumanni</i>	J
<i>Columba oenas</i>	L	<i>Falco peregrinus</i>	S
<i>Columba palumbus</i>	R	<i>Falco subbuteo</i>	L
<i>Coracias garrulus</i>	J	<i>Falco tinnunculus</i>	K
<i>Corvus corax</i>	S	<i>Falco vespertinus</i>	K
<i>Corvus cornix</i>	R	<i>Ficedula albicollis</i>	A
<i>Corvus corone</i>	R	<i>Ficedula hypoleuca</i>	A
<i>Corvus frugilegus</i>	R	<i>Ficedula parva</i>	A
<i>Coturnix coturnix</i>	G	<i>Fringilla coelebs</i>	C,B
<i>Crex crex</i>	HX	<i>Fringilla montifringilla</i>	C,B
<i>Cuculus canorus</i>	J	<i>Fulica atra</i>	S
<i>Curruca communis</i>	B	<i>Fulica cristata</i>	S
<i>Curruca conspicillata</i>	B	<i>Galerida cristata</i>	E,D
<i>Curruca curruca</i>	B	<i>Galerida theklae</i>	D,E
<i>Curruca hortensis</i>	C	<i>Gallinago gallinago</i>	HX(t)
<i>Curruca iberiae</i>	B	<i>Gallinago media</i>	HX(t)
<i>Curruca melanocephala</i>	B	<i>Gallinula chloropus</i>	P(t)
<i>Curruca sarda</i>	A	<i>Garrulus glandarius</i>	J
<i>Curruca subalpina</i>	B	<i>Gelochelidon nilotica</i>	J(t)
<i>Curruca undata</i>	A	<i>Glareola pratincola</i>	GX,HX
<i>Cyanistes caeruleus</i>	B	<i>Grus grus</i>	V
<i>Cygnus olor</i>	Z	<i>Gypaetus barbatus</i>	Z
<i>Delichon urbicum</i>	B	<i>Gyps fulvus</i>	Z
<i>Dendrocopos major</i>	G	<i>Haematopus ostralegus</i>	P(t),R(t)
<i>Dendrocygna media</i>	E	<i>Hieraaetus pennatus</i>	R♀,P♂
<i>Dryobates minor</i>	D	<i>Himantopus himantopus</i>	J(t),K(t)
<i>Dryocopus martius</i>	L	<i>Hippolais icterina</i>	B
<i>Egretta garzetta</i>	R(t),S(t)	<i>Hippolais polyglotta</i>	B

Espècie	Model	Espècie	Model
<i>Hirundo rustica</i>	B	<i>Montifringilla nivalis</i>	C
<i>Hydrobates pelagicus</i>	DX(t)	<i>Morus bassanus</i>	X
<i>Hydroprogne caspia</i>	EX	<i>Motacilla alba</i>	B
<i>Ichthyaetus audouinii</i>	P	<i>Motacilla cinerea</i>	B
<i>Ichthyaetus melanocephalus</i>	L,P	<i>Motacilla citreola</i>	B
<i>Iduna opaca</i>	B	<i>Motacilla flava</i>	B
<i>Ixobrychus minutus</i>	P	<i>Muscicapa striata</i>	A
<i>Jynx torquilla</i>	E	<i>Myiopsitta monachus</i>	J
<i>Lagopus muta</i>	R,S	<i>Neophron percnopterus</i>	V
<i>Lanius collurio</i>	E	<i>Netta rufina</i>	S
<i>Lanius meridionalis</i>	FX	<i>Numenius arquata</i>	P(t)
<i>Lanius minor</i>	E	<i>Numenius phaeopus</i>	J(t),K(t)
<i>Lanius senator</i>	E	<i>Nycticorax nycticorax</i>	S
<i>Larus argentatus</i>	S	<i>Oenanthe deserti</i>	C
<i>Larus canus</i>	L, P	<i>Oenanthe hispanica</i>	C
<i>Larus fuscus</i>	P♀,S♂	<i>Oenanthe leucura</i>	D
<i>Larus michahellis</i>	S	<i>Oenanthe oenanthe</i>	C
<i>Larvivera cyane</i>	C	<i>Oriolus oriolus</i>	G
<i>Leiothrix lutea</i>	C	<i>Otus scops</i>	J
<i>Limosa lapponica</i>	HX(t),J(t)	<i>Oxyura leucocephala</i>	S
<i>Limosa limosa</i>	J(t), K(t)	<i>Pandion haliaetus</i>	V,X
<i>Linaria cannabina</i>	B	<i>Panurus biarmicus</i>	B
<i>Locustella luscinioides</i>	B	<i>Parus major</i>	C
<i>Locustella naevia</i>	B	<i>Passer domesticus</i>	D,C
<i>Lophophanes cristatus</i>	B	<i>Passer hispaniolensis</i>	D,C
<i>Loxia curvirostra</i>	FA	<i>Passer montanus</i>	C
<i>Lullula arborea</i>	C	<i>Pastor roseus</i>	G
<i>Luscinia megarhynchos</i>	C	<i>Perdix perdix</i>	P
<i>Luscinia svecica</i>	B	<i>Periparus ater</i>	A,B
<i>Lymnocyptes minimus</i>	EX(t)	<i>Pernis apivorus</i>	S
<i>Mareca penelope</i>	R	<i>Petronia petronia</i>	D,C
<i>Mareca strepera</i>	R	<i>Phalacrocorax aristotelis</i>	V
<i>Marmaronetta angustirostris</i>	P	<i>Phalacrocorax carbo</i>	X
<i>Melanitta nigra</i>	S	<i>Phalaropus fulicarius</i>	EX
<i>Melanocorypha calandra</i>	E	<i>Phalaropus lobatus</i>	EX
<i>Mergus merganser</i>	S	<i>Phasianus colchicus</i>	R
<i>Mergus serrator</i>	S	<i>Phoenicopterus roseus</i>	V(t),X(t)
<i>Merops apiaster</i>	FA	<i>Phoenicurus ochruros</i>	B
<i>Milvus migrans</i>	S	<i>Phoenicurus phoenicurus</i>	B
<i>Milvus milvus</i>	S	<i>Phylloscopus bonelli</i>	A
<i>Monticola saxatilis</i>	E	<i>Phylloscopus collybita</i>	A
<i>Monticola solitarius</i>	E	<i>Phylloscopus fuscatus</i>	A

Espècie	Model	Espècie	Model
<i>Phylloscopus ibericus</i>	A	<i>Spinus spinus</i>	B
<i>Phylloscopus inornatus</i>	A	<i>Stercorarius longicaudus</i>	K
<i>Phylloscopus proregulus</i>	A	<i>Stercorarius parasiticus</i>	P
<i>Phylloscopus sibilatrix</i>	A	<i>Stercorarius pomarinus</i>	K
<i>Phylloscopus trochiloides</i>	A	<i>Stercorarius skua</i>	T
<i>Phylloscopus trochilus</i>	A	<i>Sterna hirundo</i>	FX
<i>Pica pica</i>	K, HX	<i>Sternula albifrons</i>	DX
<i>Picus sharpei</i>	J	<i>Streptopelia decaocto</i>	L
<i>Platalea leucorodia</i>	V(t)	<i>Streptopelia turtur</i>	J
<i>Plectrophenax nivalis</i>	C	<i>Strix aluco</i>	S
<i>Plegadis falcinellus</i>	S(t)	<i>Sturnus unicolor</i>	G
<i>Pluvialis apricaria</i>	GX(t),J(t)	<i>Sturnus vulgaris</i>	G
<i>Pluvialis squatarola</i>	GX(t),J(t)	<i>Sylvia atricapilla</i>	C
<i>Podiceps cristatus</i>	S(o),T(o)	<i>Sylvia borin</i>	C
<i>Podiceps nigricollis</i>	R(o)	<i>Tachybaptus ruficollis</i>	L(o)
<i>Poecile palustris</i>	B	<i>Tachymarpis melba</i>	HA
<i>Porphyrio porphyrio</i>	S(t)	<i>Tadorna ferruginea</i>	S,T
<i>Porzana porzana</i>	GX(t)	<i>Tadorna tadorna</i>	S,T
<i>Prunella collaris</i>	D	<i>Tarsiger cyanurus</i>	B
<i>Prunella modularis</i>	C	<i>Tetrao urogallus</i>	V♀,X♂
<i>Psittacula krameri</i>	K	<i>Tetrax tetrax</i>	P
<i>Pterocles alchata</i>	L	<i>Thalasseus sandvicensis</i>	J
<i>Pterocles orientalis</i>	L	<i>Tichodroma muraria</i>	C
<i>Ptyonoprogne rupestris</i>	B	<i>Tringa erythropus</i>	J(t)
<i>Puffinus mauretanicus</i>	L(o)	<i>Tringa glareola</i>	EX(t)
<i>Puffinus yelkouan</i>	L(o)	<i>Tringa nebularia</i>	J(t), K(t)
<i>Pyrrhocorax graculus</i>	L	<i>Tringa ochropus</i>	FX(t)
<i>Pyrrhocorax pyrrhocorax</i>	L♀,R♂	<i>Tringa stagnatilis</i>	FX(t)
<i>Pyrrhula pyrrhula</i>	B	<i>Tringa totanus</i>	GX(t)
<i>Rallus aquaticus</i>	HX(t),J(t)	<i>Troglodytes troglodytes</i>	A
<i>Recurvirostra avosetta</i>	L(t)	<i>Turdus iliacus</i>	FA
<i>Regulus ignicapilla</i>	A	<i>Turdus merula</i>	G
<i>Regulus regulus</i>	A	<i>Turdus naumanni</i>	FA,E
<i>Remiz pendulinus</i>	B, A	<i>Turdus philomelos</i>	FA,E
<i>Riparia riparia</i>	B,A	<i>Turdus pilaris</i>	G
<i>Rissa tridactyla</i>	P,L	<i>Turdus torquatus</i>	G
<i>Saxicola rubetra</i>	B	<i>Turdus viscivorus</i>	G
<i>Saxicola rubicola</i>	B	<i>Tyto alba</i>	R,S
<i>Scolopax rusticola</i>	L(t),K(t)	<i>Upupa epops</i>	G
<i>Serinus serinus</i>	A	<i>Vanellus vanellus</i>	L
<i>Sitta europaea</i>	C	<i>Vireo olivaceus</i>	C
<i>Somateria mollissima</i>	V	<i>Zapornia parva</i>	EX(t)
<i>Spatula clypeata</i>	P,R	<i>Zapornia pusilla</i>	EX(t)
<i>Spatula querquedula</i>	R		

Appendix III. Subspecies codes

The following list is arranged alphabetically according to the scientific name of each taxon. The taxonomic sequence used is the same as in *The Birds of the Western Palearctic* (Cramp, Simmons and Perrins, 1977-94), with some subsequent modifications, basically in agreement with the concise edition of the same work (Perrins 1998) and with the decisions of the AERC. This list only includes subspecies that belong to species that have been observed in the Catalan Countries. Keep in mind that this list is very extensive: the fact that there is a code for a subspecies does not mean, however, that it can be identified with certainty (see section 3.1.3.7).

Species	subspecies	code
<i>Accipiter gentilis</i>	<i>arrigonii</i>	ARR
<i>Accipiter gentilis</i>	<i>atricapillus</i>	ATR
<i>Accipiter gentilis</i>	<i>buteoides</i>	BUT
<i>Accipiter gentilis</i>	<i>gentilis</i>	GEN
<i>Accipiter nisus</i>	<i>granti</i>	GRA
<i>Accipiter nisus</i>	<i>nisosimilis</i>	LIS
<i>Accipiter nisus</i>	<i>nisus</i>	SUS
<i>Accipiter nisus</i>	<i>punicus</i>	PUN
<i>Accipiter nisus</i>	<i>wolterstorffi</i>	WOL
<i>Acridotheres tristis</i>	<i>tristis</i>	TRI
<i>Acrocephalus agricola</i>	<i>capistrata</i>	CAP
<i>Acrocephalus agricola</i>	<i>septima</i>	SEP
<i>Acrocephalus arundinaceus</i>	<i>arundinaceus</i>	ARU
<i>Acrocephalus melanopogon</i>	<i>albiventris</i>	ALB
<i>Acrocephalus melanopogon</i>	<i>melanopogon</i>	MEL
<i>Acrocephalus melanopogon</i>	<i>mimica</i>	MIM
<i>Acrocephalus scirpaceus</i>	<i>fuscus</i>	FUS
<i>Acrocephalus scirpaceus</i>	<i>scirpaceus</i>	SCI
<i>Aegithalos caudatus</i>	<i>alpinus</i>	ALP
<i>Aegithalos caudatus</i>	<i>aremorius</i>	ARE
<i>Aegithalos caudatus</i>	<i>caudatus</i>	CAU
<i>Aegithalos caudatus</i>	<i>europaeus</i>	EUR
<i>Aegithalos caudatus</i>	<i>irbii</i>	IRB
<i>Aegithalos caudatus</i>	<i>italiae</i>	ITA
<i>Aegithalos caudatus</i>	<i>macedonicus</i>	MAC
<i>Aegithalos caudatus</i>	<i>major</i>	MAJ
<i>Aegithalos caudatus</i>	<i>paszeki</i>	PAS
<i>Aegithalos caudatus</i>	<i>rosaceus</i>	ROS
<i>Aegithalos caudatus</i>	<i>sibiricus</i>	SIB
<i>Aegithalos caudatus</i>	<i>siculus</i>	SIC
<i>Aegithalos caudatus</i>	<i>taiti</i>	TAI
<i>Aegithalos caudatus</i>	<i>tauricus</i>	TAU
<i>Aegithalos caudatus</i>	<i>tephronotus</i>	TEP
<i>Aegolius funereus</i>	<i>caucasicus</i>	CAU
<i>Aegolius funereus</i>	<i>funereus</i>	FUN
<i>Alauda arvensis</i>	<i>armenicus</i>	ARM
<i>Alauda arvensis</i>	<i>arvensis</i>	ARV
<i>Alauda arvensis</i>	<i>cantarella</i>	CAN
<i>Alauda arvensis</i>	<i>dulcivox</i>	DUL
<i>Alauda arvensis</i>	<i>guillelmi</i>	GUI
<i>Alauda arvensis</i>	<i>harterti</i>	HAR
<i>Alauda arvensis</i>	<i>scotica</i>	SCO
<i>Alauda arvensis</i>	<i>sierrae</i>	SIE
<i>Alca torda</i>	<i>islandica</i>	ISL
<i>Alca torda</i>	<i>torda</i>	TOR
<i>Alcedo atthis</i>	<i>atthis</i>	ATT
<i>Alcedo atthis</i>	<i>ispida</i>	ISP
<i>Alectoris barbara</i>	<i>barbara</i>	ARA
<i>Alectoris barbara</i>	<i>barbata</i>	ATA
<i>Alectoris barbara</i>	<i>koenigi</i>	KOE
<i>Alectoris barbara</i>	<i>spatzi</i>	SPA
<i>Alectoris chukar</i>	<i>cypristes</i>	CYP
<i>Alectoris chukar</i>	<i>kleini</i>	KLE
<i>Alectoris chukar</i>	<i>kurdestanica</i>	KUR
<i>Alectoris chukar</i>	<i>sinaica</i>	SIN
<i>Alectoris chukar</i>	<i>werae</i>	WER
<i>Alectoris graeca</i>	<i>graeca</i>	GRA
<i>Alectoris graeca</i>	<i>saxatilis</i>	SAX
<i>Alectoris graeca</i>	<i>whitakeri</i>	WHI

<i>Alectoris rufa</i>	<i>hispanica</i>	HIS
<i>Alectoris rufa</i>	<i>intercedens</i>	INT
<i>Alectoris rufa</i>	<i>rufa</i>	RUF
<i>Alle alle</i>	<i>alle</i>	ALL
<i>Alle alle</i>	<i>polaris</i>	POL
<i>Amandava amandava</i>	<i>amandava</i>	AMA
<i>Ammomanes cincturus</i>	<i>arenicolor</i>	ARE
<i>Ammomanes cincturus</i>	<i>cincturus</i>	CIN
<i>Anas acuta</i>	<i>acuta</i>	ACU
<i>Anas crecca</i>	<i>crecca</i>	CRE
<i>Anas platyrhynchos</i>	<i>platyrhynchos</i>	PLA
<i>Anas strepera</i>	<i>strepera</i>	STR
<i>Anser albifrons</i>	<i>albifrons</i>	ALB
<i>Anser albifrons</i>	<i>flavirostris</i>	FLA
<i>Anser anser</i>	<i>anser</i>	ANS
<i>Anser anser</i>	<i>rubrirostris</i>	RUB
<i>Anser caerulescens</i>	<i>atlanticus</i>	ATL
<i>Anser caerulescens</i>	<i>caerulescens</i>	CAE
<i>Anser fabalis</i>	<i>fabalis</i>	FAB
<i>Anser fabalis</i>	<i>johanseni</i>	JOH
<i>Anser fabalis</i>	<i>rossicus</i>	ROS
<i>Anthus campestris</i>	<i>campestris</i>	CAM
<i>Anthus campestris</i>	<i>griseus</i>	GRI
<i>Anthus hodgsoni</i>	<i>yunnanensis</i>	YUN
<i>Anthus petrosus</i>	<i>kleinschmidti</i>	KLE
<i>Anthus petrosus</i>	<i>littoralis</i>	LIT
<i>Anthus petrosus</i>	<i>meinertzhageni</i>	MEI
<i>Anthus petrosus</i>	<i>petrosus</i>	PET
<i>Anthus pratensis</i>	<i>pratensis</i>	PRA
<i>Anthus pratensis</i>	<i>whistleri</i>	WHI
<i>Anthus richardi</i>	<i>richardi</i>	RIC
<i>Anthus spinoletta</i>	<i>coutellii</i>	COU
<i>Anthus spinoletta</i>	<i>spinoletta</i>	SPI
<i>Anthus trivialis</i>	<i>trivialis</i>	TRI
<i>Apus apus</i>	<i>apus</i>	APU
<i>Apus apus</i>	<i>pekinensis</i>	PEK
<i>Apus pallidus</i>	<i>brehmorum</i>	BRE
<i>Apus pallidus</i>	<i>illyricus</i>	ILL
<i>Apus pallidus</i>	<i>pallidus</i>	PAL
<i>Aquila chrysaetos</i>	<i>chrysaetos</i>	CHR
<i>Aquila chrysaetos</i>	<i>homeyeri</i>	HOM
<i>Aquila pomarina</i>	<i>pomarina</i>	POM
<i>Ardea cinerea</i>	<i>cinerea</i>	CIN
<i>Ardea cinerea</i>	<i>monicae</i>	MON
<i>Ardea purpurea</i>	<i>bournei</i>	BOU
<i>Ardea purpurea</i>	<i>purpurea</i>	PUR
<i>Arenaria interpres</i>	<i>interpres</i>	INT
<i>Arenaria interpres</i>	<i>morinella</i>	MOR
<i>Asio flammeus</i>	<i>flammeus</i>	FLA
<i>Asio otus</i>	<i>canariensis</i>	CAN
<i>Asio otus</i>	<i>otus</i>	OTU
<i>Athene noctua</i>	<i>bactriana</i>	BAC
<i>Athene noctua</i>	<i>glauca</i>	GLA
<i>Athene noctua</i>	<i>indigena</i>	IND
<i>Athene noctua</i>	<i>lilith</i>	LIL
<i>Athene noctua</i>	<i>noctua</i>	NOC
<i>Athene noctua</i>	<i>saharae</i>	SAH
<i>Athene noctua</i>	<i>vidalii</i>	VID
<i>Aythya marila</i>	<i>marila</i>	MAR
<i>Bombycilla garrulus</i>	<i>garrulus</i>	GAR

Bonasa bonasia	bonasia	BON
Bonasa bonasia	rhenana	RHE
Bonasa bonasia	rupestris	RUP
Bonasa bonasia	sibirica	SIB
Bonasa bonasia	styriaca	STY
Botaurus stellaris	stellaris	STE
Branta bernicla	bernicla	BER
Branta bernicla	hrota	HRO
Branta bernicla	nigricans	NIG
Branta canadensis	canadensis	CAN
Branta canadensis	hutchinsii	HUT
Branta canadensis	parvipes	PAR
Bubo bubo	ascalaphus	ASC
Bubo bubo	bubo	BUB
Bubo bubo	hispanus	HIS
Bubo bubo	interpositus	INT
Bubo bubo	nikolskii	NIK
Bubo bubo	ruthenus	RUT
Bubo bubo	sibiricus	SIB
Bubo bubo	turcomanus	TUR
Bubulcus ibis	ibis	IBI
Bucanetes githagineus	amantum	AMA
Bucanetes githagineus	crassirostris	CRA
Bucanetes githagineus	githagineus	GIT
Bucanetes githagineus	zedlitzii	ZED
Bucephala clangula	clangula	CLA
Burhinus oedichnemus	distinctus	DIS
Burhinus oedichnemus	harterti	HAR
Burhinus oedichnemus	insularum	INS
Burhinus oedichnemus	oedichnemus	OED
Burhinus oedichnemus	saharae	SAH
Buteo buteo	arrigonii	ARR
Buteo buteo	bannermani	BAN
Buteo buteo	buteo	BUT
Buteo buteo	insularum	INS
Buteo buteo	menetriesi	MEN
Buteo buteo	rothschildi	ROT
Buteo buteo	vulpinus	VUL
Buteo lagopus	lagopus	LAG
Buteo lagopus	menzbieri	MEN
Buteo rufinus	cirtensis	CIR
Buteo rufinus	rufinus	RUF
Calandrella brachydactyla	artemisiana	ART
Calandrella brachydactyla	brachydactyla	BRA
Calandrella brachydactyla	hermonensis	HER
Calandrella brachydactyla	hungarica	HUN
Calandrella brachydactyla	longipennis	LON
Calandrella brachydactyla	rubiginosa	RUB
Calandrella brachydactyla	woltersi	WOL
Calandrella rufescens	aharonii	AHA
Calandrella rufescens	apetzii	APE
Calandrella rufescens	heinei	HEI
Calandrella rufescens	leucophaea	LEU
Calandrella rufescens	minor	MIN
Calandrella rufescens	nicolli	NIC
Calandrella rufescens	persica	PER
Calandrella rufescens	polatzeki	POL
Calandrella rufescens	pseudobaetica	PSE
Calandrella rufescens	rufescens	RUF
Calcarius lapponicus	lapponicus	LAP
Calcarius lapponicus	subcalcaratus	SUB
Calidris alpina	alpina	ALP
Calidris alpina	artica	ART
Calidris alpina	sakhalina	SAK
Calidris alpina	schinzii	SCH
Calidris canutus	canutus	CAN
Calidris canutus	islandica	ISL
Calonectris diomedea	borealis	BOR
Calonectris diomedea	diomedea	DIO
Caprimulgus europaeus	europaeus	EUR
Caprimulgus europaeus	meridionalis	MER
Caprimulgus europaeus	sarudnyi	SAR
Caprimulgus europaeus	unwini	UNW

Caprimulgus ruficollis	desertorum	DES
Caprimulgus ruficollis	ruficollis	RUF
Carduelis cannabina	autochthona	AUT
Carduelis cannabina	bella	BEL
Carduelis cannabina	cannabina	CAN
Carduelis cannabina	guentheri	GUE
Carduelis cannabina	harterti	HAR
Carduelis cannabina	meadowaldoi	MEA
Carduelis cannabina	mediterranea	MED
Carduelis carduelis	balcanica	BAL
Carduelis carduelis	britannica	BRI
Carduelis carduelis	carduelis	CAR
Carduelis carduelis	colchicus	COL
Carduelis carduelis	frigoris	FRI
Carduelis carduelis	loudoni	LOU
Carduelis carduelis	niedecki	NIE
Carduelis carduelis	parva	PAR
Carduelis carduelis	tschusii	TSC
Carduelis carduelis	volgensis	VOL
Carduelis chloris	aurantiiventris	AUR
Carduelis chloris	bilkevitchi	BIL
Carduelis chloris	chloris	RIS
Carduelis chloris	chlorotica	ICA
Carduelis chloris	harrisoni	HAR
Carduelis chloris	madaraszi	MAD
Carduelis chloris	muehlei	MUE
Carduelis chloris	vanmarli	VAN
Carduelis chloris	voousi	VOO
Carduelis flammea	flammea	FLA
Carduelis flammea	rostrata	ROS
Carduelis flavirostris	bensonorum	BEN
Carduelis flavirostris	brevirostris	BRE
Carduelis flavirostris	flavirostris	FLA
Carduelis flavirostris	kirghizorum	KIR
Carduelis flavirostris	pipilans	PIP
Carpodacus erythrinus	erythrinus	ERY
Carpodacus erythrinus	kubanensis	KUB
Catharacta skua	skua	SKU
Cercotrichas galactotes	familiaris	FAM
Cercotrichas galactotes	galactotes	GAL
Cercotrichas galactotes	minor	MIN
Cercotrichas galactotes	syriacus	SYR
Certhia brachydactyla	brachydactyla	BRA
Certhia brachydactyla	dorotheae	DOR
Certhia brachydactyla	harterti	HAR
Certhia brachydactyla	mauritanica	MAU
Certhia brachydactyla	megarhyncha	MEG
Certhia familiaris	britannica	BRI
Certhia familiaris	corsa	COR
Certhia familiaris	familiaris	FAM
Certhia familiaris	macroductyla	MAC
Certhia familiaris	persica	PER
Cettia cetti	cetti	CET
Cettia cetti	orientalis	ORI
Charadrius alexandrinus	alexandrinus	ALE
Charadrius dubius	curonicus	CUR
Charadrius hiaticula	hiaticula	HIA
Charadrius hiaticula	tundrae	TUN
Charadrius leschenaultii	columbinus	COL
Charadrius leschenaultii	crassirostris	CRA
Charadrius leschenaultii	leschenaultii	LES
Chersophilus duponti	duponti	DUP
Chersophilus duponti	margaritae	MAR
Chlidonias hybrida	hybridus	HYB
Chlidonias niger	niger	NIG
Chlidonias niger	surinamensis	SUR
Ciconia ciconia	ciconia	CIC
Cinclus cinclus	aquaticus	AQU
Cinclus cinclus	caucasicus	CAU
Cinclus cinclus	cinclus	CIN
Cinclus cinclus	gularis	GUL
Cinclus cinclus	hibernicus	HIB
Cinclus cinclus	minor	MIN

Cinclus cinclus	olympicus	OLY
Cinclus cinclus	persicus	PER
Cinclus cinclus	rufiventris	RUF
Cinclus cinclus	uralensis	URA
Circus aeruginosus	aeruginosus	AER
Circus aeruginosus	harterti	HAR
Circus cyaneus	cyaneus	CYA
Circus cyaneus	hudsonius	HUD
Cisticola juncidis	cisticola	CIS
Cisticola juncidis	juncidis	JUN
Cisticola juncidis	neurotica	NEU
Clamator glandarius	glandularis	GLA
Coccothraustes coccothraustes	buvryi	BUV
Coccothraustes coccothraustes	coccothraustes	COC
Coccothraustes coccothraustes	nigricans	NIG
Coccyzus americanus	americanus	AME
Columba livia	dakhliae	DAK
Columba livia	domestica	DOM
Columba livia	gaddi	GAD
Columba livia	livia	LIV
Columba livia	palaestinae	PAL
Columba livia	scimperi	SCI
Columba livia	targia	TAR
Columba oenas	oenas	OEN
Columba palumbus	azorica	AZO
Columba palumbus	iranica	IRA
Columba palumbus	maderensis	MAD
Columba palumbus	palumbus	PAL
Coracias garrulus	garrulus	GAR
Coracias garrulus	semenowi	SEM
Corvus corax	canariensis	CAN
Corvus corax	corax	COR
Corvus corax	hispanus	HIS
Corvus corax	laurencei	LAU
Corvus corax	tingitanus	TIN
Corvus corax	varius	VAR
Corvus corone	capellanus	CAP
Corvus corone	cornix	NIX
Corvus corone	corone	ONE
Corvus corone	orientalis	ORI
Corvus corone	pallescens	PAL
Corvus corone	sardonicus	SAR
Corvus corone	sharpii	SHA
Corvus frugilegus	frugilegus	FRU
Corvus monedula	cirtensis	CIR
Corvus monedula	monedula	MON
Corvus monedula	soemmerringii	SOE
Corvus monedula	spermologus	SPE
Coturnix coturnix	conturbans	CON
Coturnix coturnix	coturnix	COT
Coturnix coturnix	inopinata	INO
Cuculus canorus	bangsi	BAN
Cuculus canorus	canorus	CAN
Cuculus canorus	subtelephonus	SUB
Cursorius cursor	bogolubovi	BOG
Cursorius cursor	cursor	CUR
Cursorius cursor	exsul	EXS
Cyanopica cyanus	cooki	COO
Cygnus columbianus	bewickii	BEW
Cygnus columbianus	columbianus	COL
Delichon urbica	urbica	URB
Dendrocopos major	anglicus	ANG
Dendrocopos major	canariensis	SIS
Dendrocopos major	candidus	DUS
Dendrocopos major	harterti	HAR
Dendrocopos major	hispanus	HIS
Dendrocopos major	italiae	ITA
Dendrocopos major	major	MAJ
Dendrocopos major	mauritanus	MAU
Dendrocopos major	numidus	NUM
Dendrocopos major	paphlagoniae	PAP
Dendrocopos major	parroti	PAR
Dendrocopos major	pinetorum	PIN

Dendrocopos major	poelzami	POE
Dendrocopos major	tenuirostris	TEN
Dendrocopos major	thanneri	THA
Dendrocopos medius	anatoliae	ANA
Dendrocopos medius	caucasicus	CAU
Dendrocopos medius	medius	MED
Dendrocopos minor	buturlini	BUT
Dendrocopos minor	colchicus	COL
Dendrocopos minor	comminutus	COM
Dendrocopos minor	danfordi	DAN
Dendrocopos minor	hortorum	HOR
Dendrocopos minor	kamtschatkensis	KAM
Dendrocopos minor	ledouci	LED
Dendrocopos minor	minor	MIN
Dendrocopos minor	quadrifasciatus	QUA
Dryocopus martius	martius	MAR
Egretta alba	alba	ALB
Egretta alba	egretta	EGR
Egretta garzetta	garzetta	GAR
Egretta gularis	gularis	GUL
Egretta gularis	schistacea	SCH
Elanus caeruleus	caeruleus	CAE
Emberiza aureola	aureola	AUR
Emberiza cia	cia	CIA
Emberiza cia	par	PAR
Emberiza cia	prageri	PRA
Emberiza citrinella	caliginosa	CAL
Emberiza citrinella	citrinella	CIT
Emberiza citrinella	erythrogegens	ERY
Emberiza leucocephalos	leucocephalos	LEU
Emberiza rustica	rustica	RUS
Emberiza schoeniclus	caspia	CAS
Emberiza schoeniclus	incognita	INC
Emberiza schoeniclus	intermedia	INT
Emberiza schoeniclus	korejewi	KOR
Emberiza schoeniclus	pallidior	PAL
Emberiza schoeniclus	passerina	PAS
Emberiza schoeniclus	pyrrhuloides	PYR
Emberiza schoeniclus	reiseri	REI
Emberiza schoeniclus	schoeniclus	SCH
Emberiza schoeniclus	stresemanni	STR
Emberiza schoeniclus	tschusii	TSC
Emberiza schoeniclus	ukrainae	UKR
Emberiza schoeniclus	witherbyi	WIT
Erithacus rubecula	caucasicus	CAU
Erithacus rubecula	hyrcanus	HYR
Erithacus rubecula	melophilus	MEL
Erithacus rubecula	rubecula	RUB
Erithacus rubecula	superbus	SUP
Erithacus rubecula	tataricus	TAT
Erithacus rubecula	valens	VAL
Erithacus rubecula	witherbyi	WIT
Estrilda astrild	jagoensis	JAG
Falco biarmicus	erlangeri	ERL
Falco biarmicus	feldeggi	FEL
Falco biarmicus	tanypterus	TAN
Falco cherrug	cherrug	CHE
Falco cherrug	milvipes	MIL
Falco columbarius	aesalon	AES
Falco columbarius	columbarius	COL
Falco columbarius	insignis	INS
Falco columbarius	pallidus	PAL
Falco columbarius	subaesalon	SUB
Falco peregrinus	anatum	ANA
Falco peregrinus	brookei	BRO
Falco peregrinus	calidus	CAL
Falco peregrinus	madens	MAD
Falco peregrinus	peregrinus	PER
Falco subbuteo	subbuteo	SUB
Falco tinnunculus	alexandri	ALE
Falco tinnunculus	canariensis	CAN
Falco tinnunculus	dacotiae	DAC
Falco tinnunculus	neglectus	NEG

Falco tinnunculus	rupicolaeformis	RUP
Falco tinnunculus	tinnunculus	TIN
Ficedula hypoleuca	hypoleuca	HYP
Ficedula hypoleuca	iberiae	IBE
Ficedula hypoleuca	muscipeta	MUS
Ficedula hypoleuca	sibirica	SIB
Ficedula hypoleuca	speculigera	SPE
Ficedula parva	albicilla	ALB
Ficedula parva	parva	PAR
Francolinus francolinus	arabistanicus	ARA
Francolinus francolinus	francolinus	FRA
Fratercula arctica	arctica	ARC
Fratercula arctica	grabae	GRA
Fratercula arctica	naumanni	NAU
Fringilla coelebs	africana	AFR
Fringilla coelebs	alexandrovi	ALE
Fringilla coelebs	balearica	BAL
Fringilla coelebs	canariensis	CAN
Fringilla coelebs	caucasica	CAU
Fringilla coelebs	coelebs	COE
Fringilla coelebs	gengleri	GEN
Fringilla coelebs	maderensis	MAD
Fringilla coelebs	moreletti	MOR
Fringilla coelebs	ombriosa	OMB
Fringilla coelebs	palmae	PAL
Fringilla coelebs	sarda	SAR
Fringilla coelebs	solomkoi	SOL
Fringilla coelebs	spodiogenys	SPO
Fringilla coelebs	syriaca	SYR
Fringilla coelebs	transcaspia	TRA
Fringilla coelebs	tyrrhenica	TYR
Fulica atra	atra	ATR
Galerida cristata	apuliae	APU
Galerida cristata	arenicola	ARE
Galerida cristata	brachyura	BRA
Galerida cristata	carthaginis	CAR
Galerida cristata	caucasica	CAU
Galerida cristata	cinnamomina	CIN
Galerida cristata	cristata	CRI
Galerida cristata	cyprica	CYP
Galerida cristata	festae	FES
Galerida cristata	halfae	HAL
Galerida cristata	helenae	HEL
Galerida cristata	kleinschmidti	KLE
Galerida cristata	macrorhyncha	CHA
Galerida cristata	maculata	ATA
Galerida cristata	magna	MAG
Galerida cristata	meridionalis	MER
Galerida cristata	neumanni	NEU
Galerida cristata	nigricans	NIG
Galerida cristata	pallida	PAL
Galerida cristata	randonii	RAN
Galerida cristata	riggenbachi	RIG
Galerida cristata	subtaurica	SUB
Galerida cristata	tenuirostris	TEN
Galerida cristata	zion	ZIO
Galerida theklae	aguirrei	AGU
Galerida theklae	carolinae	CAR
Galerida theklae	erlangeri	ERL
Galerida theklae	ruficolor	RUF
Galerida theklae	superflua	SUP
Galerida theklae	theklae	THE
Gallinago gallinago	delicata	DEL
Gallinago gallinago	faeroensis	FAE
Gallinago gallinago	gallinago	GAL
Gallinula chloropus	chloropus	CHL
Garrulus glandarius	albipectus	ALB
Garrulus glandarius	anataliae	ANA
Garrulus glandarius	atricapillus	ATR
Garrulus glandarius	brandtii	BRA
Garrulus glandarius	cervicalis	CER
Garrulus glandarius	corsicanus	COR
Garrulus glandarius	cretorum	CRE

Garrulus glandarius	fasciatus	FAS
Garrulus glandarius	ferdinandi	FER
Garrulus glandarius	glandularis	RIS
Garrulus glandarius	glaszneri	ERI
Garrulus glandarius	graecus	GRA
Garrulus glandarius	hibernicus	HIB
Garrulus glandarius	hyrcanus	HYR
Garrulus glandarius	ichnusae	ICH
Garrulus glandarius	iphigenia	IPH
Garrulus glandarius	jordansi	JOR
Garrulus glandarius	krynicky	KRY
Garrulus glandarius	lusitanicus	LUS
Garrulus glandarius	minor	MIN
Garrulus glandarius	rufiergum	RUF
Garrulus glandarius	samos	SAM
Garrulus glandarius	whitakeri	WHI
Gavia arctica	arctica	ARC
Gavia arctica	viridigularis	VIR
Gavia stellata	stellata	STE
Gelochelidon nilotica	nilotica	NIL
Glareola pratincola	pratincola	PRA
Grus grus	grus	GRU
Grus grus	lilfordi	LIL
Gypaetus barbatus	aureus	AUR
Gypaetus barbatus	barbatus	BAR
Gyps fulvus	fulvus	FUL
Haematopus ostralegus	longipes	LON
Haematopus ostralegus	ostralegus	OST
Hieraaetus fasciatus	fasciatus	FAS
Himantopus himantopus	himantopus	HIM
Hippolais pallida	opaca	OPA
Hirundo daurica	daurica	DAU
Hirundo daurica	rufula	RUF
Hirundo rustica	rustica	RUS
Hirundo rustica	savignii	SAV
Hirundo rustica	transitiva	TRA
Ixobrychus minutus	minutus	MIN
Ixobrychus minutus	payesii	PAY
Jynx torquilla	mauretanica	MAU
Jynx torquilla	sarudnyi	SAR
Jynx torquilla	torquilla	TOR
Jynx torquilla	tschusii	TSC
Lagopus mutus	helveticus	HEL
Lagopus mutus	islandorum	ISL
Lagopus mutus	millaisi	MIL
Lagopus mutus	mutus	MUT
Lagopus mutus	nelsoni	NEL
Lagopus mutus	pyrenaicus	PYR
Lanius collurio	collurio	COL
Lanius collurio	kobylini	KOB
Lanius excubitor	excubitor	EXC
Lanius excubitor	homeyeri	HOM
Lanius isabellinus	isabellinus	ISA
Lanius isabellinus	phoenicuroides	PHO
Lanius isabellinus	speculigerus	SPE
Lanius meridionalis	algeriensis	ALG
Lanius meridionalis	aucheri	AUC
Lanius meridionalis	elegans	ELE
Lanius meridionalis	meridionalis	MER
Lanius meridionalis	koenigi	KOE
Lanius meridionalis	pallidirostris	PAL
Lanius meridionalis	theresae	THE
Lanius senator	badius	BAD
Lanius senator	niloticus	NIL
Lanius senator	rutilans	RUT
Lanius senator	senator	SEN
Larus argentatus	argentatus	TUS
Larus argentatus	argenteus	EUS
Larus argentatus	smithsonianus	SMI
Larus atricilla	atricilla	ATR
Larus atricilla	megalopterus	MEG
Larus canus	canus	CAN
Larus canus	heinei	HEI

Larus fuscus	fuscus	FUS
Larus fuscus	graellsii	GRA
Larus fuscus	heuglini	HEU
Larus fuscus	intermedius	INT
Larus fuscus	taimyrensis	TAI
Larus hyperboreus	hyperboreus	HYP
Limicola falcinellus	falcinellus	FAL
Limosa lapponica	lapponica	LAP
Limosa limosa	islandica	ISL
Limosa limosa	limosa	LIM
Locustella luscinioides	fusca	FUS
Locustella luscinioides	luscinioides	LUS
Locustella luscinioides	sarmatica	SAR
Locustella naevia	naevia	NAE
Locustella naevia	obscurior	OBS
Locustella naevia	straminea	STR
Loxia curvirostra	balearica	BAL
Loxia curvirostra	corsicana	COR
Loxia curvirostra	curvirostra	CUR
Loxia curvirostra	guillemardi	GUI
Loxia curvirostra	poliogyna	POL
Loxia curvirostra	pusilla	PUS
Lullula arborea	arborea	ARB
Lullula arborea	pallida	PAL
Luscinia megarhynchos	africana	AFR
Luscinia megarhynchos	hafizi	HAF
Luscinia megarhynchos	megarhynchos	MEG
Luscinia svecica	cyaneula	CYA
Luscinia svecica	magna	MAG
Luscinia svecica	namnetum	NAM
Luscinia svecica	pallidogularis	PAL
Luscinia svecica	svecica	SVE
Luscinia svecica	volgae	VOL
Melanitta fusca	deglandi	DEG
Melanitta fusca	fusca	FUS
Melanitta nigra	americana	AME
Melanitta nigra	nigra	NIG
Melanocorypha calandra	calandra	CAL
Melanocorypha calandra	hebraica	HEB
Melanocorypha calandra	psammochroa	PSA
Mergus merganser	merganser	MER
Merops persicus	chrysocercus	CHR
Merops persicus	persicus	PER
Miliaria calandra	burturlini	BUR
Miliaria calandra	calandra	CAL
Miliaria calandra	clanceyi	CLA
Milvus migrans	aegyptius	AEG
Milvus migrans	lineatus	LIN
Milvus migrans	migrans	MIG
Milvus milvus	fasciicauda	FAS
Milvus milvus	milvus	MIL
Monticola solitarius	longirostris	LON
Monticola solitarius	solitarius	SOL
Montifringilla nivalis	alpicola	ALP
Montifringilla nivalis	leucora	LEU
Montifringilla nivalis	nivalis	NIV
Motacilla alba	alba	ALB
Motacilla alba	dukhunensis	DUK
Motacilla alba	persica	ICA
Motacilla alba	personata	ATA
Motacilla alba	subpersonata	SUB
Motacilla alba	yarrelli	YAR
Motacilla cinerea	canariensis	CAN
Motacilla cinerea	cinerea	CIN
Motacilla cinerea	melanope	MEL
Motacilla cinerea	patriciae	PAT
Motacilla cinerea	schmitzi	SCH
Motacilla citreola	citreola	CIT
Motacilla citreola	werae	WER
Motacilla flava	beema	BEE
Motacilla flava	cinereocapilla	CIN
Motacilla flava	feldegg	FEL
Motacilla flava	flava	AVA

Motacilla flava	flavissima	IMA
Motacilla flava	iberiae	IBE
Motacilla flava	leucocephala	LEU
Motacilla flava	lutea	LUT
Motacilla flava	melanogrisea	MEL
Motacilla flava	pygmaea	PYG
Motacilla flava	simillima	SIM
Motacilla flava	thunbergi	THU
Muscicapa striata	balearica	BAL
Muscicapa striata	inexpectata	INE
Muscicapa striata	neumanni	NEU
Muscicapa striata	striata	STR
Muscicapa striata	tyrrhenica	TYR
Neophron percnopterus	percnopterus	PER
Nucifraga caryocatactes	caryocatactes	CAR
Nucifraga caryocatactes	macrorhynchos	MAC
Numenius arquata	arquata	ARQ
Numenius arquata	orientalis	ORI
Numenius phaeopus	alboaxillaris	ALB
Numenius phaeopus	hudsonicus	HUD
Numenius phaeopus	phaeopus	PHA
Nycticorax nycticorax	nycticorax	NYC
Oceanodroma leucorhoa	leucorhoa	LEU
Oena capensis	capensis	CAP
Oenanthe deserti	atrogularis	ATR
Oenanthe deserti	deserti	DES
Oenanthe deserti	homochroa	HOM
Oenanthe hispanica	hispanica	HIS
Oenanthe hispanica	melanoleuca	MEL
Oenanthe leucura	leucura	LEU
Oenanthe leucura	syenitica	SYE
Oenanthe oenanthe	leucorhoa	LEU
Oenanthe oenanthe	libanotica	LIB
Oenanthe oenanthe	oenanthe	OEN
Oenanthe oenanthe	seebohmi	SEE
Oriolus oriolus	oriolus	ORI
Otis tarda	tarda	TAR
Otus scops	cycladum	CYC
Otus scops	cyprius	CYP
Otus scops	mallorcae	MAL
Otus scops	pulchellus	PUL
Otus scops	scops	SCO
Otus scops	turanicus	TUR
Oxyura jamaicensis	jamaicensis	JAM
Oxyura jamaicensis	rubida	RUB
Pandion haliaetus	haliaetus	HAL
Panurus biarmicus	biarmicus	BIA
Panurus biarmicus	russicus	RUS
Parus ater	ater	ATE
Parus ater	atlas	ATL
Parus ater	britannicus	BRI
Parus ater	cypristes	CYP
Parus ater	derjugini	DER
Parus ater	gaddi	GAD
Parus ater	hibernicus	HIB
Parus ater	ledouci	LED
Parus ater	michalowskii	MIC
Parus ater	moltchanovi	MOL
Parus ater	vieirae	VIE
Parus caeruleus	balearicus	BAL
Parus caeruleus	caeruleus	CAE
Parus caeruleus	calamensis	CAL
Parus caeruleus	cyrenaicae	CYR
Parus caeruleus	degener	DEG
Parus caeruleus	obscurus	OBS
Parus caeruleus	ogliastreae	OGL
Parus caeruleus	ombriosus	OMB
Parus caeruleus	orientalis	ORI
Parus caeruleus	palmensis	PAL
Parus caeruleus	satunini	SAT
Parus caeruleus	teneriffae	TEN
Parus caeruleus	ultramarinus	ULT
Parus cristatus	abadiei	ABA

Parus cristatus	bashkirikus	BAS
Parus cristatus	buresschi	BUR
Parus cristatus	cristatus	CRI
Parus cristatus	mitratus	MIT
Parus cristatus	scoticus	SCO
Parus cristatus	weigoldi	WEI
Parus major	aphrodite	APH
Parus major	blanfordi	BLA
Parus major	corsus	COR
Parus major	ecki	ECK
Parus major	excelsus	EXC
Parus major	karelini	KAR
Parus major	major	MAJ
Parus major	mallorcae	MAL
Parus major	newtoni	NEW
Parus major	niethammeri	NIE
Parus major	terraesanctae	TER
Parus montanus	baicalensis	BAI
Parus montanus	borealis	BOR
Parus montanus	kleinschmidti	KLE
Parus montanus	montanus	MON
Parus montanus	rhenanus	RHE
Parus montanus	salicarius	SAL
Parus montanus	uralensis	URA
Parus palustris	dresseri	DRE
Parus palustris	italicus	ITA
Parus palustris	kabardensis	KAB
Parus palustris	palustris	PAL
Parus palustris	stagnatilis	STA
Passer domesticus	balearoibericus	BAL
Passer domesticus	biblicus	BIB
Passer domesticus	domesticus	DOM
Passer domesticus	indicus	IND
Passer domesticus	niloticus	NIL
Passer domesticus	tingitanus	TIN
Passer hispaniolensis	hispaniolensis	HIS
Passer hispaniolensis	transcaspicus	TRA
Passer montanus	montanus	MON
Passer montanus	transcaucasicus	TRA
Perdix perdix	armoricana	ARM
Perdix perdix	canescens	CAN
Perdix perdix	hispaniensis	HIS
Perdix perdix	italica	ITA
Perdix perdix	lucida	LUC
Perdix perdix	perdix	PER
Perdix perdix	robusta	ROB
Perdix perdix	sphagnetorum	SPH
Petronia petronia	barbara	BAR
Petronia petronia	exigua	EXI
Petronia petronia	intermedia	INT
Petronia petronia	kirhizica	KIR
Petronia petronia	petronia	PET
Petronia petronia	puteicola	PUT
Phalacrocorax aristotelis	aristotelis	ARI
Phalacrocorax aristotelis	desmarestii	DES
Phalacrocorax aristotelis	riggenbachi	RIG
Phalacrocorax carbo	carbo	CAR
Phalacrocorax carbo	lucidus	LUC
Phalacrocorax carbo	maroccanus	MAR
Phalacrocorax carbo	sinensis	SIN
Phasianus colchicus	colchicus	COL
Phasianus colchicus	septentrionalis	SEP
Phasianus colchicus	talischensis	TAL
Phasianus colchicus	torquatus	TOR
Phoenicopterus ruber	roseus	ROS
Phoenicopterus ruber	ruber	RUB
Phoenicurus ochruros	aterimus	ATE
Phoenicurus ochruros	gibraltariensis	GIB
Phoenicurus ochruros	ochruros	OCH
Phoenicurus ochruros	phoenicuroides	PHO
Phoenicurus ochruros	rufiventris	RUF
Phoenicurus ochruros	semirufus	SEM
Phoenicurus phoenicurus	phoenicurus	PHO

Phoenicurus phoenicurus	samamiscus	SAM
Phylloscopus collybita	abietinus	ABI
Phylloscopus collybita	collybita	COL
Phylloscopus collybita	exsul	EXS
Phylloscopus collybita	fulvescens	FUL
Phylloscopus collybita	tristis	TRI
Phylloscopus fuscatus	fuscatus	FUS
Phylloscopus inornatus	inornatus	INO
Phylloscopus proregulus	proregulus	PRO
Phylloscopus trochiloides	nitidus	NIT
Phylloscopus trochiloides	plumbeitarsus	PLU
Phylloscopus trochiloides	viridanus	VIR
Phylloscopus trochilus	acredula	ACR
Phylloscopus trochilus	trochilus	TRO
Phylloscopus trochilus	yakutensis	YAK
Pica pica	bactriana	BAC
Pica pica	fennorum	FEN
Pica pica	galliae	GAL
Pica pica	mauritanica	MAU
Pica pica	melanotos	MEL
Pica pica	pica	PIC
Picus viridis	karelini	KAR
Picus viridis	sharpei	SHA
Picus viridis	viridis	VIR
Platalea leucorodia	balsaci	BAL
Platalea leucorodia	leucorodia	LEU
Plectrophenax nivalis	insulae	INS
Plectrophenax nivalis	nivalis	NIV
Plectrophenax nivalis	vlasowae	VLA
Plegadis falcinellus	falcinellus	FAL
Ploceus cucullatus	cucullatus	CUC
Ploceus manyar	flaviceps	FLA
Podiceps cristatus	cristatus	CRI
Podiceps grisegena	grisegena	GRI
Podiceps grisegena	holboellii	HOL
Podiceps nigricollis	nigricollis	NIG
Porphyrio porphyrio	aegyptiacus	AEG
Porphyrio porphyrio	caspius	CAS
Porphyrio porphyrio	madagascariensis	MAD
Porphyrio porphyrio	porphyrio	POR
Porphyrio porphyrio	seistanicus	SEI
Porzana pusilla	intermedia	INT
Porzana pusilla	pusilla	PUS
Prunella collaris	collaris	COL
Prunella collaris	montana	MON
Prunella collaris	subalpina	SUB
Prunella modularis	euxina	EUX
Prunella modularis	fuscata	FUS
Prunella modularis	hebridum	HEB
Prunella modularis	mabbotti	MAB
Prunella modularis	meinertzhageni	MEI
Prunella modularis	modularis	MOD
Prunella modularis	obscura	OBS
Prunella modularis	occidentalis	OCC
Psittacula krameri	borealis	BOR
Psittacula krameri	krameri	KRA
Psittacula krameri	manillensis	MAN
Pterocles alchata	alchata	ALC
Pterocles alchata	caudacutus	CAU
Pterocles orientalis	arenarius	ARE
Pterocles orientalis	orientalis	ORI
Puffinus puffinus	puffinus	PUF
Puffinus yelkouan	yelkouan	YEL
Pyrrhocorax graculus	digitatus	DIG
Pyrrhocorax graculus	graculus	GRA
Pyrrhocorax pyrrhocorax	barbarus	BAR
Pyrrhocorax pyrrhocorax	docilis	DOC
Pyrrhocorax pyrrhocorax	erythrorhamphus	ERY
Pyrrhocorax pyrrhocorax	pyrrhocorax	PYR
Pyrrhula pyrrhula	europoea	EUR
Pyrrhula pyrrhula	iberiae	IBE
Pyrrhula pyrrhula	pileata	PIL
Pyrrhula pyrrhula	pyrrhula	PYR

Pyrrhula pyrrhula	rossikowi	ROS
Quelea quelea	quelea	QUE
Rallus aquaticus	aquaticus	AQU
Rallus aquaticus	hibernans	HIB
Rallus aquaticus	korejewi	KOR
Regulus ignicapilla	balearicus	BAL
Regulus ignicapilla	ignapillus	IGN
Regulus ignicapilla	madeirensis	MAD
Regulus regulus	azoricus	AZO
Regulus regulus	buturlini	BUT
Regulus regulus	inermis	INE
Regulus regulus	regulus	REG
Regulus regulus	sanctaemariae	SAN
Remiz pendulinus	caspius	CAS
Remiz pendulinus	coronatus	COR
Remiz pendulinus	menzbieri	MEN
Remiz pendulinus	pendulinus	PEN
Riparia riparia	diluta	DIL
Riparia riparia	riparia	RIP
Riparia riparia	shelleyi	SHE
Saxicola torquata	armenica	ARM
Saxicola torquata	hibernans	HIB
Saxicola torquata	maura	MAU
Saxicola torquata	rubicola	RUB
Saxicola torquata	variegata	VAR
Sitta europaea	asiatica	ASI
Sitta europaea	caesia	CAE
Sitta europaea	caucasica	CAU
Sitta europaea	cisalpina	CIS
Sitta europaea	europaea	EUR
Sitta europaea	hispaniensis	HIS
Sitta europaea	levantina	LEV
Sitta europaea	rubignosa	RUB
Somateria mollissima	borealis	BOR
Somateria mollissima	faeroeensis	FAE
Somateria mollissima	mollissima	MOL
Stercorarius longicaudus	longicaudus	LON
Stercorarius longicaudus	pallescens	PAL
Sterna albifrons	albifrons	ALB
Sterna albifrons	guinae	GUI
Sterna bengalensis	bengalensis	BEN
Sterna bengalensis	torresii	TOR
Sterna dougallii	bangsi	BAN
Sterna dougallii	dougallii	DOU
Sterna fuscata	fuscata	FUS
Sterna hirundo	hirundo	HIR
Sterna maxima	albididorsalis	ALB
Sterna maxima	maxima	MAX
Sterna sandvicensis	acufflava	ACU
Sterna sandvicensis	sandvicensis	SAN
Streptopelia decaocto	decaocto	DEC
Streptopelia orientalis	meena	MEE
Streptopelia orientalis	orientalis	ORI
Streptopelia senegalensis	aegyptiaca	AEG
Streptopelia senegalensis	cambayensis	CAM
Streptopelia senegalensis	ermanni	ERM
Streptopelia senegalensis	phoenicophila	PHO
Streptopelia senegalensis	senegalensis	SEN
Streptopelia turtur	arenicola	ARE
Streptopelia turtur	hoggara	HOG
Streptopelia turtur	rufescens	RUF
Streptopelia turtur	turtur	TUR
Strix aluco	aluco	ALU
Strix aluco	mauritanica	MAU
Strix aluco	sanctinicolai	SAN
Strix aluco	siberiae	SIB
Strix aluco	sylvatica	SYL
Strix aluco	willkenskii	WIL
Sturnus vulgaris	causicus	CAU
Sturnus vulgaris	faroensis	FAR
Sturnus vulgaris	granti	GRA
Sturnus vulgaris	poltaratskyi	POL
Sturnus vulgaris	purpurascens	PUR

Sturnus vulgaris	tauricus	TAU
Sturnus vulgaris	vulgaris	VUL
Sturnus vulgaris	zetlandicus	ZET
Sylvia atricapilla	atricapilla	ATR
Sylvia atricapilla	dammholzi	DAM
Sylvia atricapilla	gularis	GUL
Sylvia atricapilla	heineken	HEI
Sylvia atricapilla	pauluccii	PAU
Sylvia borin	borin	BOR
Sylvia borin	woodwardi	WOO
Sylvia cantillans	albistriata	ALB
Sylvia cantillans	cantillans	CAN
Sylvia cantillans	inornata	INO
Sylvia cantillans	moltonii	MOL
Sylvia communis	communis	COM
Sylvia communis	icterops	ICT
Sylvia communis	volgensis	VOL
Sylvia conspicillata	conspicillata	CON
Sylvia conspicillata	orbitalis	ORB
Sylvia curruca	althea	ALT
Sylvia curruca	blythi	BLY
Sylvia curruca	caucasica	CAU
Sylvia curruca	curruca	CUR
Sylvia curruca	halimodendri	HAL
Sylvia curruca	minula	MIN
Sylvia hortensis	crassirostris	CRA
Sylvia hortensis	hortensis	HOR
Sylvia melanocephala	leucogastra	LEU
Sylvia melanocephala	melanocephala	MEL
Sylvia melanocephala	momus	MOM
Sylvia nisoria	nisoria	NIS
Sylvia sarda	balearica	BAL
Sylvia sarda	sarda	SAR
Sylvia undata	dartfordiensis	DAR
Sylvia undata	toni	TON
Sylvia undata	undata	UND
Tachybaptus ruficollis	capensis	CAP
Tachybaptus ruficollis	iraquensis	IRA
Tachybaptus ruficollis	ruficollis	RUF
Tarsiger cyanurus	cyanurus	CYA
Tetrao urogallus	aquitanicus	AQU
Tetrao urogallus	major	MAJ
Tetrao urogallus	rudolfi	RUD
Tetrao urogallus	taczanowskii	TAC
Tetrao urogallus	urogallus	URO
Tichodroma muraria	muraria	MUR
Tringa totanus	robusta	ROB
Tringa totanus	totanus	TOT
Tringa totanus	ussuriensis	USS
Troglodytes troglodytes	borealis	BOR
Troglodytes troglodytes	cypristes	CYP
Troglodytes troglodytes	fridariensis	FRI
Troglodytes troglodytes	hebridensis	HEB
Troglodytes troglodytes	hirtensis	HIR
Troglodytes troglodytes	hyrcanus	HYR
Troglodytes troglodytes	indigenus	IND
Troglodytes troglodytes	islandicus	ISL
Troglodytes troglodytes	juniperi	JUN
Troglodytes troglodytes	kabyorum	KAB
Troglodytes troglodytes	koenigi	KOE
Troglodytes troglodytes	troglodytes	TRO
Troglodytes troglodytes	zetlandicus	ZET
Turdus iliacus	coburni	COB
Turdus iliacus	iliacus	ILI
Turdus merula	aterrimus	ATE
Turdus merula	azorensis	AZO
Turdus merula	cabrerae	CAB
Turdus merula	intermedius	INT
Turdus merula	mauritanicus	MAU
Turdus merula	merula	MER
Turdus merula	syriacus	SYR
Turdus philomelos	clarkei	CLA
Turdus philomelos	hebridensis	HEB

Turdus philomelos	philomelos	PHI
Turdus torquatus	alpestris	ALP
Turdus torquatus	amicorum	AMI
Turdus torquatus	torquatus	TOR
Turdus viscivorus	deichleri	DEI
Turdus viscivorus	viscivorus	VIS
Tyto alba	affinis	AFF
Tyto alba	alba	ALB
Tyto alba	detorta	DET
Tyto alba	erlangeri	ERL
Tyto alba	ernesti	ERN
Tyto alba	gracilirostris	GRA
Tyto alba	guttata	GUT
Tyto alba	schmitzi	SCH
Upupa epops	epops	EPO
Upupa epops	major	MAJ
Upupa epops	senegalensis	SEN
Uria aalge	aalge	AAL
Uria aalge	albionis	ALB
Uria aalge	hyperborea	HYP
Vireo olivaceus	olivaceus	OLI
Zoothera dauma	aurea	AUR