Recorder 2002

Microsoft Access and *Recorder 2002*

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Recorder 2002 uses a Microsoft Access 97 database to store all its data although users don't have to have Access to run it. However, if they have Access, they will be able to use it on the database, but care must be exercised since the database is not write protected so users could easily alter the data in a way that will cause problems with running *Recorder 2002*. Some such problems may prove very serious.

Reporting in *Recorder 2002* will meet many of a users needs, but perhaps not all, so being able to produce additional reports via Access should prove useful. However, the database structure is very complex and will require time and effort to master. Documentation on the NBN data model, as implemented in *Recorder 2002,* is available on the National Biodiversity Network web-site www.nbn.org.uk.

Although the *Recorder 2002* database is an Access 97 database, it is possible to use it in later versions of Access but when you do you are asked whether you want to convert the database to the later version. DO NOT CONVERT YOUR DATABASE. *Recorder 2002* works on an Access 97 database. Converting will stop *Recorder 2002* from working. If you accidentally convert your database, there is a an option in Access 2000, through **Tools – Database Utilities – Convert Database – To Prior Access Database version…** to convert back. However, this is a last resort. It has not been tested thoroughly enough to guarantee that the conversion will work correctly for *Recorder 2002*.

The *Recorder 2002* database is called **nbndata.mdb** and is found in the Database folder within the *Recorder 2002* folder. In a standard installation on a single PC it will be found in C:\Recorder 2002\Database. Note that if *Recorder 2000* was originally installed the folder will still be called C:\Recorder 200**0**. In a network installation the database will typically be found in \Rec2002\Database on the server. The Database folder will also contain **nbndict.mdb**, the database that contains the taxon, biotope and admin areas dictionary, and in *Recorder 2002* version 2.3.1 onwards it will contain **index_taxon_group, name** and **synonym.mdb**, designed to speed up reporting and the use of the dictionaries.

If you open an Access 97 database with a later version of Access, you cannot make changes to the database objects. This means that you can view and change data but you cannot create new queries, etc. To get around this, you can create a 'dummy database' containing links back to the original. You can then query this database without running the risk of accidentally converting your original. To do this:

1. Create a new blank Access database using the later version of Access, say Access 2000
2. Select **File – Get External Data – Link Tables**
3. Browse to **nbndata.mdb** and click **Link** (if a password is requested try 'password')
4. Select **Select All** and click OK
5. Repeat steps 2 to 4 for **nbndict.mdb** (without this you will not have access to the names of things in the dictionaries)
6. Repeat steps 2 to 4 for **index_taxon_name**.mdb (this provides an easier way of retrieving the names of species)

You now have a database that you can work with without running the risk of conversion.

N.B. The instructions given above are for Access 2000 – they may vary in other versions of Access.

Access 97 places a limit of 1Gb on a single mdb file. JNCC estimate that this translates to around 1 - 1.3 million species records depending on how much detail is included in the supporting information. However, in practice it is not practical to allow the mdb file to approach the 1Gb limit too closely because errors will be encountered whenever *Access* attempts to create temporary working files (e.g. when running some queries). 800-900 Mb is probably a more realistic limit.

In *Recorder 2002* version 2.3.1, which was released in December 2003, a new add-in was made available called **SQL Reports**. Its purpose is to make queries stored in the main database (nbndata.mdb) available to users as a way of providing simple to use predefined reports. When first installed 38 queries are added to nbndata.mdb that produce reports, statistics and cross tabulations, many of which the Report Wizard cannot generate. The user may be prompted to enter parameters (e.g. names, grid squares, dates) and/or to supply lists of keys from a rucksack. Users with Access expertise will be able to create their own queries and make them available to others via this add-in. The latest version of it can be downloaded from the NBN web-site www.nbn.org.uk.

Microsoft Access Queries

Some examples of Access queries on a *Recorder 2002* database:

Query to list the number of observations per species – *Recorder 2002* v2.3.1.0 onwards

This query lists all species in the database for which there are observations, and the number of observations (taxon occurrences) for each. The Taxon_list_item_key is the unique identifier for a particular species on a particular list (Item-name) in the taxon dictionary. It is the entry that will appear in Rucksacks and Recording Cards in *Recorder 2002* if the associated species is added.

Index_taxon_name contains the species names although it contains 3 names for each key: Actual_name, Common_name and Preferred_name. The Actual_name and Preferred_name are used to identify synonyms: if the Actual_name is not equal to the Preferred_name, this means that the Actual_name is a synonym of the Preferred_name.

Without the criteria of Preferred = True the count will be of Taxon Determinations not Taxon Occurrences (species observations).

Query to list the number of species observations per survey

Query to list the species in a Rucksack – *Recorder 2002* v2.3.1.0 onwards

The rucksack was imported to a table called 'TblAtlas 2000 (Oxon) Version 5 Jan 99 040221'

[INDEX_TAXON_NAME]![ACTUAL_NAME] = [INDEX_TAXON_NAME]![PREFERRED_NAME] – if the number of rows that result from running this query is the same with or without this criteria then there are no synonyms in the rucksack.

Query to list the number of observations per species – *Recorder 2002* v2.0.5.0

Prior to version 2.3.1 of *Recorder 2002* the Index_taxon_name table was not available so the names of species had to be retrieved as follows:

Microsoft Access - [Q01 No of observations per species v205 : Select Query]

File Edit View Insert Query Tools Window Help

TAXON_OCCURRENCE
- TAXON_OCCURRENCE_KEY
- COMMENT
- ZERO_ABUNDANCE
- CONFIDENTIAL
- VERIFIED
- CHECKED
- CHECKED_BY
- CHECKED_DATE
- SURVEYORS_REF
- PROVENANCE
- SAMPLE_KEY
- SUBSTRATE_KEY
- RECORD_TYPE_KEY
- ENTERED_BY
- ENTRY_DATE
- CHANGED_BY
- CHANGED_DATE

TAXON_DETERMINATION
- TAXON_DETERMINATION_KEY
- TAXON_LIST_ITEM_KEY
- TAXON_OCCURRENCE_KEY
- VAGUE_DATE_START
- VAGUE_DATE_END
- VAGUE_DATE_TYPE
- COMMENT
- PREFERRED
- DETERMINER
- DETERMINATION_TYPE_KEY
- DETERMINER_ROLE_KEY
- ENTERED_BY
- ENTRY_DATE
- CHANGED_BY
- CHANGED_DATE
- SOURCE_KEY

TAXON_LIST_ITEM
- TAXON_LIST_ITEM_KEY
- TAXON_VERSION_KEY
- TAXON_LIST_VERSION_KEY
- TAXON_LIST_VERSION_TO
- PREFERRED_NAME
- SORT_CODE
- LST_ITM_CODE
- PARENT
- TAXON_RANK_KEY
- CODE_SOURCE
- NOTE
- ENTERED_BY
- ENTRY_DATE
- CHANGED_BY
- CHANGED_DATE
- SYSTEM_SUPPLIED_DATA

TAXON_VERSION
- TAXON_VERSION_KEY
- TAXON_KEY
- ATTRIBUTE
- AUTHORITY
- DATE_FROM
- DATE_TO
- COMMENT
- VALIDATION_LEVEL
- UK_NATIVE
- QUALITY
- SOURCE_KEY
- ENTERED_BY
- ENTRY_DATE
- CHANGED_BY
- CHANGED_DATE
- SYSTEM_SUPPLIED_DATA

TAXON
- TAXON_KEY
- ITEM_NAME
- AUTHORITY
- INTRODUCED_VAGUE_DATE_START
- INTRODUCED_VAGUE_DATE_END
- INTRODUCED_VAGUE_DATE_TYPE
- LANGUAGE
- TAXON_NAME_TYPE_KEY
- ABBREVIATION
- ENTERED_BY
- ENTRY_DATE
- CHANGED_BY
- CHANGED_DATE
- SYSTEM_SUPPLIED_DATA
- withauth
- clean

Field:	TAXON_LIST_ITEM_KEY	ITEM_NAME	TAXON_OCCURRENCE_KEY	PREFERRED				
Table:	TAXON_DETERMINATION	TAXON	TAXON_OCCURRENCE	TAXON_DETERMINATION				
Total:	Group By	Group By	Count	Group By				
Sort:			Descending					
Show:	☑	☑	☑	☐	☐	☐	☐	☐
Criteria:				-1				
or:								

Ready   NUM

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Query to list the species in a Rucksack – *Recorder 2002* v2.0.5.0

The rucksack was imported to a table called 'tblAtlas 2000 (Oxon) Version 5 Jan 99 040221'

Common Name: IIf(TAXON_1!LANGUAGE="La",Null,TAXON_1!ITEM_NAME) – without this expression the scientific name will be listed when there is no common name.

PREFERRED_NAME=[TAXON_LIST_ITEM]![TAXON_LIST_ITEM_KEY] – enabled a check to be made to ensure that none of the species in the rucksack were synonyms.

Query to list all taxon occurrences with their grid references – *Recorder 2002* v2.3.1.0 onwards

This query shows how to extract all records with their grid references for use in a GIS system.

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