

# 11 BIRD SITE REGISTER

Zoological Museum, Finnish Museum of Natural History  
Bird Site Register / Zoological Museum

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SF-00100 Helsinki

**1. BACKGROUND AND AIMS.** To monitor breeding birds and declare their need for protection, inventories of valuable bird sites have been started in many countries. In Finland this was started in 1986 in connection with the Second Bird Atlas project. The Bird Site Register is designed to be a data bank which supports other monitoring and is updated annually between atlas projects.

The purpose of the Bird Site Register is to monitor the state of nature reserves and areas included in national protection programmes, and to find out other sites valuable for breeding birds, as well as to detect factors threatening the natural state of these sites or their breeding birds. Sites and their breeding bird fauna should preferably be monitored continuously to reveal changes in the environment. Environmental authorities use this information, for example, to evaluate the need for protection of a particular site and the success of conservation. The Bird Site Register is also an important tool for preserving natural areas and threatened species at the municipality level. The Register is useful for birdwatchers, researchers or local ornithological societies in mapping threatened species and their habitats. It serves bird atlas projects, because an observer without previous knowledge of a particular atlas square may be guided to visit the most important bird sites. – Bird Site Register information is not collected for bird tourism; it is confidential and used for research and bird conservation.

The Bird Site Register is a concrete way of co-operating between birdwatchers and environmental authorities. It benefits both parties, but first of all birds and nature.

**2. BIRD SITES TO BE REGISTERED.** An important part of the Bird Site Register consists of nature reserves and areas listed by the Ministry of the Environment for the conservation programmes of wetlands, peatlands and rich forests. The most important areas, or valuable sites

at international or national level, have been listed by 10x10 km squares using the national uniform grid. Observers may get lists of these sites from the Museum on request by giving the coordinates of their observation squares.

Other, unprotected but valuable breeding sites outside the above programmes are included in the Bird Site Register. These include, e.g., lakes and sea bays with a rich avifauna, wetlands, mires and peatlands, open islands, extensive shore meadows, rich forests, old forests and important bird colonies. Sometimes the value of a bird site may be difficult to evaluate but it is not necessary to make an evaluation – it is enough if the sites of at least moderate significance for the breeding birds in the region are reported. When there are more data, various conservation indexes for habitats and areas may be calculated. After that it is easier to define the grade of the sites in the Register and which kinds of sites need more study. One is asked to report too many sites rather than too few, especially if the region has only a few patches of the particular habitat left and the habitat is somehow threatened. Experienced observers are best in evaluating the importance of a particular site in the region for future preservation of populations of threatened and less numerous bird species. – Remember that the Bird Site Register is not intended to be a memorial of disappeared species, but to actively help in preserving birds and their breeding sites in your home range!

**3. REPORTING BIRD SITES SUBSEQUENTLY.** Data on valuable bird sites are collected for the Register at all levels, from single-visit lists of valuable breeding birds to pair estimates based on thorough mapping censuses of all the species in the area.

The following procedure may be used when gathering information on valuable bird sites for the Register:

(1) List all bird sites you know previously from your observation area. Check from a map that every important site was included.

(2) Add to the list the areas covered by conservation programmes (catalogues obtainable at the Museum, see above).

(3) Fill in Bird Site Register Form 11A for every site you have visited. Both old and recent observations are valuable. Send the forms to the Museum as soon as possible after completing them.

**4. REVISION OF REGISTER DATA.** Old observations are often haphazard and give an insufficient description of a site. Exact and up-to-date information is most useful for conservation. Even from nature reserves there are often no data on the avifauna or reports are too old to be useful. By checking valuable bird sites and reporting data on them to the Museum one can help in protecting such areas and at the same time improve knowledge on local bird species, because these sites often hold an unusual bird fauna.

New data may also be reported on a Bird Site Register Form. However, if one visits a site several times or carries out a thorough inventory, it would be better to fill in Bird Site Inventory Form 11C–D. Information on the numbers of all breeding birds of a site are much more valuable than a mere list of the most valuable species. One may provide information on breeding evidence and abundance of species on Form 11C–D even if the area was visited only once. – Note that all data on the Bird Site Inventory Form have to be based only on observations within the bird site in question (see Sect. 6). Because basic data of the site is gathered with the Bird Site Register Form, it should be sent together with the Bird Site Inventory Form.

**5. SPECIAL STUDIES.** Censuses or other special studies which give a complete species list and pair numbers are most useful for the Register. Monitoring methods should be chosen according to the type of habitat. The details of field work and time schedule are determined according to the method (see the instructions for different mapping projects in this Manual).

The mapping method is most effective in small areas. It is well suited to most kinds of terrestrial and wetland habitats. One should pay several visits to the area during the breeding

season. Small patches may be mapped satisfactorily even during five visits, as long as enough time is available for the area to be thoroughly surveyed (see Sect. 14 in the instructions of mapping censuses in Ch. 6 of this Manual).

In large areas (e.g. extensive mires and forests) line transect censuses of breeding land birds may be suitable for detecting breeding species and estimating their pair numbers. Bird densities of different habitats can be calculated from the results of the main belt, and the survey belt observations may be used for estimating general densities and pair numbers over the whole area. Point counts may be applied for rough estimation of abundance indexes, when mapping or line transect methods cannot be used due to lack of time or trespassing problems. Still, the abundance indexes based on point counts are more useful than a mere species list supplemented with breeding evidences. If a transect of recommended length (4–6 km) or a route with 20 counting points cannot be censused (no time, small area), one may walk a shorter transect (and possibly census only the birds of the main belt) or count only a few points. In general, monitoring methods should be modified to be applicable to different bird sites and habitats.

If there is a water body within a site, waterfowl should be censused either by the round or point count method. If the latter is used, the sectors of the points should cover the whole water body. Islands in an archipelago should be censused according to instructions for archipelago birds censuses in Ch. 5 of this Manual.

One may use modified versions of the raptor census methods for counting the number of raptor pairs at bird sites (mapping territories and searching for nests). Special censuses of hole-nesting and nocturnal singing species are also recommended.

Valuable information on nesting habitats may be obtained by filling in Nest Record Cards of nests found at bird sites. A Nest Record Card can also be used for describing habitats of rare or threatened species, even if a nest was not found (see instructions for monitoring threatened species in Ch. 13 of this Manual, Sect. 5). More detailed instructions for describing bird habitats are available from the Museum on request.

**6. FILLING IN THE FORMS.** Bird Site Register Form 11A is filled in for all areas reported

to the Bird Site Register, regardless of whether they are reported on other forms. If one has visited an area several times and filled in Bird Site Inventory Form 11C-D, a basic description of the site should be given on Form 11A. All the forms of a site should be sent together to the Museum (see Sect. 4). Instructions for filling in the forms are on page 11B.

**7. RESULTS OF SPECIAL STUDIES.** Results of special censuses and other studies made at a bird site (see Sect. 5) are reported on the special forms for each project. The name and national grid coordinates (accuracy 1x1 km) of the bird site are written in the left upper margin. The forms are sent together with the Bird Site Register Form and the Bird Site Inventory Form. If a method has been modified from those described in this Manual, give a note about changes in the remarks section of the form.

**8. COMPLETING DATA ON A BIRD SITE IN FOLLOWING YEARS.** Basic information on a bird site is useful even if reported only once. If there are no reasons to believe that any major changes are taking place in the natural state of the bird site, it is not necessary to repeat the inventory every year but instead at regular intervals (e.g. five years). Additional visits may, however, reveal new species or marked fluctuations, which always should be reported.

*In an ideal case, the bird fauna is censused  
Return bird site forms to the Museum during  
Autumn!*

#### SELECTED REFERENCES

- Dybbro, T. 1985: Status for Danske fuglelokaliteter. – Dansk Ornitologisk Forening, Copenhagen.
- Fuller, R.J. 1982: Bird habitats in Britain. – Poyser, Calton.
- Väisänen, R.A. 1989: Renewal of methodology in the second bird atlas of Finland. – Ann. Zool. Fennici 26:167–172.

**BIRD SITE REGISTER FORM** Bird sites / Zoological Museum  
P. Rautatiekatu 13  
SF-00100 Helsinki Return before the  
end of September!  
**11A** Version III/1990

NATIONAL GRID 1x1 km S - N	W - E	SITE NUMBER	YEAR	MUNICIPALITY (6-letter code)	OBSERVER NUMBER
6,8,2,9	6,3,8	[ ]	19 9,0	P,A,R,I,K,K	1,2,3,4

NAME OF THE BIRD SITE (preferably from a map) Name: \_\_\_\_\_  
V,E,H,K,A,L,A,H,T,I Addr.: \_\_\_\_\_  
 \_\_\_\_\_  
 All data is confidential. Information on threatened species is kept secret. Tel.: \_\_\_\_\_

**TYPE OF BIRD SITE** (circle one code):

<p>① Lake or sea bay with a rich bird fauna</p> <p>2 Wetland (wet shore meadows and/or reed-beds)</p> <p>3 Mire or peatland with abundant pools and rich bird life</p> <p>4 Open island with a sizeable gull or tern colony</p> <p>5 Broad shore meadow with rich bird-life</p> <p>6 Productive deciduous forest, dominating tree(s): _____</p>	<p>7 Old forest (long period since last logging, many hole-trees), dominating tree(s): _____</p> <p>8 Important bird colony (e.g. Razorbill, Rook or Yellow-breasted Bunting), describe the site: _____</p> <p>9 Other, what: _____</p>
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**AREA CLASS** (circle one code; appr. upper limits of classes in parenthesis):

1 Less than 1 are (10x10 m)	⑤ 10-100 hectares (1x1 km)	<b>AREA SIZE</b>
2 1-9 ares (30x30 m)	6 Over 1 km <sup>2</sup>	km <sup>2</sup> ha    ares
3 10-99 ares (100x100 m)	0 Not determined	[ ] [6,2] [0,0]
4 1-9 hectares (300x300 m)		

**NEED OF CONSERVATION** (circle one code):

<p>1 Site already preserved or included in a conservation programme.</p> <p>② Valuable site; I suggest the following arrangements for conservation: <u>DISTURBANCE SHOULD BE AVOIDED DURING THE BREEDING SEASON.</u></p> <p>3 No special arrangements needed</p> <p>0 No comments</p>	<p><b>Threats for the present status:</b></p> <p><u>SEVERAL SUMMER COTTAGES HAVE BEEN BUILT IN RECENT YEARS → PART OF THE REED-BEDS HAVE BEEN DESTROYED.</u></p> <p>_____</p> <p>_____</p>
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**VALUABLE BREEDING SPECIES** (with appr. pair numbers, if possible; give reason for your estimates):

SPECIES (3+3-letter code)	PAIRS	Remarks	SPECIES (3+3-letter code)	PAIRS	Remarks
P,O,D,G,R,I	2	NESTS FOUND	A,C,R,S,C,I	1	♂ 29.5-20.6
P,O,R,P,O,R	3	3♂♂ 11.5-10.6	G,A,L,G,A,L	5	DISPLAYING
R,A,L,A,Q,U	1	♂ 8.5			
F,U,L,A,T,R	3	TERRITORIES			
C,I,R,A,E,R	1	NEST FOUND			
B,O,T,S,T,E	1	♂ 4.5-21.6			

Additional information (e.g. publications on the site and its bird fauna)  
 BITTERN ANNUALLY SINCE 1988,  
 MARSH HARRIER BREEDING FOR THE FIRST TIME,  
 REED WARBLER ANNUALLY SINCE 1970.

## **B** HOW TO FILL IN THE BIRD SITE REGISTER FORMS

Forms are filled in with clear handwriting, in pencil using **UPPER CASE LETTERS**. All numbers are written so that they end at right margin (e.g. observer number). All letter data are typed from the left margin (e.g. municipality, name of the bird site).

Information on a bird site is based on occasional visits only, not enough to fill in Bird Site Register Form 11A. If the area has been visited several times and the bird species breeding there are known quite well, Bird Site Inventory Form 11C-D could be used (a filled Form 11A is always sent together with Form 11C-D). - Remember that data on only one site can be reported per form!

### **BIRD SITE REGISTER FORM 11A**

**NATIONAL GRID** coordinates should be given with an accuracy of 1x1 km, because the form is more or less rectangular, unless, if the site cannot be found in the field! If the site is smaller than ca. 1 km<sup>2</sup>, give the coordinates of the center (if the whole area was visited) or those of the visited part of the site (if the whole area was not covered). The National grid system is explained in the general instructions part of the Manual. **SITE NUMBER** means the running number of the site within the National grid and is filled in at the Museum. **YEAR**: If data on several years are included, write the last year and list the others in "additional information" below. The **MUNICIPALITY** is coded according to Appendix 2 in the Manual and the **SERVER NUMBER** is explained in the general instructions. **NAME OF THE BIRD SITE**: If the site has no name, use the name of the nearest place on a survey map and give the distance and direction from that place. Circle the **TYPE OF THE BIRD SITE**. If possible, write the **SIZE OF THE AREA** accurately (in square kilometers, hectares or ares, depending on measuring accuracy and size of the site) right of **AREA CLASS**. When estimating the **NEED OF CONSERVATION** other options than 1 (site already preserved included in a conservation programme) may be used even if you are not sure whether the site is already preserved or not. Listing **VALUABLE BREEDING SPECIES**, use 3+3-letter codes (see Appendix 1 in the Manual). It is also worth reporting the date of observation and, if a pair estimate is presented, how it was obtained (census method, nest found, etc.).

### **BIRD SITE INVENTORY FORM 11C-D**

Categories of breeding evidence and pair numbers of species to be presented on Form 11C-D. Names of 153 bird species are preprinted on the reverse side of the form (11D). **ADDITIONAL SPECIES** can be reported on the lower part of Form 11C by writing the name and the respective 3+3-letter code of the species. If there is not enough space for all additional species, continue on another form.

Most of the instructions and codes for filling in the form can be found in Forms 11C-D. (See also guidelines for Form 11A above.)

Data on only one year can be reported per form. Beside the **YEAR** mark the **SURVEY ACTIVITY**. It describes the efficiency of the inventory: how intensively different habitats and subareas have been searched through, how complete is

The survey activity is coded in the following way: 1 = occasional observations; 2 = fair survey (breeding birds of the most common habitats have been surveyed, but only in a small part of the area); 3 = satisfactory survey (breeding species of the most common habitats have been observed in several subareas, but many additional species would probably be found by more intensive recording); 4 = well-surveyed (all habitats and at least half of the site have been surveyed regularly but a few species may still be absent from the list; the breeding evidence and abundance indexes would "get better" with more effective censusing); 5 = thoroughly surveyed (almost the whole site has been visited regularly through the breeding season; the possibility of finding new breeding species from the site is small and it is difficult to improve the categories of breeding evidence and abundance indexes).

**MONITORING EFFORTS AT THE SITE DURING THE BREEDING YEAR** as well as **ADDITIONAL STUDIES ON BREEDING BIRDS** should be listed on the form. The accuracy of the results can be evaluated more reliably from this information.

**CATEGORIES OF BREEDING EVIDENCE** describe the certainty of nesting of a particular species within the site (four categories: unlikely, possible, probable and confirmed breeding). Mark the highest index of the breeding season beside each species. If the site is surveyed during the following years, report only higher indexes for the same species. However, the indexes of rare species should be reported every year, especially if their occurrence fluctuates markedly from year to year.

The **ABUNDANCE** index describes the abundance of the species at the site. It is based on observations made only within the site itself. The abundance of the species during the breeding season is coded by a combination of a letter and number(s) in three ways: (1) The pair number (code starting with P and followed by up to four numbers) is based on censuses (error from the true number at most 20%). (2) The accurate index of abundance (code A followed by number(s) 1-10) is based on intensive field work and experience, preferably also on sample censuses covering part of the species and subareas. When estimating the indexes for the whole site, one has to know the coverage of different habitats and bird densities in them. (3) The inaccurate abundance index (code I followed by number(s) 1-10) may contain an error of one class downwards or upwards. For example, abundance index A5 means 20-50 pairs, but I5 10-100 pairs (includes classes 4, 5 and 6).

Code the absence of a species at a well-studied site with symbol P0 (P and zero). Symbol I1, which means 0-5 pairs, is useful for expressing the possibility that a species is lacking from a site.

If pair numbers have been censused at a site, the results should be reported on respective project forms and Bird Site Register Form (11A) should be enclosed. Send a survey map or a copy of it to the Museum and mark the boundaries and most valuable subareas of the site on it.



D SITE FORM

D

Version  
11/1990

YEAR  
19 **90**

ABUNDANCE. Three levels of estimate (write the respective letter in column \* ).

Code:

Examples:

P = Pair number

P70 = about 70 pairs, based on censuses.

A = Accurate index of abundance

A5 = 20-50 pairs, abund. index 5 on Form 11C.

I = Inaccurate index of abundance

I5 = 10-100 pairs, abund. indexes 4-6 included.

UTSJOKI  
10 PUORNAJÄGGI

SPECIES		Br. evid.	Abundance	SPECIES		Br. evid.	Abundance	SPECIES		Br. evid.	Abundance
SPECIES		*	*	SPECIES		*	*	SPECIES		*	*
Whooping Crane	GAVARC			Common Sandpiper	ACTHYP			Redwing	TURILI	9	P: 4
Crested Grebe	PODCRI			Turnstone	AREINT			Mistle Thrush	TURVIS		
Black-necked Grebe	PODGRI			Red-n. Phalarope	PHALOB	9	P: 2	Grasshopper Warbler	LOCNAE		
Great Northern Diver	PODAUR			Little Gull	LARMIN			Sedge Warbler	ACRSCH		
Trumpet Swan	CYGCYG			Black-headed Gull	LARRID			Blyth's Reed Warbler	ACRDUM		
Common Loon	ANAPEN			Common Gull	LARCAN			Marsh Warbler	ACRRIS		
Common Goldeneye	ANACRE			Lesser Black-b. Gull	LARFUS			Reed Warbler	ACRSCI		
Common Goldeneye	ANAPLA			Herring Gull	LARARG			Icterine Warbler	HIPICT		
Common Goldeneye	ANAACU			Gr. Black-b. Gull	LARMAR			Lesser Whitethroat	SYLCUR		
Common Goldeneye	ANAQUE			Common Tern	STEHIR			Whitethroat	SYLCOM		
Common Goldeneye	ANACLY			Arctic Tern	STEAEA	9	P: 1	Garden Warbler	SYLBOR		
Common Goldeneye	AYTFER			Black Guillemot	CEPGRY			Blackcap	SYLATR		
Common Goldeneye	AYTFUL			Feral Pigeon	COLLIV			Wood Warbler	PHYSIB		
Common Goldeneye	SOMMOL			Stock Dove	COLOEN			Chiffchaff	PHYCOL		
Common Goldeneye	MELFUS			Woodpigeon	COLPAL			Willow Warbler	PHYLUS	7	A: 4
Common Goldeneye	BUCCLA			Cuckoo	CUCCAN			Goldcrest	REGREG		
Common Goldeneye	MERSER			Eagle Owl	BUBBUB			Spotted Flycatcher	MUSSTR		
Common Goldeneye	MERMER			Hawk Owl	SURULU			Pied Flycatcher	FICHYP		
Common Goldeneye	PERAPI			Tawny Owl	STRALU			Willow Tit	PARMON		
Common Goldeneye	CIRCYA			Ural Owl	STRURA			Siberian Tit	PARCIN		
Common Goldeneye	ACCGEN			Long-eared Owl	ASIOTU			Crested Tit	PARCRI		
Common Goldeneye	ACCNIS			Short-eared Owl	ASIFLA			Coal Tit	PARATE		
Common Goldeneye	BUTBUT			Tengmalm's Owl	AEGFUN			Blue Tit	PARCAE		
Common Goldeneye	BUTLAG			Nightjar	CAPEUR			Great Tit	PARMAJ		
Common Goldeneye	PANHAL			Swift	APUAPU			Treecreeper	CERFAM		
Common Goldeneye	FALTIN			Wryneck	JYNTOR			Golden Oriole	ORIORI		
Common Goldeneye	FALCOL			Grey-h. Woodpecker	PICCAN			Red-backed Shrike	LANCOL		
Common Goldeneye	FALSUB			Black Woodpecker	DRYMAR			Great Grey Shrike	LANEXC		
Common Goldeneye	BONBON			Gr. Sp. Woodpecker	DENMAJ			Jay	GARGLA		
Common Goldeneye	LAGLAG			L. Sp. Woodpecker	DENMIN			Siberian Jay	PERINF		
Common Goldeneye	TETRIX			Three-l. Woodpecker	PICTRI			Magpie	PICPIC		
Common Goldeneye	TETURO			Skylark	ALAARV			Jackdaw	CORMON		
Common Goldeneye	PHACOL			Sand Martin	RIPRIP			Hooded Crow	CORNIX		
Common Goldeneye	PORPOR			Swallow	HIRRUS			Raven	CORRAX		
Common Goldeneye	FULATR			House Martin	DELURB			Starling	STUVUL		
Common Goldeneye	GRUGRU			Tree Pipit	ANTTRI			Chaffinch	FRICOE		
Common Goldeneye	HAEOST			Meadow Pipit	ANTPRA	9	A: 5	Brambling	FRIMON		
Common Goldeneye	CHADUB			Yellow Wagtail	MOTFLA	9	A: 5	House Sparrow	PASDOM		
Common Goldeneye	CHAHIA	6	P: 1	Pied Wagtail	MOTALB	7	P: 1	Greenfinch	CARCHL		
Common Goldeneye	PLUAPR	6	P: 1	Waxwing	BOMGAR			Siskin	CARSPI		
Common Goldeneye	VANVAN			Wren	TROTRO			Linnet	CARCAN		
Common Goldeneye	PHIPUG	6	P: 14	Duncock	PRUMOD			Redpoll	CARMEA	9	A: 3
Common Goldeneye	GALGAL	9	P: 2	Robin	ERIRUB			Crossbill	LOXCUR		
Common Goldeneye	SCORUS			Thrush Nightingale	LUSLUS			Parrot Crossbill	LOXPYT		
Common Goldeneye	NUMPHA			Bluethroat	LUSVE	9	P: 10	Scarlet Rosefinch	CARERY		
Common Goldeneye	NUMARO			Redstart	PHOPHO			Bullfinch	PYRPHY		
Common Goldeneye	TRIERY			Whinchat	SAXRUB			Lapland Bunting	CALLAP	9	A: 5
Common Goldeneye	TRITOT			Wheatear	OENOE	7	P: 2	Yellowhammer	EMBCIT		
Common Goldeneye	TRINER			Blackbird	TIURMER			Ortolan Bunting	EMRHOE		

