

Data management at national level

*from diverse data sources to
integrated atlas outcomes*

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European Breeding Bird Atlas 2 (EBBA2) Workshop



In the field

1. Species



2. Site



3. Date



4. Breeding evidences



5. Additional information: number of observed individuals, effort-completeness of survey-time, observer info (name, contact address), etc.

Back to the office

We can store the information in a spreadsheet

Site	Species	Date	Breeding evidence
Llobregat Delta	Anas platyrhynchos	01/04/2014	Nest construction
Llobregat Delta	Recuvistrosa avoceta	01/04/2014	
Llobregat Delta	Larus michahellis	01/04/2014	Young feeding
Llobregat Delta	Hirundo rustica	01/04/2014	Nest construction
Sant Boi	Anas		Nest construction
Sant Boi	Gallus gallus domesticus	01/04/2014	Juvenile
Sant Boi	Hirundo rustica	03/04/2015	Nest construction
Sant Boi	Motacilla flava	03/04/2015	Male singing
Sant Boi	Troglodytes troglodytes	09/05/2015	Territorial pair

This is not a database!

Spreadsheets are designed for data processing

What a database is

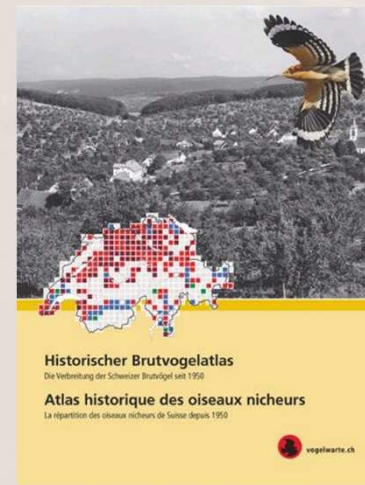
Organized collection of data.



Species	Site	Date
H. Rustica	D. Llobregat	02/04/14
.....

To model relevant aspects of reality (e.g., which species have you seen in one site)

In a way that supports processes requiring this information (e.g. to produce an Atlas with distribution maps of breeding birds).



Thinking in an atlas database



Inputs: data source



Final purpose:
only national
Atlas or
something else?

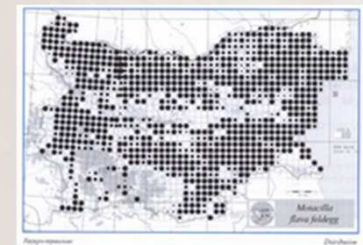
Planning
database
design

Available resource:

- Coordinator
- Data manager
- Volunteers

Species	Population estimate	Mean	Minimum-Maximum
Accipiter gentilis	Estimes col-laboradors ampliada		1361-1515
Accipiter nisus	Distance	21.726	15.689-30.239
Acrocephalus melanopogon	Estimes col-laboradors ampliada		179-243
Actitis hypoleucos	Estimes col-laboradors ampliada		1122-1320
Aegithalos caudatus	Distance	1.472.433	1.197.907-1.810.200
Agropus fuscus	Estimes especifics		300
Alauda arvensis	Distance	735.665	420.040-1.296.208
Alca torda	Censos d'ocells marins		1401-1479
Alcedo atthis	Estimes col-laboradors ampliada		1714-2294
Alcedo atthis	Distance	133.873	80.416-223.180
Anas acuta	Censos d'aquatics		1712-8939
Anas chrypeata	Censos d'aquatics		5846-22602
Anas crecca	Censos d'aquatics		24136-41252
Anas penelope	Censos d'aquatics		2856-7808
Anas platyrhynchos	Censos d'aquatics		53040-89199
Anas strepera	Censos d'aquatics		3353-6118
Anser anser	Censos d'aquatics		283-870
Anthus pratensis	Distance	1.643.433	1.257.647-2.149.300
Anthus richardi	Estimes col-laboradors		14-26

Integrated Atlas outcomes



Planning my database: modelling the reality

Site	Species	Date	Breeding evidence
Llobregat Delta	Anas platyrhynchos	01/04/2014	Nest construction
Llobregat Delta	Recurvirostra avoceta	01/04/2014	
Llobregat Delta			Young feeding
Llobregat Delta			Nest construction
Sant Boi	Gallinula chloropus	22/03/2015	Nest construction
Sant Boi	Hirundo rustica		Juvenile
Sant Boi	Motacilla flava		
Sant Boi	Troglodytes troglodytes		

Any column in the spreadsheet must become a single table in a database

Scientific name	Vernacular name	Euring code	Construction
Anas americana	Ànec xiulador americà	1800	singing
Anas strepera	Ànec griset	1820	
Anas formosa	Xartet del Baikal		
Anas crecca	Xarxet		
Anas platyrhynchos	Ànec coll-verd		
Anas acuta	Ànec cuallarg		
Anas bahamensis	Ànec de les Bahames		

- A. Possible breeding
 - 1 Species observed in breeding season in possible nesting habitat
 - 2 Singing male(s) present (or breeding calls heard) in breeding season
- B. Probable breeding
 - 3 Pair observed in suitable nesting habitat in breeding season
 - 4 Permanent territory presumed through registration of territorial behaviour (song, etc.) on at least two different days a week or more apart at same place or many individuals on one day
 - 5 Courtship and display
 - 6 Visiting probable nest-site
 - 7 Agitated behaviour or anxiety calls from adults
 - 8 Brood patch on adult examined in the hand
 - 9 Nest-building or excavating of nest-hole
- C. Confirmed breeding
 - 10 Distraction-display or injury-feigning
 - 11 Used nest or eggshells found (occupied or laid within period of survey)
 - 12 Recently fledged young (radicolous species) or downy young (nidifugous species)
 - 13 Adults entering or leaving nest-site in circumstances indicating occupied nest (including high nests or nest holes, the contents of which cannot be seen) or adult seen incubating
 - 14 Adult carrying a faecal sac or food for young
 - 15 Nests containing eggs
 - 16 Nests with young seen or heard

UTM10	Site
DF29	Barberà del Vallès
DF29	Sabadell
DF17	El Prat de Llobregat
DF17	Llobregat Delta
DF17	Sant Boi
DF17	Sant Vicenç dels Horts
DF17	Gavà
DF16	Les Botigues de Castelldefels

Planning my database: introducing data

You need an user-software friendly interface

Observacions

ATLES DELS OCELLS NIDIFICANTS DE BARCELONA:
Entrar observacions d'espècies

UTM1: DF2880
Espècie: EGGAR
Estima: II
Data_ultima_ot: []

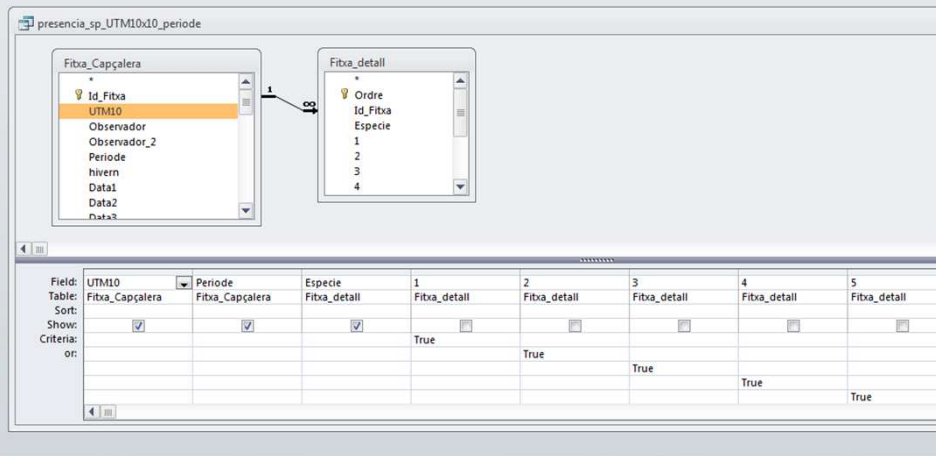
Evidències de cria

UTM500	Evidència	Espècie detectada en època i	Visita		
C	V	Espècie detectada en època i	Primer	DF2880	01/05/2012
D	V	Espècie detectada en època i	Seqon	DF2880	03/06/2012

Record: 1 of 2 | No Filter | Search

Record: 1 of 236 | No Filter | Search

Planning my database: answering questions



Square	species
DG96	ANPRA
DG96	ANPRA
DG96	ANPRA
DG96	ANPRA
DG96	ANPRA
DH10	ANPRA
DH10	ANPRA
DH10	ANPRA
DH10	ANPRA



Planning my database: Software options

Free software or license program?

On line or off-line?

Planning my database: Software options

On-line platform (e.g. MySQL + PHP)	Domestic databases (e.g. MS Access or open Access)
<i>Open license</i>	<i>Open license (open Access) or license program (MS Access)</i>
<i>Open community based (low risk to disappear in future)</i>	<i>Open community based (open Access) or company based (secure but...)</i>
<i>Suitable for large datasets</i>	<i>Not suitable for very large datasets (millions of rows)</i>
<i>Suitable for remote and multi-user access</i>	<i>suitable only for one person with a PC. It can be copied in other computers but it needs data export to connect both</i>
<i>Development needs educated programmer</i>	<i>Development and administration is possible by experienced user (perhaps MS Access easier)</i>
<i>Can be connected by other application (also in MS Access and open access)</i>	

Planning my database: Is an on-line portal an atlas database?

BirdTrack

News update: **Stock Dove** - They've started singing, whilst some Collared Doves are already nesting!

About BirdTrack | Taking part | Maps & reports | Bird recording | Surveys

You are logged out
Log in
Register

Your options
My details & settings
Add records
My records
Sites
Help

BirdTrack Partners
BTO
DCA
RSPB

Skylark *Alda arvensis*
Graph guide
Reporting rates the percentage of complete lists that contain each species as a proportion of available sites.

Top BirdTrackers
Complete lists this month
Species recorded this year
BirdTrack photos

...collecting data for the conservation of birds worldwide

World map
Our vision
Youth
Contact us
Acknowledge

Africa Asia Central America & Caribbean Europe Middle East & Central Asia
North America Oceania South America

BirdLife INTERNATIONAL
RSPB
Audubon

Contact us | Acknowledgements | Copyright BirdLife 2007
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ornitho.de

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Donors and sponsors
News and events
Latest news
Distributions
Observations
Eurasian Blackcap

Observations in Germany and Luxembourg based on data submitted via ornitho.de and ornitho.lu since January 1st, 2013. Join in and contribute to make the picture more complete!

Date	Count	Sex	Age	Behaviour	Species	Location	Country	Map	Chart	Details
01-06-1988	99	unknown	territory	Azure Tit - <i>Cyanistes cyanus</i>	Belarus -Brest (52.1248,27.3653)	BY				
01-06-1988	9	unknown	singing	Azure Tit - <i>Cyanistes cyanus</i>	Belarus -Brest (52.5697,25.8935)	BY				
01-06-1988	9999	unknown	singing	White Wagtail - <i>Motacilla alba</i>	Belarus -Mahiljow (53.4685,31.8703)	BY				
01-06-1988	999	unknown	territory	White Wagtail - <i>Motacilla alba</i>	Belarus -Homyel (52.1203,31.9047)	BY				
01-06-1988	999	unknown	singing	White Wagtail - <i>Motacilla alba</i>	Belarus -Vitsyebk (55.2554,31.0334)	BY				
01-06-1988	999	unknown	territory	White Wagtail - <i>Motacilla alba</i>	Belarus -Vitsyebk (55.7044,31.0109)	BY				
01-06-1988	9999	unknown	territory	White Wagtail - <i>Motacilla alba</i>	Belarus -Vitsyebk (55.2401,30.3203)	BY				
01-06-1988	9999	unknown	territory	White Wagtail - <i>Motacilla alba</i>	Belarus -Vitsyebk (55.6892,30.3068)	BY				
01-06-1988	9999	unknown	territory	White Wagtail - <i>Motacilla alba</i>	Belarus -Vitsyebk (54.8064,31.0553)	BY				

Planning my database: Is an on-line portal an atlas database?

Ахова птушак Бацькаўшчыны Observations Overviews

Sign in Create account Forum Help Select language and/or site

Great Tit - *Parus major*

Family: Tits (Paridae) Status: native, Species Rarity: Common

Subspecies: Great Tit ssp excelsus - *Parus major excelsus*
Subspecies: Great Tit ssp newtoni - *Parus major newtoni*
Subspecies: Great Tit ssp major - *Parus major major*
All subspecies

Maps

from 1998-02-16 to 2013-02-16

sort by Individuals observed Observations only approved observations

grid 50km season All second specie OK



Accueil

Les partenaires

Introduction

Consulter

- Atlas des oiseaux nicheurs
- Atlas des oiseaux: en hiver

Participer

- Liste des coordinateurs

Information

- Toutes les nouvelles
- Sur votre agenda
- Documents à télécharger

Outils

- Aide
- Code de conduite
- Questions/Réponses

Statistiques

Les liens

email : _____ mot de passe : _____

mémoriser le mot de passe **Me connecter**

[J'ai perdu mon mot de passe!](#)

Actualités

jeudi 17 janvier 2013 avnews

Synthèse Wetlands International 2012

Le dénombrement des oiseaux d'eau coordonné à la mi-janvier 2012 représentait la 46ème opération de ce type menée en France. [\[...\]](#)

mardi 12 juin 2012 avnews

plaquette Anatidés-Limicoles en France

A l'occasion de la 34ème rencontre des parties de l'AEWA qui s'est déroulée du 14 au 18 mai dernier à La Rochelle, la LPO et l'ONCFS [\[...\]](#)

Rochefort,
Lune gibbeuse (6 jours)
Lever à 12h21 et coucher à 2h53

Soleil : Lever à 07h05 et coucher à 19h16
Jour : Aube à 06h25 et crépuscule à 19h46

Etat d'avancement

Planning my database: Is an on-line portal an atlas database?

It is not really an atlas database

However it could be a perfect option for data gathering

At least you need to export data to carry out final analysis (distribution maps, estimate populations, habitat selection, abundance maps)

Good practice

Evaluate your resource availability

Design proper planning

Define few and clear final purposes

Consult someone experienced: design your database by a biologist with extensive computer skills or an experienced programmer in conjunction to a biologist

Database should be friendly and generate feedback to volunteers

A local example



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Generalitat de Catalunya
Departament de Medi Ambient
i Habitatge



Atles dels ocells de Catalunya a l'hivern 2006-2009

- Assignacions
- Entrar fitxa de quadrat
- Entrar fitxa complementària
- Importar dades col.laboradors
- Exportar dades col.laboradors
- Consulta
- Sortir



© Toni Lobet

A local example

Atlas dels ocells de Catalunya a l'hivern 2006-2009
Fitxa de quadrat

Quantitat d'observacions:
 2006-2007 2007-2008 2008-2009

Observador:
 Adreça: Localitat: ZPI:
 Telèfon: E-mail:

Observador: Martínez Vilalta, Albert
Observador 2: Vendrell Martí, Armando

Període: A: 15 novembre - 31 de desembre

UTM10: 2E79
Municipi: Sant Rafel del Maestrat
Comarca: Montsià
Any Atlas: 2006

Verificada
 Fitxa dubtosa

ENTRAR DADES

1 de 788

Fitxa de quadrat

UTM10: 2E79
Municipi: Sant Rafel del Maestrat
Comarca: Montsià
Any Atlas: 2006

Observador: Martínez Vilalta, Albert
Observador 2: Vendrell Martí, Armando

Període: A: 15 novembre - 31 de desembre

Verificada
 Fitxa dubtosa

ENTRAR DADES

1 de 788

Dades generals | Observacions per espècie | Dades fenològiques | Dades dormidors

	1	2	3	4	5	6	7	C
Dates	26/11/2006	26/11/2006						05/12/2006
Hora d'inici	10:10	11:20						17:05
Neutralitzat	0:00	0:00						0:00
Meteorologia	A	A						O
Observacions	Fet a mitges amb Armando Vendrell							

A local example



The image shows a large grid of data, likely a spreadsheet or database table, with a blue oval highlighting a specific section. The grid contains many columns and rows of data, with some cells containing text and others containing numbers or symbols. The highlighted section is in the upper left quadrant of the grid.

Fitxa de quadrat

UTM10: BE79

Municipi: Sant Rafel del Maestrat

Comarca: Montsià

Any Atlas: 2006

Observador: Martínez Vilalta, Albert

Observador 2: Vendrell Martí, Armando

Període: A: 15 novembre - 31 de desembre

Verificada

Fitxa dubtosa

ENTRAR DADES

1 de 788

Dades generals Observacions per espècie Dades fenològiques Dades dormidors

D	Espècie	1	2	3	4	5	6	7	C	Fora cens	Estima	
<input checked="" type="checkbox"/>	Phalacrocorax carbo	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Informar UTM's
<input type="checkbox"/>	Bubulcus ibis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Informar UTM's
<input type="checkbox"/>	Ardea cinerea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Informar UTM's
<input checked="" type="checkbox"/>	Falco tinnunculus	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Informar UTM's
<input type="checkbox"/>	Alectoris rufa	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Informar UTM's
<input checked="" type="checkbox"/>	Vanellus vanellus	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Informar UTM's
<input checked="" type="checkbox"/>	Larus michahellis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Informar UTM's

Record: 1 of 39 No Filter Search

A local example

