

# **KEY CONCEPTS OF ARTICLE 7(4) OF DIRECTIVE 79/409/EEC**

PERIOD OF REPRODUCTION AND PRENUPTIAL MIGRATION  
OF  
ANNEX II BIRD SPECIES IN THE 27 EU MEMBER STATES

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## **INTRODUCTION**

### **1. Objective and context**

#### **1.1. Objective**

This report presents information on the timing of the reproduction period and of pre-nuptial migration (return to the breeding areas) for bird species listed on Annex II of the Directive on the conservation of wild birds (79/409/EEC) occurring in EU27. Annex II lists those bird species that, owing to their population level, geographic distribution and reproductive rate, may be hunted throughout the Community (part 1) or in the Member States in respect of which they are indicated (part 2).

This document is an updated and extended version of the original "Key Concepts" report published in September 2001. Since the publication of the original report, 12 new countries have become members of the EU. Furthermore, much new information on the population size and trends has also become available for the entire EU since 2001. Therefore this report is primarily intended to extend information to the EU-12 new Member States but it also comprises as much as possible new information on the status of the species in the 15 Member States that were covered by the first version. However, a thorough update of the document remains necessary in the future to take into account the latest data for all Member States.

#### **1.2. Context**

The need for this information arose from a Court of Justice judgement in 1994<sup>1</sup>. The Court concluded that the closing date for the hunting of migratory birds and waterfowl must be fixed in accordance with a method that guarantees complete protection of those species during the period of pre-nuptial migration<sup>2</sup>.

Although the Court only examined the question of fixing closing dates for hunting of migratory species, a matter related to the start of the pre-nuptial migration, its interpretation (namely the requirement of 'complete protection'), is also relevant to the fixing of opening dates, a matter related to the end of the period of reproduction.

The exercise to develop a "Key Concept" report was initiated by the Birds Directive's ORNIS Committee (Committee for the adaptation to technical and scientific progress, which is comprised of official representatives of the competent authorities in the Member States and chaired by the European Commission) in November 1998. Both the Committee and the Commission recognised the need to have a clear interpretation of key concepts of Article 7(4) in the light of the 1994 Court of Justice's ruling, and how to apply them to the bird species of Annex II.

The report therefore aimed to summarise information on the period of pre-nuptial migration and reproduction of each Annex II species for each Member State where that species occurs.

As a basis for data compilation a general scheme for 'period of reproduction', including the different possible stages was developed. The sequence and importance of the different elements of this scheme vary in relation to the biology of different species.

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<sup>1</sup> Case C435/92, Association pour la protection des animaux sauvages and other v Préfet de Maine-et-Loire and Préfet de Loire-Atlantique. Reference for a preliminary ruling: Tribunal Administratif de Nantes, France. European Court Reports, 1994, page I-0067.

<sup>2</sup> This case also highlighted other difficulties in applying Article 7(4) linked to staggered closing dates (different closing dates for different species) These are the risk of confusion between different species, which may lead to the shooting of species for which the hunting is already closed. There is also the risk of disturbance caused by hunting to other bird species for which hunting has already closed. These elements are not covered by the present exercise.

Likewise, a working definition was agreed for 'return to the breeding areas'. Further details on these definitions and their application are given in Section 2 of the introduction. The common methodology for collecting the data, including the gathering, processing and presentation of data, is also described in this section.

It must be recognised that there are likely to be some differences in quality of data for species across the Community. In order to ensure a science-based approach to underpin implementation of the directive there will be therefore a need to regularly update this review, taking into account new and better data on these species as it becomes available.

Furthermore, the data for individual species is presented at a national level and does not take into account any regional differences that may exist in relation to pre-nuptial migration and reproduction periods within a Member State. Where hunting seasons are fixed at regional or sub-regional levels there will be a need for more detailed information at the appropriate geographical and administrative levels.

The document provides a necessary step in clarifying the implications arising from the national application of the Court of Justice ruling. However, this work should not be read in isolation as it forms part of an ongoing exercise in interpreting the provisions of the Birds Directive relating to hunting. Furthermore, the data indicate that there are some problems in the definition of hunting seasons under Article 7(4) alone, varying in scale and degree, in every Member State.

Against this background, the Commission is therefore proposing to continue the work on interpretation by examining other key concepts of the Directive relating to hunting including the principles of wise use and ecologically balanced control. The Commission has now developed and updated the "Guidance document on hunting under Council Directive 79/409/EEC on the conservation of wild birds". This interpretation guide forms part of a broader initiative on 'sustainable hunting' under of the Birds Directive which the Commission has initiated with the Member States, the Federation of Associations for Hunting and Conservation of the EU (FACE) and BirdLife International. The initiative is based on a programme of scientific, conservation as well as training and awareness measures. The global warming caused by greenhouse gasses will most like lead to considerable climate change in the coming decades. This is an addition reason for updating this report regularly, as it must be expected that many migratory birds will change the migration and breeding periods in the coming years.

## **2. Methodology**

### **2.1 Definitions**

Initial discussions by the ORNIS Committee's Scientific Working Group in November 1998 agreed the following working definitions:

#### **Period of reproduction<sup>1</sup>**

'**Breeding season**'<sup>2</sup> was defined using the definition of Cramp & Simmons (1977)<sup>3</sup>: "*the breeding season is the period during which a species lays and incubates its eggs and rears its young to the flying stage.*" However, the '**reproduction period**' not only covers the breeding season but also includes the occupation of the breeding areas as well as the period of dependence of young birds after leaving the nest (previously

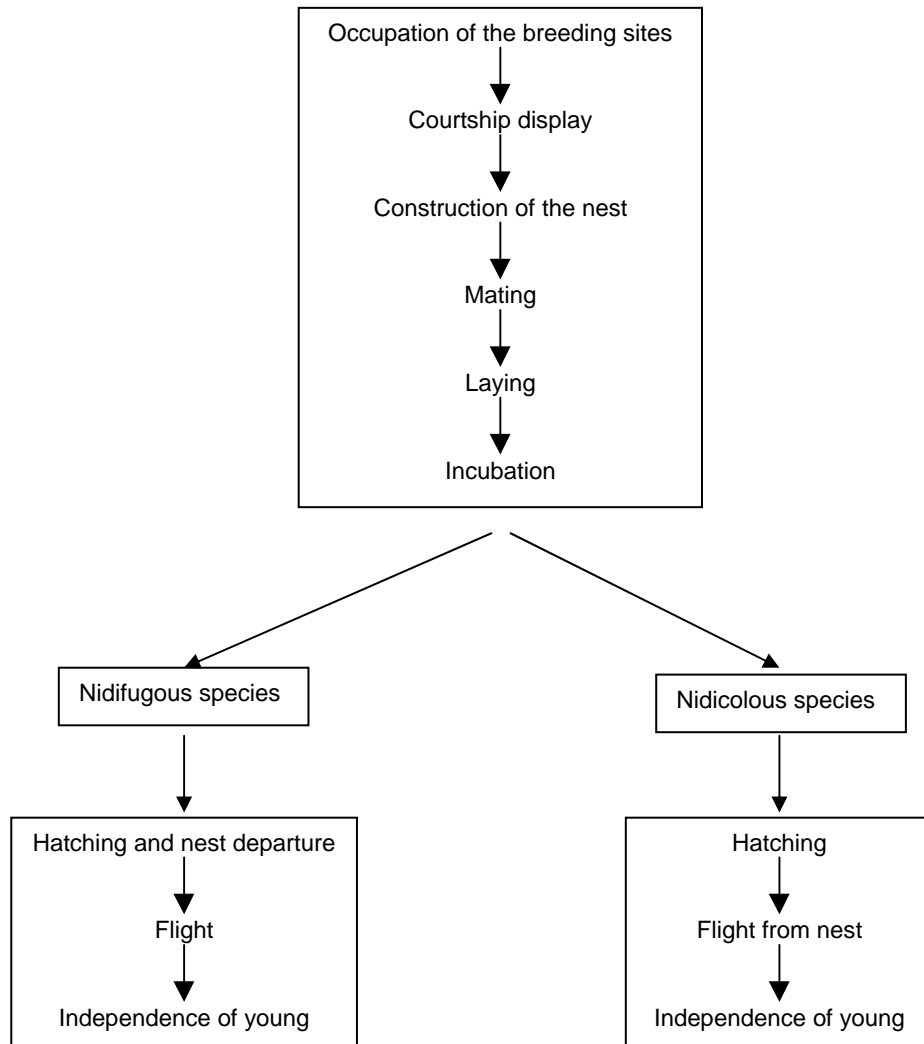
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<sup>1</sup> Note that Article 7(4) refers both to 'rearing season' and 'the various stages of reproduction' (cf. French version 'les différents stades de reproduction et de dépendance'; German version 'Einzelnen Phasen der Brut- und Aufzuchtzeit')

<sup>2</sup> This term is considered equal and better English than the term 'rearing season' used in Article 7(4).

<sup>3</sup> Cramp, S. & Simmons, K.E.L. (eds). 1977. *Birds of the Western Palearctic*, Volume 1. Oxford, Oxford University Press. 722 pp.

recognised in the 1993 Commission report on the application of the Birds Directive<sup>1</sup>). The following scheme, which deals with the different stages of reproduction, was agreed as an appropriate general scheme for the period of reproduction. The sequence and importance of the elements of this general scheme may vary by species according to differences in breeding biology.



### **Return to the breeding areas<sup>2</sup>**

Return to the breeding areas is an annual displacement, in one of more stages, of birds from their wintering areas back to nesting grounds. The wintering period ends with departure from the wintering areas where migrant birds have been more or less stationary since the end of the post-nuptial (autumn) migration. The return to the breeding areas is commonly called 'pre-nuptial migration' or 'spring migration'.

In Europe, return migration movements are mostly directed north, northeast or northwest. This means that migrants from African winter quarters first cross the Mediterranean, then pass through central Europe on their way to their Northern European breeding areas. This migration normally takes several weeks (including breaks at resting places on the way) but individual birds can complete the journey in

<sup>1</sup> COM (93) 572 final. *Second report on the application of Council Directive 79/409/EEC on the conservation of wild birds.* Brussels, 24 November 1993.

<sup>2</sup> "return to breeding areas" is taken as a synonym of "return to the rearing grounds"

one or a few days. The start, end and length of the migration season in a particular country are determined by a number of biological, geographical and methodological factors.

Regarding the beginning of the pre-nuptial migration, all individuals of a species within a same region do not end their wintering period at the same time. Not only are there individual differences, but within a single wintering area, birds of different populations having different annual cycles come together. Birds belonging to northern populations, for example, often start their return flight much later than birds breeding more to the south. An extreme case is the so-called 'leapfrog' migration (e.g. in the Redshank): birds breeding in more northern latitudes travel greater distances and move to more southerly wintering areas than those that nest farther south.

The fact that birds leave a wintering area does not necessarily mean that they start their return migration. They can move to other wintering quarters because of changes in the local ecological conditions, exhaustion of food resources, disturbance or changes in climatic conditions. When migratory and sedentary birds of the same species coexist on the same wintering grounds, the situation can be even more complex. Thus, apparent discrepancies may arise among the data for large countries. Major differences between neighbouring regions can reflect ecological differences more than actual differences in migration timing. For example, although the southern parts of Spain (Andalucía) and Italy (Sicilia) are situated on the same latitude (37th) this does not necessarily imply similar arrival dates of migrants because different populations might be involved.

The length of the migration period does not only depend on the north-south extension of the country concerned but also on the availability and the use of resting places. A typical example concerns the Bar-tailed Godwits, which migrate from the African winter quarters to Siberian breeding areas. After a continuous flight from the Banc d'Arguin in Western Africa, they stay several weeks in the Wadden Sea. The migration period length is also determined by the quantity and the geographical range of the birds involved: a small population can pass in a few days while a numerous species with an extensive breeding range can have a prolonged migratory season encompassing several months. Moreover, the migration period can also be extended if a country is passed over by several populations with different time schedules. Methodological reasons can also account for a short period: the start and end dates of migration are not recorded accurately because it only involves small numbers of birds which are often not noted if few observations are available (low chance of recording). As said before, availability of data differs very much from species to species (behavioural differences) and from country to country (e.g. numbers of observers).

In general, the beginning of the return migration can only be estimated by comparison of data from many different regions of the European Union, analysis of ring recoveries and consideration of arrival dates in the breeding areas.

Information defining the timing of pre-nuptial migration was based on statistics relating to populations rather than individual birds.

## **2.2 Nature of the information**

### **Gathering of data**

For the 2001 Key Concepts report the data was compiled in close collaboration with the competent conservation authorities in each of the Member States as well as with BirdLife International and the Federation of Associations for Hunting and Conservation of the EU (FACE). All parties to the exercise were asked to provide the best available information on Annex II species, including where possible with reference to published

sources. Accordingly, information for the 2001 version was sought from the national representatives on the Scientific Working Group (SWG) for the relevant bird species. Initially data was provided on a questionnaire prepared and circulated on December 1998 by the Commission services. Subsequently, and according to the development of the work, updated information was provided either on questionnaires or other forms (e.g. tables).

The additional data on pre-nuptial migration and reproduction periods within the new Member States that were added to this version of the report have been provided by the competent conservation authorities in each country or, in case of lack of data, by the consulted stakeholders.

For this updated version, questionnaires were not used and all new information was provided by Member States authorities and/or their designated experts and/or stakeholders.

Some bird species have been subjected to more intensive study than others, whilst some countries have a long history of ornithological research and others have more restricted information. Thus, the quality and quantity of information presented is variable both between countries and between species. Nonetheless, given these constraints the report summarises data that is considered to be as much as possible the best available. The report presents explicit references for all data allowing an 'audit trail' to original sources.

### **Processing of data**

In connection with the preparation of the 2001 version of this report a small advisory group was formed including experts from the SWG, FACE and BirdLife International. This group discussed various aspects of the draft, compiled data and where information for some species appeared to be anomalous; these were highlighted, via the Commission, with the relevant Member State's SWG representative.

This updated version of the document results from a consultation of the SWG representatives and/or relevant National Authorities and stakeholders mainly aimed at filling in missing data, especially for new Member States. The data were initially screened with the assistance of external contractors. Where information for some species was missing or appeared to be inconsistent, this was discussed directly with the relevant National Authorities. Data provided by National authorities have been given priority as long as they are supported by acknowledged references.

### **Presentation of data**

To avoid spurious precision and to allow for normal between-year variation in timing of migration and breeding events, the data presentations summarise the data on reproduction and return migration in 'decades' or ten-day periods (i.e. 1-10, 11-20, 21 up to 31 in each month).

A number of general principles were adopted in the gathering of data:

- Where there is a range in timing of pre-nuptial migration or breeding (as will occur in most countries of significant size), the data used relate to the earliest periods in each of the Member States concerned. This is generally relating to the southernmost parts or lowest altitudes. Likewise, for the end of the reproduction, the data used refers to the latest dates. This means that regional differences may exist for prenuptial migration and reproduction periods within the territory of one Member State, which may be relevant. The Court considered that *"on condition that complete protection of the species is guaranteed, the fixing of closing dates which vary between the different parts of the territory of a Member State is compatible with the directive."*

- Where significant between-year variation occurs on a regular basis, data from the earliest periods have always been taken;
- Where different populations of the same species migrate through a country at different times, information relating to the earliest migrating population has been used. In some cases, where different populations (i.e. different subspecies or different flyways) are clearly distinguishable in the field their correspondent timings were given.
- Extreme, outlying and erratic data have been excluded due to their unpredictable nature and falling outside normal patterns of variation between and within years.

### **2.3 Need for future regular review**

In some Member States, progressively earlier breeding<sup>1</sup> and migration<sup>2</sup> of some species has been demonstrated consequent upon changing climate that is resulting in warmer spring's weather in Europe. This, and climate-induced changes in distributions<sup>3</sup> indicate that whilst the data presented here is a good current summary of relating to recent years, there will be a need for regular review and updating. Furthermore, the evolution on the knowledge of reproduction biology and ecology and of migration's phenology may also require future updating.

A thorough update of the document still needs to be done, in order to take into account the most recent references in each Member State and to lift some discrepancies between neighbouring countries<sup>4</sup>.

### **3. Criteria used to identify the beginning and end of the period of reproduction**

In general, for migratory species, the stage of reproduction identifying the start of the period of reproduction is the 'occupation of the breeding sites'. However, the occupation of the breeding sites is generally difficult to use where the species is mainly locally resident or where there is a mixing of locally resident and migratory birds. In these cases, the stage identifying the start of the period of reproduction is the 'construction of the nest'. In those situations where the stage retained is difficult to recognise in the field, a mention is made to the corresponding number of decades counted from the start of egg laying (generally well known for most species).

- In general, the stage retained to identify the end of the period of reproduction is the 'full flight of young birds', i.e. fledging of all broods including second or third broods for some species (e.g. rails / Rallidae, pigeons / Columbidae, thrushes / Turdidae). Full flight means that young birds are capable of sustained, continuous flight to a similar capacity as adult birds and corresponds to the 'independence of young birds. Nonetheless, for certain species (e.g. crows / Corvidae) the full flight occurs before 'independence of young birds'. Young birds are independent when the loss of parental care and/or feeding does not significantly lower survival prospects of young. In those situations where the 'full flight/independence of young' is difficult to establish in the field, a mention is made to the corresponding number of decades counted from the end of hatching.

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<sup>1</sup> Crick, H.Q.P., Dudley, C., Glue, D.E. & Thomson, D.L. 1997. UK birds are laying eggs earlier. *Nature* 388: 526.

<sup>2</sup> Sparks, T.H. 1999. Phenology and the changing pattern of bird migration in Britain. *International Journal of Biometeorology* 42: 134-138.

<sup>3</sup> Thomas, C. & Lennon, J. 1999. *Nature* 399: 213.

<sup>4</sup> For example, Denmark has indicated that the periods appearing for their country do not reflect the latest information.



The stage identifying the start and the end of the period of reproduction for each individual Annex II bird species is given in the following table:

<b>Species</b>	<b>Start</b>	<b>End</b>
<i>ANATIDAE</i>		
1 - <i>Cygnus olor</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
2 - <i>Anser fabalis</i>	occupation of the breeding sites	full flight of young birds
3 - <i>Anser brachyrhynchus</i>	<i>Does not breed in the EU territory covered by the Directive</i>	
4 - <i>Anser albifrons</i>	<i>Does not breed in the EU territory covered by the Directive</i>	
5 - <i>Anser anser</i>	occupation of the breeding sites	full flight of young birds
6 - <i>Branta canadensis</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
7 - <i>Branta bernicla</i>	<i>Does not breed in the EU territory covered by the Directive</i>	
8 - <i>Anas penelope</i>	occupation of the breeding sites	full flight of young birds
9 - <i>Anas strepera</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
10 - <i>Anas crecca</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
11 - <i>Anas platyrhynchos</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
12 - <i>Anas acuta</i>	occupation of the breeding sites	full flight of young birds
13 - <i>Anas querquedula</i>	occupation of the breeding sites	full flight of young birds
14 - <i>Anas clypeata</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds

**Key concepts of Article 7(4): Version2009**

<b>Species</b>	<b>Start</b>	<b>End</b>
15 - <i>Netta rufina</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
16 - <i>Aythya ferina</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
17 - <i>Aythya fuligula</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
18 - <i>Aythya marila</i>	Occupation of the breeding sites	full flight of young birds
19 - <i>Somateria molissima</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
20 - <i>Clangula hyemalis</i>	occupation of the breeding sites	full flight of young birds
21 - <i>Melanitta nigra</i>	occupation of the breeding sites	full flight of young birds
22 - <i>Melanitta fusca</i>	occupation of the breeding sites	full flight of young birds
23 - <i>Bucephala clangula</i>	occupation of the breeding sites	full flight of young birds
24 - <i>Mergus serrator</i>	occupation of the breeding sites	full flight of young birds
25 - <i>Mergus merganser</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
<b>TETRAONIDAE</b>		
26 - <i>Bonasa bonasia</i>	courtship display (4 decades before egg laying)	Independence of young birds (c. 3-4 decades after hatching)
27 - <i>Lagopus lagopus</i>	continuous occupation of breeding territory	Independence of young birds (c. 6 decades after hatching)
28 - <i>Lagopus mutus</i>	continuous occupation of breeding territory	Independence of young birds (c. 6 decades after hatching)
29 - <i>Tetrao tetrix</i>	courtship display on lek sites (4 decades before egg laying)	Independence of young birds (c. 8 decades after hatching)
30 - <i>Tetrao urogallus</i>	courtship display on lek sites (6 decades before egg laying)	Independence of young birds (c. 9 decades after hatching)
<b>PHASIANIDAE</b>		
31 - <i>Alectoris chukar</i>	occupation of breeding territory by singing males (4 decades before egg laying)	Independence of young birds (c. 6 decades after hatching)
32 - <i>Alectoris graeca</i>	continuous occupation of breeding territory (4 decades before egg laying)	Independence of young birds (c. 6 decades after hatching)

**Key concepts of Article 7(4): Version2009**

<b>Species</b>	<b>Start</b>	<b>End</b>
33 - <i>Alectoris rufa</i>	continuous occupation of breeding territory (4 decades before egg laying)	Independence of young birds (c. 6 decades after hatching)
34 - <i>Alectoris barbara</i>	continuous occupation of breeding territory (4 decades before egg laying)	Independence of young birds (c. 6 decades after hatching)
35 - <i>Perdix perdix</i>	continuous occupation of breeding territory (6 decades before egg laying)	Independence of young birds (c. 6 decades after hatching)
36 - <i>Coturnix coturnix</i>	occupation of the breeding sites by singing males	Independence of young birds (c. 3 decades after hatching)
37 - <i>Phasianus colchicus</i>	courtship display (2 decades before egg laying)	Independence of young birds (c. 6 decades after hatching)
<b>MELEAGRIDIDAE</b>		
38 - <i>Meleagris gallopavo</i>	<i>no data in Europe</i>	
<b>RALLIDAE</b>		
39 - <i>Rallus aquaticus</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds (3 decades after hatching)
40 - <i>Gallinula chloropus</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds (5 decades after hatching)
41 - <i>Fulica atra</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds (6 decades after hatching)
<b>HAEMATOPODIDAE</b>		
42 - <i>Haematopus ostralegus</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
<b>CHARADRIIDAE</b>		
43 - <i>Pluvialis apricaria</i>	occupation of the breeding sites	full flight of young birds
44 - <i>Pluvialis squatarola</i>	<i>does not breed in the EU territory covered by the Directive</i>	
45 - <i>Vanellus vanellus</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
<b>SCOLOPACIDAE</b>		
46 - <i>Calidris canutus</i>	<i>does not breed in the EU territory covered by the Directive</i>	
47 - <i>Philomachus pugnax</i>	occupation of the breeding sites	full flight of young birds
48 - <i>Lymnocyptes minimus</i>	occupation of the breeding sites	full flight of young birds (c. 4 decades after hatching)

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<b>Species</b>	<b>Start</b>	<b>End</b>
49 - <i>Gallinago gallinago</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites with courtship display</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds (c. 4 decades after hatching)
50 - <i>Scolopax rusticola</i>	occupation of the breeding sites (roding)	full flight of young birds (c. 4 decades after hatching )
51 - <i>Limosa limosa</i>	occupation of the breeding sites	full flight of young birds
52 - <i>Limosa lapponica</i>	occupation of the breeding sites	full flight of young birds
53 - <i>Numenius phaeopus</i>	occupation of the breeding sites	full flight of young birds
54 - <i>Numenius arquata</i>	occupation of the breeding sites	full flight of young birds
55 - <i>Tringa erythropus</i>	occupation of the breeding sites	full flight of young birds
56 - <i>Tringa totanus</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
57 - <i>Tringa nebularia</i>	occupation of the breeding sites	full flight of young birds
<b>LARIDAE</b>		
58 - <i>Larus ridibundus</i>	courtship display at breeding sites (2 decades before egg laying)	full flight of young birds
59 - <i>Larus canus</i>	courtship display at breeding sites (2 decades before egg laying)	full flight of young birds
60 - <i>Larus fuscus</i>	courtship display at breeding sites (3 decades before egg laying)	full flight of young birds
61 - <i>Larus argentatus</i>	courtship display at breeding sites (3 decades before egg laying)	full flight of young birds
62 - <i>Larus cachinnans</i>	courtship display at breeding sites (3 decades before egg laying)	full flight of young birds
63 - <i>Larus marinus</i>	courtship display at breeding sites (3 decades before egg laying)	full flight of young birds
<b>COLUMBIDAE</b>		
64 - <i>Columba livia</i>	construction of the nest	full flight of young birds
65 - <i>Columba oenas</i>	occupation of the breeding sites, together with courtship display	full flight of young birds
66 - <i>Columba palumbus</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
67 - <i>Streptopelia decaocto</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds

**Key concepts of Article 7(4): Version2009**

<b>Species</b>	<b>Start</b>	<b>End</b>
68 - <i>Streptopelia turtur</i>	occupation of the breeding sites	full flight of young birds
<b>ALAUDIDAE</b>		
69 - <i>Alauda arvensis</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds (c. 3 decades after hatching); semi-nidicolous species
<b>TURDIDAE</b>		
70 - <i>Turdus merula</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
71 - <i>Turdus pilaris</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
72 - <i>Turdus philomelos</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
73 - <i>Turdus iliacus</i>	occupation of the breeding sites	full flight of young birds
74 - <i>Turdus viscivorus</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	full flight of young birds
<b>CORVIDAE</b>		
75 - <i>Garrulus glandarius</i>	construction of the nest	Independence of young birds (c. 5 decades after hatching)
76 - <i>Pica pica</i>	construction of the nest, including re-lining of old nests (3 decades before egg laying)	Independence of young birds (c. 7 decades after hatching)
77 - <i>Corvus monedula</i>	construction of the nest, including re-lining of old nests	Independence of young birds (c. 7 decades after hatching)
78 - <i>Corvus frugilegus</i>	continuous occupation of breeding colonies	Independence of young birds (c. 7 decades after hatching)
79 - <i>Corvus corone</i>	construction of the nest, including re-lining of old nests	Independence of young birds (c. 6 decades after hatching)
<b>STURNIDAE</b>		
80 - <i>Sturnus vulgaris</i>	<ul style="list-style-type: none"> <li>• occupation of the breeding sites where it is mainly migratory</li> <li>• construction of the nest in all other cases</li> </ul>	Independence of young birds (c. 3 decades after hatching)

#### **4. Bird Species Datasheets**

The description of each species consists of four parts:

1. The first part includes a short text on the distribution, movements, population size and relevant biological and behavioural aspects for each of the 80 species. This information is based on general literature (see page 15) and is given to provide a global perspective of the Member States data. This information was originally compiled by the IRSNB and revised by the SWG. In this edition of the report the text has been extensively updated to include new information and to adjust the EU populations to cover 27 Member States.
2. This is followed by a table that gives an overview of the occurrence of the species in the EU - if it is resident, breeding, migrating or wintering in the Member State (or a combination of this). The information in the tables is primarily based on data from the general references (page 15). A light grey bar indicates that the species does not regularly breed or migrate through the Member State in spring.
3. This is followed by two tables concerning the period of reproduction based on data provided by the Member State. The first table shows the stage used to identify the beginning of the reproduction period, with relevant comments. The second table gives the period of reproduction (in ten days intervals - decades) as provided by the Member States. A light grey bar indicates if the species does not breed regularly in the particular Member State. At the end of this part, important comments and conclusions are added. These include comments on the species breeding range and the stages identifying the start and the end of the reproduction period.
4. The final part indicates the period of prenuptial migration based on data provided by the Member State. This comprises a table assessing the degree of difficulty to identify the beginning of the prenuptial migration period and the references used; a second table with the periods of the prenuptial migration (in decades). A light grey bar indicates if the species does not migrate through the particular Member State in spring. At the end of this part, important comments and conclusions are added. These include comments on the species movements (e.g. wintering areas) and comments on the identification of return movements.

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