Guide to using IPMR 2.2 for Nest Recording

Introduction

IPMR is a computer database written by programmer Mark Cubitt for BTO ringers and nest recorders. It is available free of charge and provides a way for nest recorders and ringers to enter their nest records on home computers and submit them to the BTO's **Nest Records Unit** electronically.

Nest records have traditionally been filled in on paper cards and then posted to the BTO, but IPMR presents a new way for nest recorders to complete and submit their records. The program has been designed to make entering data as easy as filling in a paper card. As the nest recording method and coding system has remained unchanged, any nest recorder will find it easy to switch to using IPMR. The program also has many advantages over paper cards:

- IPMR provides a convenient means of storing nest records data electronically, so there is no need to find storage room to file lots of paper cards. It is also not necessary to fill in cards twice in order to hold one copy and send another to the BTO.

- IPMR makes it easy for nest recorders to view their nest records and produce summaries and reports.

- Location and habitat data need only be entered once for a particular site, instead of writing the same details in repeatedly for every nest record card.

Submitting your nest records electronically is also of great benefit to the BTO and the Nest Record Scheme itself. Paper records must be sorted and input manually, which is very expensive, but electronic records can be loaded into the in-house databases in a fraction of the time. By using IPMR, you will be helping the BTO save precious time and resources that can then be put back into the Nest Record Scheme, thus helping us all do more for wild birds.

What you will find in this guide

This guide provides step-by-step instructions for setting up IPMR for nest recording, using it to input and store your nest records, submitting nest records to the BTO, and producing your own reports and summaries of your data.

There are several levels to IPMR, and this manual will serve as a guide to both the very basic user and those who wish to make full use of the program's facilities. At a basic level, the user need only set up their 'places', after which they may enter all the information for their nest records as they go along. At the other end of the scale, IPMR can store habitat and nestbox information that can be selected for use in nest records, thus saving a great deal of time and effort when entering data.

The diagram below shows two possible 'routes' that may be taken through this manual. The red route takes the user through all the essential components required to be able to enter nest records and submit them to the BTO. The blue route introduces the user to the rest of IPMR's functionality. By referring to the diagram you may choose which sections of the manual you wish to read. By clicking on the boxes, you may go straight to a section.
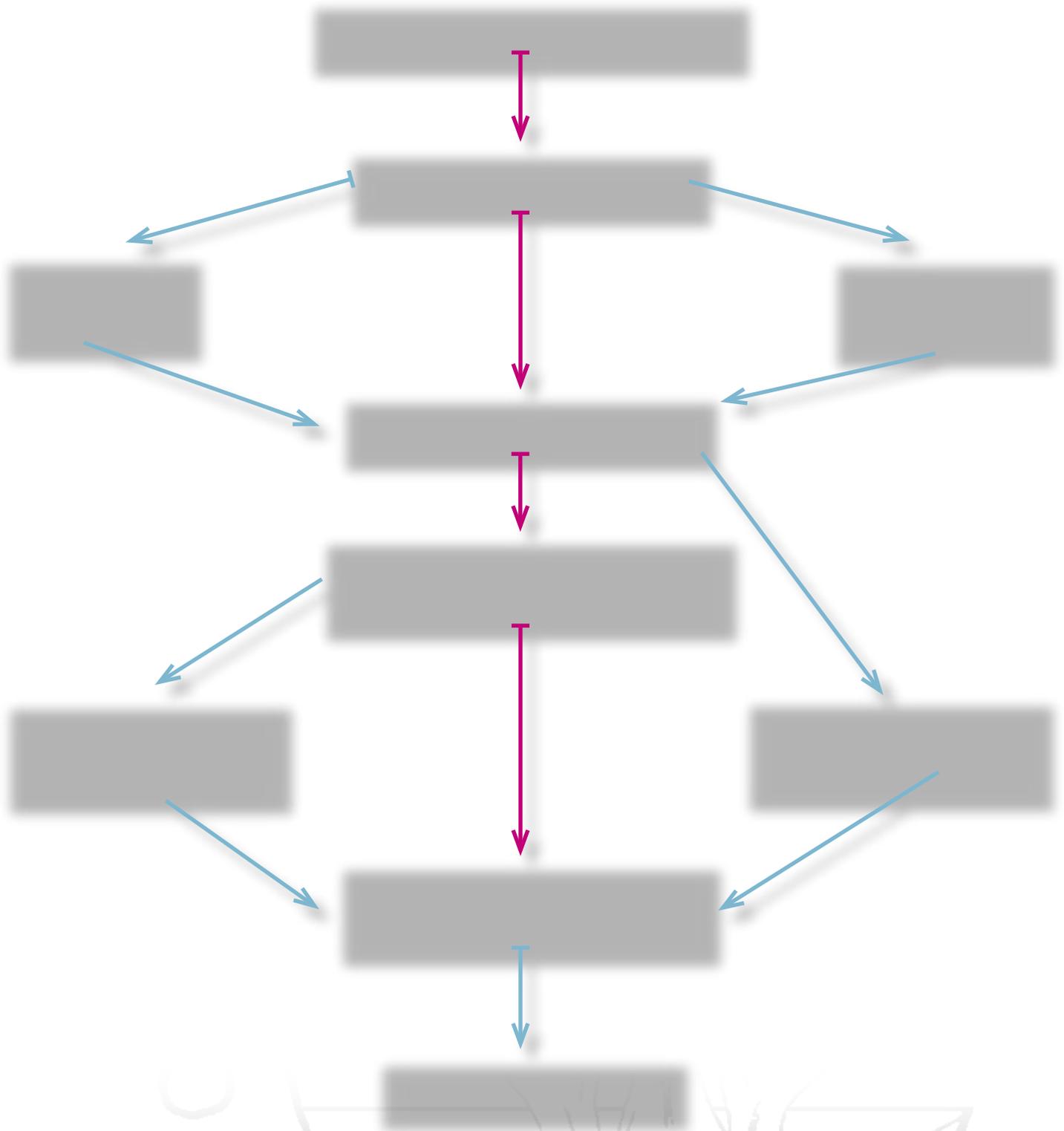
Registering as a nest recorder

Before you can get stuck into monitoring nests and inputting the data onto IPMR, you must be registered as a nest recorder with the BTO's **Nest Record Scheme** (NRS). Please contact the Nest Records Officer either by e-mail (**nest.records@bto.org**) or by phone (**01842 750050**). If you e-mail, please include your name and initials, your full address including postcode and your telephone number(s) in the message.

Upon joining the scheme, you will be given a Starter Pack containing the **NRS Handbook** (detailing the recording protocol) and a blue Coding Card. You will also be given your **observer code**, which you will need in order to set up IPMR for nest recording.

Where to obtain IPMR

IPMR can be posted to you on a CD, or you can download it straight from the BTO website at:

http://www.bto.org/ringing/ringsoft/ipmr/index.htm

Installing IPMR

Once you have double-clicked on the installation executable, you will be guided through the installation process via a series of on-screen instructions. IPMR will be installed to **C:\program files\IPMR97** unless you tell the installation program otherwise. Once the program has been installed, you will be asked to reset your machine. Once your machine has reset, the **IPM reporter** and **Installation and Maintenance** program logos should appear on your desktop (though you should never need to use Installation and Maintenance). If you load IPM Reporter, you will be taken through another series of instructions:

1   *A window will ask you if you are installing IPMR on your machine for the first time, simply click the appropriate option.*

2   *Another window will ask for a name for your database. This will be the name for your first database on IPMR.*

3   *IPMR will then ask you to choose a destination for your IPMR files to be held. The default location is* **My Documents***.*

4   *IPMR will then ask whether the database will be used for nest recording, after which you will be asked to enter the name and* **NRS observer code** *for the 'owner' of the database (please see* this section *for more details). If you are a ringer, please do NOT use your ringing permit number as an observer code.*

5   *Indicate whether you want IPMR to save a backup of your database at the end of each session (recommended). If yes, then provide IPMR with a location to store your back up files by using the browse button. The default location is* **My Documents***.*

Additional help

If you run into difficulty please do consult an IPMR advisor for help. There are two e-mail forums on the world-wide web that you are invited to join, either via the mailing list or the bulletin board. The forums are:

http://groups.yahoo.com/group/IPMRForum/
-an e-mail Group for IPMR users to share views, ideas and problem discussion.

http://groups.yahoo.com/group/IPMRAdvisors/
-to allow people to ask questions and advice of experienced IPMR users.

IPMR will actually help you contact these forums. If you select **Subscribe to E-mail Support Groups** from the **File** menu, IPMR will ask you if you wish to join the forums, and then generate the necessary subscription e-mails on your behalf.

If you wish to e-mail the IPMR Advisors forum, select **E-mail IPMR Advisors** from

the **File** menu. IPMR will create an e-mail for you, and even add in details of the version you are using, and the last error you experienced. You then simply need to add your own message before sending the e-mail.

As well as e-mailing the IPMR forums, you may also contact the Nest Records Officer by telephone on (01842) 750 050 or via e-mail at **nest.records@bto.org**

1.0 Setting up

1.1 Creating a database

Within IPMR one may hold a number of databases. A single database is designed to hold the records of a single nest recorder, or a single group operating via a secretary. Please go to **section 7.0** if you are a group secretary who wishes to keep a group database.

Generally a nest recorder/ringer with a copy of IPMR will have one database in which all their nest records and ringing records will be kept. However, a nest recorder might want to have another database on their copy of IPMR if, for example, they wish to compute another nest recorder's cards and send them to the BTO on his/her behalf. In this case, a second database would be created, and it would be held under the second nest recorder's name and observer code.

This introduces the concept of **ownership** of a database, and it is the first thing that must be considered when setting up a new database using IPMR. The database must be associated with a registered nest recorder, whose name and details are entered when the database is created. This is so that, when the database contents are eventually submitted to the BTO, it can be seen who the nest records belong to. When you installed IPMR, you will remember that it set up your first database for you and asked you to fill in your ownership details at the time. When you load IPMR for the first time, then, you will already have a database created, registered, and ready to use.

The database window, showing the menu bars along the top, and the current settings in the middle.
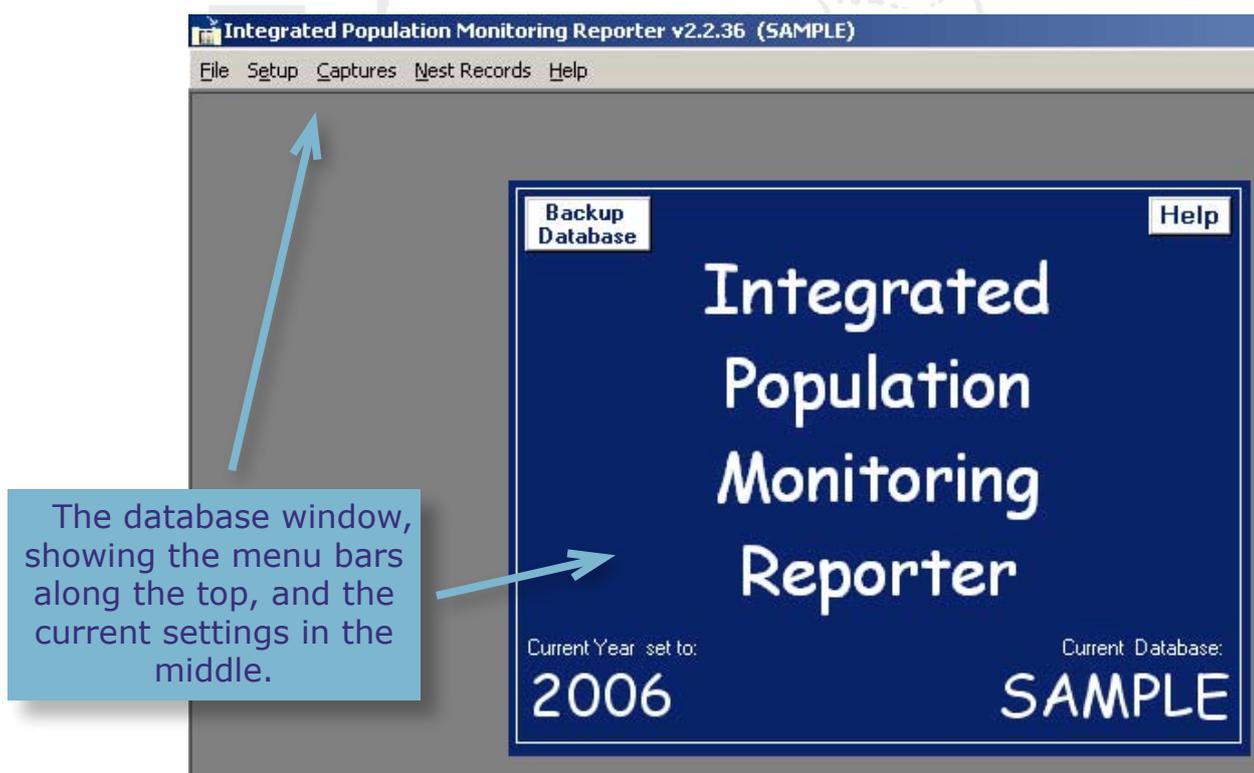
With IPMR open, as in the picture above, you can see the current program settings in a box in the middle of the screen. You will see that the box lists the name of your current active database. There are a number of menu bars in the top left hand corner of the screen, which you will now use to create and run a new database. Of course, you already have a database created and ready for your data, but let's imagine you want to create another one. To set up a new database:

1   *Go to the **File** menu and click **Select database**.*

2   *Press the **Add New** button.*

3   *Type name of your first database.*

4   *Select the database by highlighting its name and then press **Select**.*

IPMR will then automatically require you to confirm what the database will hold (nest records in this case) and will then prompt you for 'owner' information in exactly the same way as when it created your first database (**see above**). You will then have created your new database! You can see on the IPMR screen that the current database is your new one, and that it is set to accepting records from the current year (can be changed later).

1.2 Ownership details

You have already provided IPMR with your name and your observer code when creating your new database, however there are a few more details you will need to provide yourself:

1   *Go to the **Setup** menu and select **Owner details**.*

2   *On the first tab you will see the owner details you entered when creating the database, which can be amended as necessary. Please now also enter your **Schedule 1** details if you have a Schedule 1 licence. On the **Address** tab, add the recorder's address and then add the computer owner's e-mail address and click e-mail application setup. IPMR uses this information to send e-mails from the computer it has been installed on.*

3   *Update the e-mail setup to the relevant application – this must be correct in order to have IPMR send data automatically by e-mail. Most users may select MAPI, which works for Outlook Express, Thunderbird and Netscape. IPMR is not able to send e-mails automatically via web-browser based e-mail accounts (i.e. hotmail).*

1.3 IPMR options

Now that you have set up a new database and entered your ownership details, it's worth checking IPMR's program settings to make sure that the program will manage your databases the way you want it to.

1   *Go to the **Setup** menu and select **Options**.*

2   *Go to the **File locations** tab.*
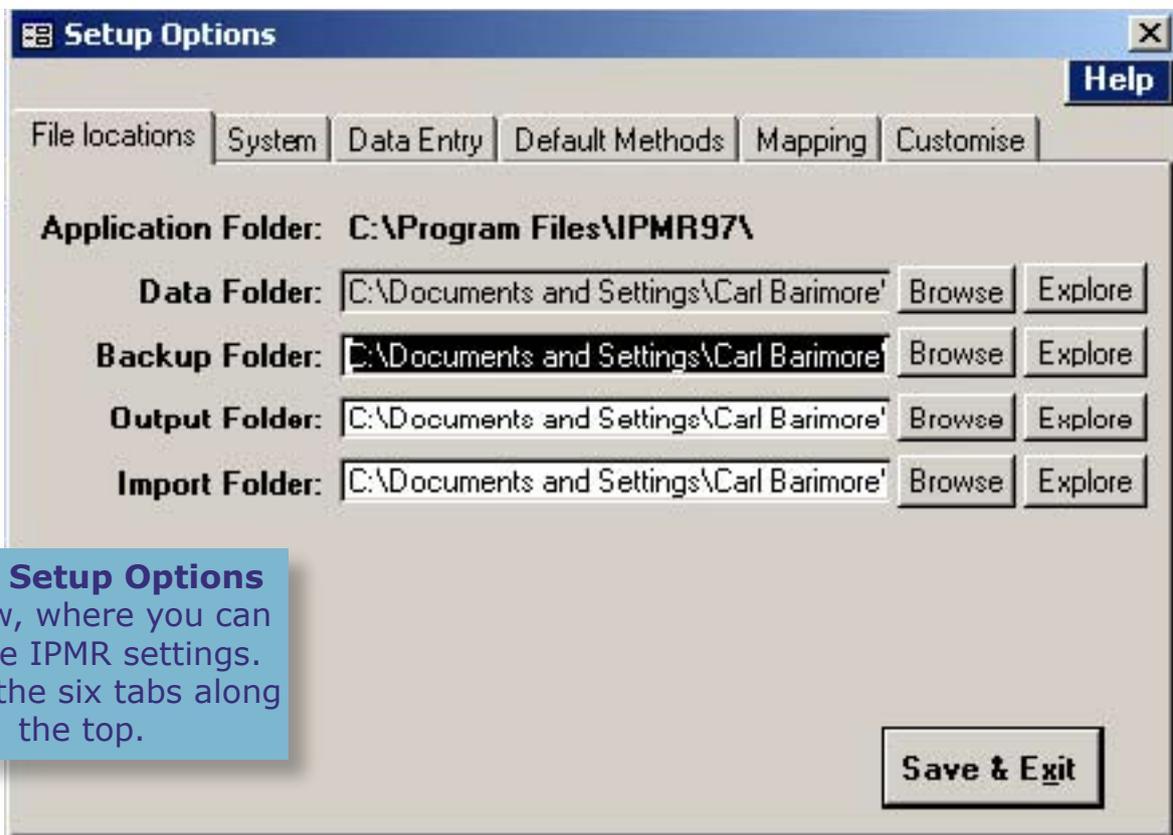
The **Setup Options** window, where you can change IPMR settings. Notice the six tabs along the top.

The **File Locations** tab allows you to determine where IPMR will save your backup files, output files and where it will search for your import files. There are three location pathways:

- **Backup**   Where IPMR will store backups of your databases.

- **Output**   Where IPMR will place any submission files and reports you create.

- **Import**   The location for you to place any files you want to subsequently import into IPMR.

You can change each one by clicking the **browse** button, and selecting a new location. It's common to create three folders, **output**, **backup** and **import**, within the IPMR folder in 'My Documents' and to then specify these as the file locations. You will notice that there is a file location for **Data**, which is where IPMR stores your main database file. As you have already told IPMR where to store data files, this option is ghosted out.

*3   Go to the **System** tab. A number of database settings can be changed here:*

- **Auto backup option**   You can choose to backup your files, using the 'compress' option if on a removable storage media, such as a floppy disk.

- **Year**   This will be set to the current year, but can be changed to input archive data.

- **Export format**   Determines the file type for which your submission files will be saved. Please keep it as **CSV** for submissions to the BTO.

- **Move after enter**   Determines what the 'return' key will do whilst entering data. It is recommended to leave it as 'next record' and then use the 'tab' key to move between fields.

- **Own species list**   Allows you to create your own custom species list that appears when you are entering records via the **Nest Records Form**. By default, the list comprises 201 commoner British species.

- **E-mail application**   Covered in **section 1.2.**

- **User field aliases**   There are two extra fields on the **Nest Records Form** where you can enter additional data for your own benefit. By pressing **Edit** here you can name these extra fields.

4 *Go to the **Data entry** tab. There is only one setting here that concerns nest recorders:*

- **Can use other series for nest captures**   Controls whether, if you aren't the owner of the rings when entering a nest records capture, and the owner will be submitting the ringing details of the captures, one can use **Other Series** for nest captures.

Of the remaining tabs, the **Default Methods** tab is not needed at all for nest recording, the **Mapping** tab is for exporting information for plotting on separate mapping software, and the **Customise** tab may be used to change the colour scheme of the IPMR interface.

2.0 Places

IPMR is a relational database, which means that the information in the database is organised into a number of different **tables**, and **records** are then linked between the tables. You can actually see the structure of these tables and links by going to the **File** menu and selecting **View Table Relationships**. This database structure has been created to increase data integrity and to make inputting the data easier.

Let's imagine a simple database, with just one table, and imagine we intend to enter three nest records- for a pair of birds that nest in the same location three years in a

row. We would have to enter all the information for the nest, including the habitat and location information, every time we created a new record, as pictured below:

Nest Record Table			
Record Number	Species	Habitat	Location
1	BLUTI	Wood	Nunnery
2	BLUTI	Wood	Nunnery
3	BLUTI	Wood	Nunnery

But when the location and habitat information is mostly the same year-on-year, it would seem a waste of effort to keep typing in the same information again and again. It also would increase the chance that we would get information wrong, such as by mis-typing a location name.

If we imagine a relational database, however, we would have a table for 'place records', where information about places, their grid references and habitat details would be stored. There would then be another table for nest records found in these places, with a link connecting up certain place records with certain nest records. So for our nesting pair, there would be one location record (they have nested in the same place each year), and three nest records (one for each year):

Place Record Table		
Record Number	Habitat	Location
1	Wood	Nunnery

Nest Record Table		
Place Record	Record Number	Species
1	1	BLUTI
1	2	BLUTI
1	3	BLUTI

You can see that the place information only has to be typed in once, and thereafter can simply be 'selected' for linking with new nest records. This greatly reduces the amount of inputting of information. It also means that the site details are actually kept in only one record and can't be mis-typed in subsequent years.

In IPMR, information about the locations where you go nest finding are input as **Place** records, and are then simply selected when creating a new nest record, so the nest is then associated with that place.

Although this way of managing your nest records has many advantages, it does mean that you will have to invest some time entering information about the places where you find nests before you can start entering in your nest records. But this step only has to be done once, with occasional additions as you move into new sites.

2.1 Your Places

A **Place,** according to IPMR, is a 1km grid square on the ordnance survey map (although it can be made to represent a larger area). The concept of 'Place' in IPMR comes from the need for ringers to record the 1km grid square where their birds were ringed. This principle has been adopted for recording nest records on IPMR.

When a nest is found, and you wish to make a record of it on IPMR, you must first create a **Place** record for the 1km grid square in which the nest was found. The place record will contain:

- The **National Grid Reference** of the 1km square.

- The **County** in which the 1km square is found.

- The **main habitat type** within the 1km square. Habitat information is entered as a code, which is covered fully in the Nest Record Scheme Handbook, so it will not be dealt with here.

Once the **Place** record is created, you can then enter a new nest record and associate it with that **Place** record. The nest record, as well as having nest visit information, can have more detailed habitat descriptions, and a more detailed NGR to supplement the information in the **Place** record.

If you find another nest on that square next year, or find several more in the same year, that same Place record can be selected and associated with all the nest records, saving you from having to re-type the same information.

Here's how to create a **Place**:

1 *Go to the **Setup** menu and select **Places** followed by **Own Place Details**. This will show a table that lists all of your Places (unless you haven't created any).*

2 *Click **Create**, and then come up with a code for your new Place. It should be relevant to the Place for ease of remembering- perhaps the first six letters of its full name.*

3 *A form will appear with the place code written at the top. Enter the details required:*

- **Place Name** Its full name.

- **Grid ref** A 4 digit NGR, such as TL8781. Co-ordinates can be converted using the facility provided by the button at the bottom of the form, though this is only approximate.

- **Grid reference accuracy** See below.

- **County/Region** IPMR will often work it out. Otherwise pick from the drop-down list

● **County/Region (E79)**	This is the older four digit code used on IPMR version 2.1.75. Select from the list.
● **Vice county**	This is optional and for your own purposes. Pick from the drop-down list.
● **Country**	GB or Eire.
● **Coastal or inland**	Pick one.
● **Schedule 1 site code**	See **Confidential Sites**.
● **Place usage**	Tick **Nest Recording**, and then the other options as applicable.
● **Habitat (first and second)**	Explained in the Nest Records Handbook, P.16.
● **Altitude:**	Enter in metres.
● **Capture Method:**	Not applicable to nest recording.

Finally, there are another couple of tick boxes; **Owner Place** is for ringing use, and **Active** can be un-ticked if the site is not in use and you want to be able to distinguish active and inactive sites on your reports.

If you click **Save and Exit** you will be taken to the **List of Places** table (see below) you were at before. From here you may manage all your Places, editing them, renaming them and deleting them as necessary. You can even search on an NGR for a nearby place by selecting the binoculars symbol.

A sorting arrow. Pressing this will sort all the records in the table in alphabetical order of place name.

The **List of Places** table, showing the table in the middle, with sorting arrows along the top, and editing buttons along the side.

2.1.1 Grid reference accuracy

Once you have created a Place record, you will only be able to use it for nest records that fall within the 1km grid square it represents. The same is true for subsites and nestboxes- you cannot link them to a Place unless their NGR falls within the 1-km grid square for the place. This could lead to difficulty if, for example, you want the Place record to represent an area that is larger than 1km^2, for example a wood where you go nest finding, or a circuit of nestboxes that are spread out in a large area.

As such, it is possible to alter the grid reference accuracy, so that the Place comes to represent an area larger than 1km^2. Selecting '1' expands the place area to each 1km square around the central one, an area of 9km^2. Selecting '2' expands it further.

2.1.2 Confidential sites

IPMR contains a facility for keeping nest locations confidential. **Confidential** nests may include those of Schedule 1 species or other sensitive species in your area. With a confidential site, two kinds of information are entered:

- **Open data**   Approximate location data for the site, which will appear on all reports and submission files.

- **Secure data**   Accurate location data, which will remain on your database.

To set up a Confidential Place:

1   *Visit the **Setup** menu and select **Places** and then **Own Place details**. Click the **Create** button.*

2   *Enter the code of your choice in the appropriate box.*

3   *When the **Places Form** opens, select the **Confidential** tick box.*

You will notice an extra section of the form will appear for you to enter your secure data (see picture on next page); the open data is entered in the normal fields at the top of the form. You will also notice that the Open Place name field will have "Site Confidential near" written in it, and the grid reference accuracy can now be changed to a radius of up to 25km.

4   *Enter the Open Place name, making sure you prefix it with "Site Confidential near."*

5   *Enter a grid reference that is up to 25km away from the true NGR for the nest- it does not have to be in the same county as the true NGR.*

6   *Enter the grid ref accuracy- the distance between your chosen NGR and the true one.*

7   *Enter the county and country codes for your chosen NGR.*

8   *Enter the Schedule 1 site number, if applicable.*

9   *Enter the accurate information for the nest in the **Secure Place Details** section (if you are not a ringer you may as well use '0' for accuracy).*

10 *As previously, tick the **Nest recording** tick box, and then enter the habitat details.*

Note that this Place (code and details) can only be used for Schedule 1 nests at that location. For any other nests occurring at the same place, you will need to set up another Place record.

The Secure data can be held within the database in encrypted form by visiting **Places** in the main **Setup** menu and then selecting **Set Secure Place Password**. After this, when you first use any feature of IPMR that involves accessing secure information, you will be prompted for the password. This will not be required again unless you exit and re-enter the database.

Ringers ringing species at sites they wish to remain confidential should submit both an electronic submission and a printed schedule for all such birds.

The **Places** form, after the 'Confidential' box has been ticked.

This becomes the section for the 'Open' details. Notice 'Site confidential' prefixing the name.

This is the expanded section for the confidential details.

2.2 Subsites

Within a **Place** you may create **Subsites**, which hold more detailed information about the geography and ecology of particular habitats or nest sites. There are two different kinds of subsites, serving two different purposes:

● **General subsites** can be created to represent the different habitats or types of nest site **within a Place**. Once a subsite has been created for a particular habitat, every nest found in that habitat can be linked to the subsite, instead of typing the same habitat information in manually for every one. This can be very beneficial if

there are large numbers of nest records with the same habitat information, such as nests in a gull colony. You can have as many Subsites within a Place as you wish.

• **Specific subsites** are used for individual nests that stay in the same location each year, such as a raptor nest in a tree or a Dipper nest under a bridge. Detailed information, including an accurate NGR, is entered for a specific subsite, and it is then used for each new nesting attempt at that nest site, so there is no need to manually enter the information each time. This also allows you to track usage of a nest over a period of years.

Subsites are created and managed from the **Nest Recording Subsites** form (below), opened from the **Setup** menu. This screen lists subsites by Place, so by choosing a Place from the drop-down list, all the subsites for that place are listed. Subsites can be edited by selecting them and pressing **Subsite Details**, or erased by selecting **Delete**.

The **Nest Recording Subsites** form.

Select a Place here.

The subsites associated with the place appear in the table. To create a new subsite, fill in the next blank row and select the **Subsite Details** button.

To create a new Subsite:

1   Make sure you have selected the right Place with which the subsite will be associated, and then select the next blank row in the subsites list.

2   Enter a code and a subsite name.

*3   Press **Subsite Details**, which will bring up a new form.*

4   Select which subsite type you are creating from the box at the top right.

5   Fill in the habitat information, as per the Nest Record Scheme Handbook instructions.

6   Fill in nest site details if appropriate, bearing in mind whether you are creating a specific or general subsite.

7 *You can enter an NGR of up to eight figures for a specific subsite. You would not normally fill in an NGR for a general subsite, unless, for example, you knew that all the habitat existed in one spot within the 1km^2 Place. Nest Subsite grid references will not be submitted to the BTO if the Place in which they are located is marked as confidential.*

To aid data entry, pressing the blue boxes next to a field will expand it into a new window, allowing you to select the information you want using check-boxes (see below).

Here is a small cut-away section of the **Nest Subsite Information** form.

Whenever you see a blue button, such as this one, on a form in IPMR, pressing it will bring up an extra tick-button form, such as the one above, to make your data entry easier.

At this stage you may ask, "If I have already entered an NGR and habitat details for the place, and am now doing so again, which one is used in the nest record?" Any habitat details that are entered for a nest record, or are populated into it from a subsite, will over-ride the information contained in the Place record. However, any grid references will not be submitted to the BTO if the Place in which they are located is marked as confidential.

2.3 Nest boxes

Inputting the details of your nestboxes for subsequent use when nest recording is one of IPMR's most powerful features, and although it requires some effort to set up the nestboxes in IPMR, the time saved year-on-year by this method can be vast.

The principle behind it is exactly the same as for a subsite. Within a place, you create records of all the nestboxes you inspect, giving details of the box type, habitat type, and NGR. Each time a nest record is created for a box, these details can simply be linked in with the record, so there is no need to type in the habitat and location details repeatedly.

There are two parts to creating records for nestboxes:

- **Nestbox type** This feature is used to record different designs and positions of nestboxes. So, a barn owl box on a pole would be one nestbox type, and an indoor barn owl box would be another type.

- **Nestboxes** These are the actual nestbox records, and include habitat information, an NGR and a nestbox type, picked from a list of the above.

2.3.1 Nest box types

IPMR already contains a list of common nest box types that are taken from the BTO Guide 23, 'Nestboxes'. However, if you use a type of box that is not in the list you may add it yourself:

1   *Go to the **Setup** menu and select **Box Types**.*

2   *A list of nest box types will appear, including the BTO ones.*

3   *Click on the next empty line in the list and add a name and a description for your new box type.*

4   *Click **Box Type Details**, which will take you to a small form where you can enter details from the drop-down menus.*

2.3.2 Nest boxes

To enter nest box details, visit the **Setup** menu and select **Nest Boxes** to open the **Nest Boxes** form. This screen is similar to the **Nest Recording Subsites** form, as it lists nestboxes by **Place**, so by choosing a Place from the drop-down list, all the nestboxes for that place are listed. Nestboxes can be edited by selecting them and pressing **Nest Box Details**, or erased by selecting **Delete**. To create a new nestbox:

1   *Select the next blank row and enter a **Box Code** and a **Walk Order** number and **Comment** (if desired). Then complete a separate line for every box that you will be recording.*

Walk Order is extremely helpful once you start nest recording, but it needs some careful thought in advance. It is helpful to have IPMR list your nestboxes in the order you tend to visit them when doing an inspection. However, IPMR will order nest records according to when they were created. As some boxes are occupied sooner than others, this will never correspond to the order you visit the boxes. **Walk order** allows your records to be shown in the order you visit the nestboxes. To enter the walk order, plan to number the boxes from the first that you come to, through to the last, using consecutive numbers. You have to remember that the numbers are stored as text

characters in IPMR, not as numbers. The main implication is that you should start your numbering with the Box Codes '01' to '09' (or '001' to '009' if you have more than 100 boxes) so that these appear as the first nine numbers in the list, otherwise you would see: 1, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 2, 20, 21, etc. The Walk Order generally is for use across subsites within a place. The Walk Order can start from '01' in each separate place. Note, for Walk Order to work correctly, you must enter all the relevant Walk Order entries before any nest records are created. If you change them later, the changes will not apply to any nest records created before the changes were made.

2   Select the first new box in your list and click **Nest Box Details**, which will bring up a screen showing the box code and the Place code at the top of the window.

3   Choose the **Box Type**, the list will include any new box types you have created.

4   Select any optional nest defaults, including nest height, orientation and NGR– these are all details that will be carried forward when you select the nestbox for a nest record, so it is very useful to enter as much detail here as you can. If you choose a subsite, all the Subsite habitat details are carried forward also.

5   Click **Nest Box Details** to proceed to the next box in the list you have created.

If your boxes share much of the same nest defaults (i.e. all at the same height) then you can duplicate information from one box to another as you move through the list. Double click on a field you wish to duplicate and the background will go yellow, meaning that the data in the field will be carried forward to the next record. If, at any time, you wish to stop this feature, double click in the field and its background will return to white.

3.0 Entering nest records

As explained earlier, there are two ways of entering nest record data. Without making use of the subsite and nestbox facilities, you will have to enter all your nest site details manually, which is the most time consuming and inefficient approach, but is also the simplest, and may be the best option for those who only enter, say, four records per year.

On the other hand, if you have set up subsites and nestboxes, you will find that much of the work with regards to entering nest site details on nest records has already been done.

3.1 How to enter new nest records

1   Go to the **Nest Records** menu and select **New Nests**. The **Nest Record Card** form should appear, as below.

The **Nest Record Card** form, which is one half of the two forms used to fill in a nest record

The **Nest Visits** form, which is the other form used to input a nest record.
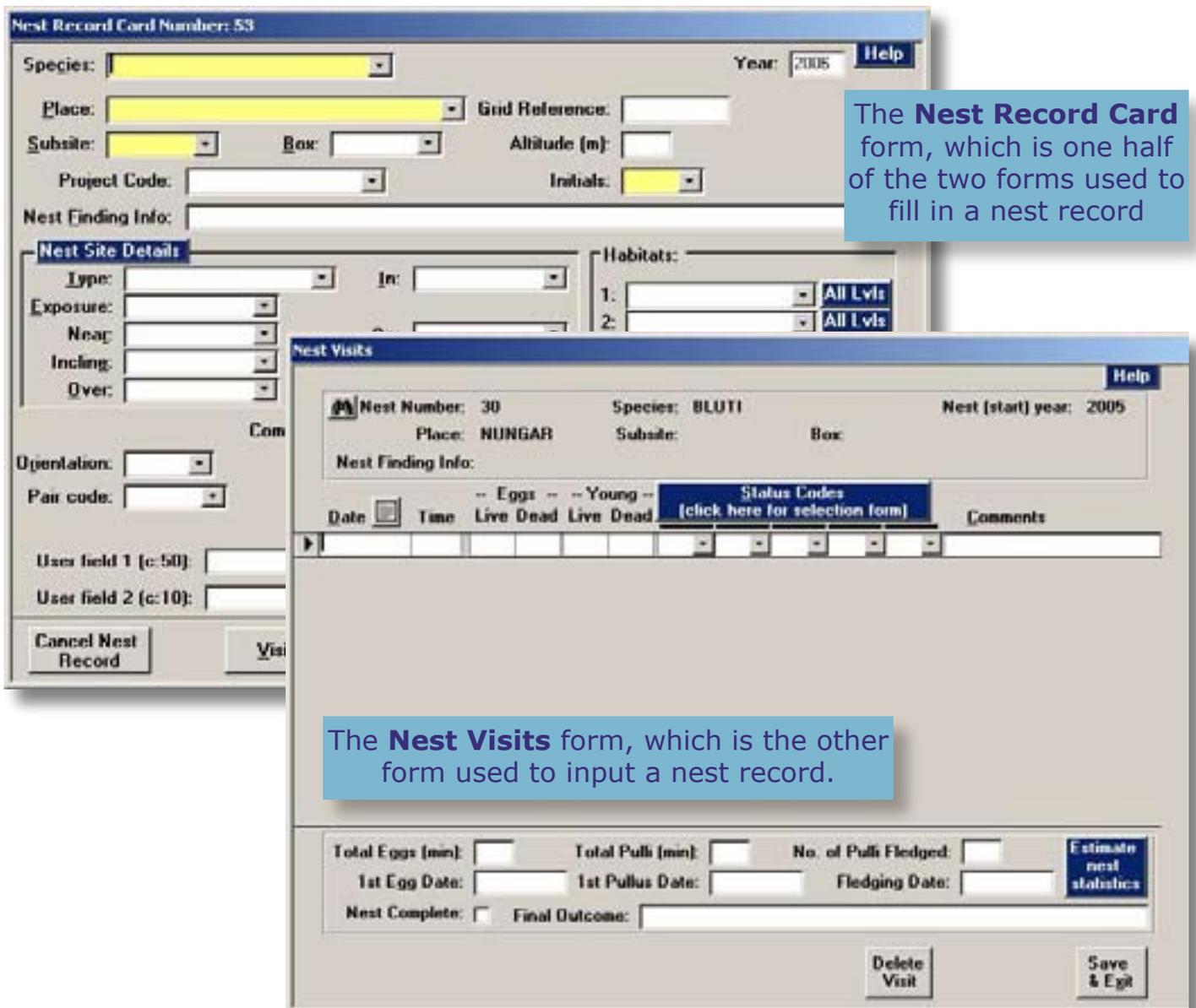
Nest records are input on two forms. Information about the nest site is entered via the **Nest Record Card** form and information about the nest visits is entered on the **Nest Visits Form** (see above). Nest recorders who are used to nest record cards will recognise all the fields as being the same as on the paper cards, although the layout is slightly different.

2   Begin by entering the **Species**, either by typing the first few letters of the name, or by choosing the name from the drop-down menu.

3   Enter the **Place**. If you remember the code, just type the code and the name should appear. Otherwise, the drop-down list will show all the Places you have created. You will then see that the 4-figure NGR and the altitude for the Place will automatically appear in their respective fields, as well as the first level of the habitat.

4   If you have set up **subsites** or **nestboxes**, now is the time to select the appropriate ones from the drop-down lists. Depending on how much information you entered for the subsites and nestboxes, you should see some or all of the nest site fields become populated with details you entered earlier. This is where IPMR can save you so much time entering your nest records.

5 The remaining nest site details may be filled in manually. Enter the habitat information using either the drop-down lists in each field, or else click the blue buttons to expand each section. The coding system for habitats is explained in the Nest Records Handbook.

5 Enter the correct year of observation (the 'Nest Year') in the **Year** field. If your record comes from the current year, the field will not need changing.

6 The **Nest Finding Info** field can be entered with any notes, and the nest finder's initials can be selected in the **Initials** field (see **Group section**). The 'Project Code' field is not usable.

7 Enter the record type in the **Subm** field. This field tells IPMR and ultimately the BTO what type of record has been created. The options are:

- **NOT** For a new un-submitted record, that will be sent to the BTO.

- **OLD** For an old record you want to have on your database but not submit to the BTO.

- **PSC** For a record that has previously already been sent to the BTO on card (including colony card).

The record is now ready to have the visit information entered – the data that you would have written on the printed lines on the front of a nest record card.

8 Click on **Visits** to be taken to the **Nest Visits** form.

The **Nest Visits** form shows one blank row when first opened. This row represents a single visit to the nest. As it is completed another blank row will appear, and so on for successive visits. Visits can be deleted again by selecting **Delete Visit**.

9 Enter the date in the format **01/01/2000**, or alternatively use the calendar function situated above the date column. You can enter any date, and may need to enter previous years if you are entering historic data, but do ensure that the date agrees with the 'Nest Year', which you set in step 5.

10 Enter the time in twenty-four hour format. Note that you do not have to enter the full stop or colon separator, just the figures.

11 Enter the nest contents. There are separate rows for live eggs, dead eggs, live young and dead young.

There are a number of important rules to filling in these numbers, especially where approximate or minimum counts are concerned. However, the protocol is covered fully in the NRS Handbook and so will not be repeated here.

12 Enter the status codes for the visit. The codes may be typed in, chosen from the drop-down lists, or chosen from the **selection form** by clicking on the blue **Status Codes** button (see below).

Clicking the **Status Codes** button on the **Visits Form**, as above, brings up this coding form, allowing you to use tick boxes to fill in the nest activity. Where boxes are ghosted, the status codes cannot be applied at that visit.

The NRS status codes are printed on the blue **Nest Record Scheme Coding System** card that is included with your starter pack. Again, the coding system is thoroughly explained in the NRS Handbook.

Once you have entered an **outcome code** (i.e. **NE, SL, OU**, **EA**, **YP**, etc.) for your final visit, a message box will appear and ask if this is the final outcome of the nest, and whether this outcome code may also be used for the **final nest outcome**. Although you can enter up to four outcome codes for the last visit (i.e. **NE** and **JD** for a partial success) IPMR requires that one of these codes be entered as the final outcome for the nest, and will automatically enter the code into the final outcome field if you select 'yes'. You may choose which code is selected, but it must be one of them. **Nest Records cannot be submitted to the BTO until a final outcome code is entered.**

3.1.1 Entering egg measurements

When a number of eggs is entered in the live eggs column, the **Egg Details** button appears on the bottom of the **Nest Visits** form. If you select this button a form appears for you to enter measurements for the eggs in the clutch– length and breadth in millimetres and weight in grams.

This is especially useful if you record Tawny and Barn Owls and take egg measurements in order to work out the expected hatching date of the chicks (this is useful for ringers who wish to capture adults at the nest and avoid disturbing the nest around the hatching date). Upon entering the egg measurements for these two species, the **Est. Hatch** button will appear, which, when clicked, will give you an estimation of the hatching date for the clutch.

3.1.2 Nest Statistics

From the data that are entered, IPMR tries to make sense of what is put in and fills the statistics fields at the bottom of the form – the number of eggs in the clutch, the number of live young, etc. For example, it will take the largest count of eggs if there is one. If you see an obvious mistake because, for example, the full clutch size was never recorded, you can manually overwrite the data held in those fields. It is essential to do so if you wish to get any sense from the reports that are available when all the nest records have been completed. **Nest Statistics** are for your own use and do not get passed on to the BTO.

3.2 Entering adult capture records

For those who ring adult birds and young at the nest, IPMR can create a link between your nest records and your capture records. This greatly benefits the BTO and also allows you to glean far more information from your records, via IPMR's reporting facilities.

There are two ways of entering records of adults caught at the nest:

*1   Create a brand new **capture record** from the **Nest Visits** form, which will allow you to enter all the capture data and will automatically link the capture record with the nest.*

*2   Enter the **nest record** and the **capture record** separately, and then link them via the **Nest Visits** form. This method is not recommended, but may be necessary, particularly if a group secretary has imported capture records and nest records from separate sources into one database.*

Both of these methods begin with entering an adult capture activity code for one of the visits at the nest. When one of the adult capture codes **AT**, **FT** or **MT** is entered, a button labelled **Adult Captures** appears at the bottom of the nest visits screen (see next page). Each time you select the row with the adult capture code, the button appears, and it disappears when another row is selected.

Clicking this button brings up the **Adult Nest Captures** form, which has two option buttons:

*1   A button labelled **Add a new capture record**. When you click this button the **Adult Nest Capture** form appears and a brand new capture record may be filled-in, beginning of course with the ring number. This of course assumes that you have set up your ring series, and understand how to enter capture records- a subject that will not be covered by this manual.*

*2   A small check button labelled **Allow attachment of existing captures**. When you check the button, a larger button appears with a drop-down list to the right. Select the already-existing capture record you want to attach to the nest using the drop-down list and then click the **Attach an existing capture record** button to the left. A window will then appear, confirming to which number nest record the capture record has been linked.*

Here is a cut-away picture of the bottom of the **Nest Visits** form. You can see the extra buttons that appear when you are editing a visit with young or adult ringed codes. In this example, 4 pulli capture records have already been added, so the button displays this. Notice also that the egg button is present because egg measurements have been added for eggs in this visit.

The **Adult Nest Captures Form**, showing all the buttons that appear for entering new captures, entering retraps, amending existing records, and attaching capture records that have already been created. Which of these buttons is visible will depend on the circumstances of the visit that is being edited.

Once you have entered or linked the adult capture record(s), you will see that the **Adult Capture** button at the bottom of the Visits Screen now displays the number of adult captures that have been linked to the nest record **on that visit**.

If a capture activity code is used on subsequent nest visit, the same **Adult Capture** button appears, which again brings up the **Adult Nest Captures** form when clicked. If you wish to add the capture details of a second adult you did not catch on a previous visit, simply repeat the process exactly as described above.

3.2.1 Retrap Capture Records at the Nest

If you wish to record a re-trapped adult, whose details you first entered on a previous visit, you will once again need to enter a capture activity code for the appropriate visit, and then select the **Adult Capture** button to bring up the **Adult Nest Captures** form. This time, you will need to select an additional button that appears in the middle of the form, called **Add details to this visit of a bird from a previous visit**. You will notice that, when the Adult Captures form appears this time, the **Record Type** field is automatically set to 'R' for re-trap.

3.2.2 Editing existing capture records

When you select a visit row where capture records have already been linked, the **adult capture** button reappears. When it is clicked, the **Adult Nest Captures** form

appears, but this time with another additional button: **Edit Existing details of a bird from this visit**.

Select the capture you wish to edit from the drop down list and then select the button to the left to revisit the '**Adult Captures**' form.

3.2.3 Unlinking capture records

If you want to undo a link you have made between a capture record and a nest record, it may be done from the **Nest Record Card** form. Once you have linked capture records to a nest, you will see that a new button, called **Captures**, now appears next to the navigation buttons at the bottom of the **Nest Record Card** form.

Selecting this button brings up a summary table of all the capture records linked to the nest. This table can be sorted and queried in exactly the same way as the **Goto Nest Record** table or the **Nest Selection, Reporting and Processing** table (see **section 4.2**). Selecting a row and pressing **Edit Capture Record** will bring up the Adult Captures form for editing that record.

If you want to un-link one of the capture records from the nest, select the record in the table and then bring up the **Captures** menu from the IPMR menu bar. Select the **Unlink nest record from this capture** option. Even records that were originally created via the Nest Visits screen can be unlinked.

3.3 Entering pulli capture records

When young are ringed during a visit you enter the activity code **YR**. Upon doing so, a third button appears: **Chick Handling**. (Remember, you must also enter at least one code to describe the stage of development of the pulli: **DO**, **IP**, **FS**, **FM** or **FL**).

Clicking the Chick Handling button brings up a window giving you two options:

- Clicking 'Yes' allows you to create new capture records for the whole brood in one go:

  1   *When the **Multiple Pulli Captures** form appears, enter the first ring number in the **first series** box, and then the number of pulli ringed on that series on that visit (from the number alive on that visit).*

  2   *You can then enter additional details such as sex, stage code and processor's initials if need be.*

  3   *If you have got to the end of a ring series in the middle of ringing a brood, you can enter the first ring number from the second series, and then continue as above.*

  4   *The end **Pulli alive** total should equal the total number of pulli you ringed on that visit. You can then enter the Checker's initials, and extra ring information, as appropriate.*

- Clicking 'No' allows you to create each individual pulli capture record separately, and also allows you to attach existing pulli capture records if they have already been created. A **Nest Chick Handlings** form is brought up that is essentially the same as the **Adult Nest Capture** form we dealt with earlier:

   1 *Clicking **Add a new capture record** brings up a large capture form, the **Nest Chick Handling** form, wherein a new capture record can be entered, as for* **section 3.2***.*

   2 *Checking the **Attach an existing...** button allows you to select an existing pulli capture record from the drop-down list and then attach it. When the number of ringed pulli in the drop-down list equals the number of pulli alive at that visit, a message box appears, stating: **'Do you want to add all X pulli for this nest using rings (first ring no.) to (last ring no.)?'** If the details are correct, click Yes. Otherwise, you can attach each record individually. Unlinking pulli records is identical to* **section 3.2.3***.*

When you have entered the pulli records, the **Chick Handling** button will include the number of pulli that have been ringed on that visit (see **here**).

3.3.1 Editing existing pulli records

When you select a visit row where pulli records have already been linked, the **Chick Handling** button appears again. When it is clicked, the **Nest Chick Handlings** form appears (below), with an **Edit existing details...** button. Select the capture you wish to edit from the drop down list and then click the button to revisit the **Nest Chick Handling** form.

The **Nest Chick Handling** form, that appears when you select a visit row where pulli records have already been entered. Here a record is being selected for editing. The form appears the same whether you are attaching new pulli records or creating new records individually.

3.4 Troubleshooting

When you are linking an already existing adult or pulli capture record to a nest record, you may be surprised to find that the record you were expecting to see in the drop-down list is not there. The most common reason for this is that the date and/or the time entered for the capture record does not agree with that of the nest visit you are linking it to. Both the date and time for capture record must be identical to that of the nest record visit in order for them to be linked.

With adult capture records, you must either revisit the capture record or go to the nest visit and amend the date/time. Often the difference will only be a matter of an hour's discrepancy, and the capture record may have to be changed from, say, 07:00 to 08:00.

With pulli capture records the situation is slightly different. Any applicable capture records will still show up in the **Attach an existing...** drop-down list, even if the time is wrong. However, when you select a capture record, you will see the message: **'The time of the selected capture (Time 1) is not equal to the visit time (Time 2). Changing the visit time to (Time 1) is suggested.'** Remember (Time 1) and click OK.

As with adult capture records, it is then a case of amending the nest visit time to (Time 1), or else amending all the pulli capture records, which is more long-winded.

4.0 Navigating around your records

It is often necessary to revisit the records you have entered, either to make corrections, check your data or enter follow-up visits for 'active' nests. There are three separate forms for navigating through your nest records, and a combination of all three is the best approach to viewing all your data.

4.1 The Nest Record Card/Nest Visit forms

You will have already seen these when you created a new record. They are two connected forms for creating a nest record: one is for site and habitat details, and the other is for visit details.

The Nest Record Card/Nest Visit forms can be accessed directly from the **Nest Records** menu by selecting the following buttons:

- **Edit all nests**   This will result in the first record you have entered being shown on the **Nest Record Card** form. The navigation buttons at the bottom of the form can be used to navigate through all your records one at a time.

● Edit outstanding nests	Loads up the first 'outstanding nest record' onto the **Nest Record Card** form. These are records that do not have a final outcome code and are thus deemed unfinished. Once again, the navigation buttons at the bottom of the form can be used to navigate from one outstanding record to the next. This is a good way to review all your unfinished records at the end of the season.

There are two more buttons on the **Nest Records** menu that do the same job as the ones just described, except they load the records into the **Nest Visits** form instead of the **Nest Record Card** form. They are- **Edit all Visits** and **Edit Outstanding Visits**.

The navigation buttons at the bottom of the **Nest Record Card** form will vary depending on the route you have used to access it. If you visit the form via the **Nest Records** menu, you will see the following buttons along the bottom:

● Go to nest record	This will bring up a table listing all your nest records (or all your outstanding nest records). You may scroll up and down the table, and sort the records by any of the columns by pressing the arrows along the top. Double clicking on a record will load that record onto the form.
● Visits	This will take you to the Nest Visits form for the same record. Pressing 'Save and Exit' will return you to the Nest Record Card form.
● Prev Card/Next Card	By pressing these buttons you can navigate backwards and forwards through all your nest records (or all your outstanding records) one at a time. The records appear in the order they were created. The number of the record is shown along the window bar.
● Save and exit	Closes the Nest Record Card form.

If you have accessed the **Nest Visits** form via a route that takes you straight to the visits section, you will see the same navigation buttons, however there will be no button that will allow you to switch to the **Nest Record Card** form for the same record. All the navigation takes place purely between the visits section of each record.

4.2 Nest Selection, Reporting and Processing

This feature can be entered by selecting **Nest Selection, Reporting and Processing** in the **Nest Records** menu bar. It is a table that displays all your nest records, rather like the **Goto nest record** table described above. However, this table has many more sorting features, as well as a query feature.

Each row of the table represents a summary of a nest record in your database, with the key fields of each nest record presented in the columns. You can select a nest record and display it in the **Nest Visits** form for editing by double-clicking on a row. Alternatively, you can select a nest record and then select **view nest** or **view visits** to display it in either the Nest Records or Nest Visits form. When you enter the Nest

Record Card screen via this route, scrolling through the records will be done in the order they appear in the **Nest Selection, Reporting and Processing** table.

You can **sort** the records shown in the **Nest Selection, Reporting and Processing** table according to a column by clicking the arrow at the top header of the column (see picture below). For example you can view the list of records according to the year by selecting the arrow above the year column.

Similarly, you can **filter** the list for specific records by typing in search terms at the top of each column. So, if you wanted to list all your blue tit nest records, you would type in 'BLUTI' in the white text box at the top of the species column and then select **Run Query**. As well as typing in search terms into the text box, you may also select them from the drop-down list. You can use combinations of search terms to refine your filtering. For example, if you wanted to look at all your outstanding nests in your back garden for the current year:

> **1**   Select the **Year** and the **Place** from the drop-down menus.
>
> **2**   Choose **Outstanding** from the drop-down list for the outcome.
>
> **3**   Press **Run Query** at the bottom left of the screen.

If you want to list the records in **Walk Order** (see **section 2.3.2**), select the search arrow to the right of the heading 'Nest find info'.

The **Nest Selection, Reporting and Processing** table. The arrows at the top of each column sort the records by the selected column. Here they have been sorted by species.

5.0 Submitting nest records

Once you have a collection of completed nest records, you will be ready to submit them to the BTO. However, you should first review all your records using the **Nest Selection, Reporting and Processing** table (see above) and check that all your finished records have final outcome codes. **Please remember that nest records must have Final Outcome codes or they will not be added to the submission file.** Submitting records to the BTO can be done by having IPMR create a **Submission File**, which is a text file of all your completed nest records. This file is placed in a designated location on your computer (usually 'My Documents' see **this section**) and, if the facility has been set-up, is also automatically placed as an attachment in an e-mail for you to send to the BTO.

Nest record data should be submitted to the BTO by 28th February of the following year. Sending all your records in a single file ensures that the totals calculated for your submission will be correct, however this may not be convenient for all recorders. Once your records have arrived at the BTO you will be sent an e-mail acknowledging their receipt. **Please get in contact if you hear nothing, as it may mean that your file hasn't reached us.** To make a submission:

1 *Go to the* **Nest Records** *menu and select* **Submissions** *and then* **Create Submission File***. IPMR will then inform you of how many outstanding nests you have, as these will not be submitted. This is to remind you of any nest records you may wish to finish off. Press* **OK** *to proceed.*

2 *You will then be presented with the* **Create Submission File** *form (see next page). Select one of the two options for creating a submission file. They are:*

- **All outstanding nests** — This would include in the submission any nest that has a valid Outcome Code, from any year, including historic records, unless the record's submission code has been set to **OLD**.

- **All outstanding nests from Year** — This has a drop down list in order to choose the year for the records to be selected for submission. This is the option that can be used part way through the breeding season and when all remaining nest records have been completed. Again, IPMR only selects those nests that have valid **Outcome codes** from the chosen year.

In the **Create Submission File** form (see next page) you will see the 'submission sequence number' that your new submission file will be given. IPMR gives nest record submission files a name that comprises two parts. The first part is simply the word 'Output' followed by the user's observer code, and the second part is the submission sequence number. The submission sequence number is a two digit year code followed by a sequence digit which starts at 1 and for each submission for that year is incremented through 2, 3, 4 et seq. After 9 the sequence is taken from the alphabet. For example,

if an observer with the code 'TEST' was to create his first submission file in 2006, the filename would be 'OuputTEST-061'. His fifteenth submission file for 2006 would read 'OutputTEST-06F'. The 'year' section of the filename is the year of the file creation, and has nothing to do with the year of the nest records contained within.

Below the sequence number, you can see the pathway to your new submission file, to remind you where you can find it should you need to. Below that is a button, next to the **Cancel** and **OK** buttons, that will take you to the **Effort Recording** form. Recording effort is a necessary part of the submission process, and IPMR will be prompt you to fill in the **Effort Recording** form if you have not done so by the time you press **OK**.

The **Create Submission File** Form

The form tells you how many records may be submitted now, and how many are still waiting to be finished

The form tells you the name of the submission file ot be created (here it is OutputBTO.063) and the pathway it will be saved to.

Selecting **Recording Effort** brings up a form much like the effort section of the paper NRS Summary Sheets. Filling this in will mean that no Summary Sheet need be sent in.

At the Nest Recording Effort Screen you can fill in time spent on nest recording, broken down month-by-month. There is a drop-down for you to select the appropriate

year (in case you have records for multiple years in your submission file) and then a choice of alternative ways of recording effort:

- **Simple**

  With this table you simply select the appropriate description of effort for each month, out of the choices '0' (None), 'F' (Few) or 'M' (Many).

- **Visits and hours**

  Allows you to record the actual number of hours spent recording, and the number of visits made to nests.

Once you have recorded your Nest Recording effort, and selected **OK** on the **Create Submission File** form, IPMR will bring up a **Submission File Processing** window, telling you the number of files it will export to the submission file. You will see that you are also given some processing options.

- **Create e-mail to send to BTO hq**

  IPMR will automatically attach the submission file to an e-mail and send it to the BTO.

- **Create e-mail to send to group sec**

  IPMR will automatically attach the submission file to an e-mail and send it the e-mail address you type in.

- **Copy file to diskette**

  IPMR will copy the file to a removable storage media, such as a floppy disk or CD, so that you can post it.

- **Copy file to clipboard and then exit**

  IPMR will place the file in the output folder (which it does anyway) and take no further action.

If you select the fourth option, it will be up to you to see that the submission file gets to the BTO. If you manually e-mail the file, please send your e-mail to **nest.data@bto.org**

Quick note: IPMR will only create e-mails automatically if you have set up the e-mail facility (**see here**).

OutputBTO-061.zip — Zip file

OutputBTO.061 — Raw output file
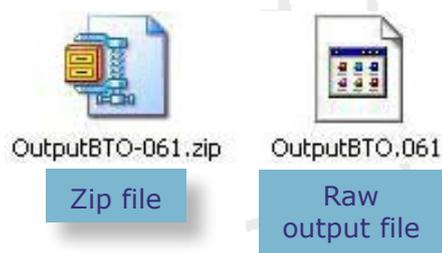
If you look in the folder where IPMR has created your submission file, you will see that there are in fact two copies (see left). One will be a raw file (an undesignated file type) and the other will be a **zip-file**. The zip-file simply contains the raw file you can already see plus the control file for the database (see **this section**). **Please send the zip-file to the BTO.** The reason it has been zipped is to protect the raw files from corruption, which they can sometimes sustain when passing through Internet service providers.

If you now revisit the **Nest Selection, Reporting and Processing** table, you will see that all the records that have been exported will have the **submission sequence number** given as their **submission code**, instead of **NOT**. You can now sort your records in this table by the submission sequence number, or run a query looking for a specific sequence number. This way you will easily be able to see exactly what records have been submitted, and what file they were exported to.

5.1 Resubmitting nest records

Once you have submitted a record to the BTO, you may then realise that some of the information is incorrect, or you may have more information to add. Luckily, you have the option of **resubmitting** individual records to the BTO.

If you visit the **Nest Record Card** form for a submitted record, you will see that it displays a new yellow button on the top right corner, asking if you want to resubmit the record (see below). Clicking this will automatically set the **Submission** field on the bottom right of the form to **RES**, for 'resubmission'. When you next create a submission file, the record will be included along with all the new **NOT** records in your database.

The **RES** designation is very important as it informs the BTO that the record has already been received and that the resubmission is to replace it. If you have a file to resubmit, but for some reason have to recreate it from scratch, you will need to manually change its submission status from **NOT** to **RES** before submitting it. This can be done in the **Submission** field at the bottom right of the **Nest Record Card** form.

The Nest Record Card form, showing a record that has been submitted, with the **resubmit** button near the top right, and the **submission number** near the bottom left. After clicking the resubmit button, you can see that the button disappears, and the resubmission number changes to an **RES** submission code.

5.2 If your records do not reach the BTO

Sometimes it is necessary to send in your records to the BTO again because they did not receive them, perhaps because the e-mail never reached the BTO, or perhaps because the disk got lost in the post. The apparent solution to this problem is to simply press **resubmit** for all the records that were exported in the lost submission file, and then create a new submission file with them all in. **Please do not attempt this.** The records will all appear as **RES**, when in truth the BTO will have never received the original records! Here is what to do:

- **Find the submission file and send it again.**

  The original submission file should still be in the **output** location for your IPMR files, and we would advise you to keep them there whenever they are created. Simply attach the file to an e-mail again, and send it to the BTO.

- **Undo the submission file and recreate it**

  If the file is lost both you and the BTO, you can easily **cancel the submission** on IPMR, via the following steps:

  1 Select the **Submissions** option in the **Nest Records menu** and then select **View Submission History**.

  2 This will bring up the **View Submission History** form which shows a log of all your submission files in order of creation, with the time and date they were created. By clicking on a submission number, and pressing **Cancel Submission** you can reset IPMR to before it created your file.

  3 The log of the file will disappear and all the records which have that file number as their submission code will return to **NOT**. You may then create a new submission file with those records all over again, and they will appear as new records in the submission file.

5.3 Viewing the submission history of your records

We have already visited the **View Submission History** form in the section just above, but it's worth looking at it again. It provides a very useful summary of your data exports, either to the BTO or to a group secretary. You have the option of checking a box to say whether each submission was sent to and accepted by the BTO, and you may add a comment. Selecting **Process File** brings up the **Submission File Processing** window again, as covered **before**.

There is also a report found in the **Submissions** section of the **Nest Records** menu that is very handy when examining your submission history. If you select the **Submissions** option in the **Nest Records** menu and then select **Submission History Statistics**, the log from the **View Submission History** form is reproduced as a report, which may then be printed out. It will also show you the number of records that were contained in each submission file.

6.0 Reporting

The great advantage to the nest recorder of using IPMR as oppose to paper cards is the program's ability to quickly summarize your data in reports that can be viewed, saved, and printed off. It may be helpful to think of there being three types of reports:

- **Lists-** There are many reports in IPMR that are simply lists, often in summary form, of either the data held in your database or of your activities on your database. For example, you can produce a list of the places you have entered, or you can view a list of the number of submission files you have created. These reports are there to aid you in maintenaning your database.

• **Summaries and statistics-** When you have completed all your nest records for a season, you may wish to summarise your results for use in a ringing report, to send to the County bird recorder, or for your own perusal. There are reports in IPMR that will present your data in lots of useful ways. For example, the **Year End Totals Submission** gives you a summary of all the successful nests, failed nests and nests of unknown outcome you have recorded in a given year.

• **Nest Recording Tools-** These reports are designed to aid your nest recording, by acting as a 'Progress Report' during the season and providing you with summaries of outstanding nests that you can print off and take into the field. An example would be the **Nest Checking Report**, which will try to predict the best time to ring chicks in outstanding nests.

We shall take a look at these in turn, however, as the reports are so easy to run, I would recommend simply trying out each one to see what it contains. Please note that not all the reports are located in the same place on IPMR.

6.1 List reports

• *Imported Nests*   This is a list, record by record, of all the nest records that have been imported into the database. It shows the date and time they were imported, and in which submission file they arrived. This report can be found by visiting the **Nest Selection, Reporting and Processing** table. On loading the table, you will see that a new menu has appeared on the IPMR menu bar, called **Reports**. By opening the menu you will come to the **Imported Nests** option.

• *Imports summary report*   Asks you for a particular year, and then shows you all the submission files that were imported that year. It lists each filename, which is equivalent to an observer's database, and then shows each submission file number for that filename to the right, along with the date it was imported. **This is a good way of seeing how many imports have come from the same source database.** The report can be selected from the **Imports** menu option in the **Nest Records** main menu.

• *Submission History Statistics*   This is covered in section 5.3. It is a report of all the submission files that have been created from the database. It lists their submission number, the date and time they ran and the number of nest records they contained. It is can be run by selecting **Submissions** in the Nest Records menu, and then selecting **Submission History Statistics**.

• *Places Report*   Provides a summary list of each place in your database, including the grid reference, county, and habitat information for each. It is found in the **Reports** menu that appears on the menu bar when you load the **Places** form.

• *Nest subsites report*   This shows all your **subsites** by the Place they are linked to. It also shows the habitat description and NGR for each subsite. It can be found via the **Setup Reports** option in the **Setup** menu (main IPMR screen).

• Nestbox summary report	Running this report produces a list of each site and subsite, showing how many of each type of nestbox is found in each site. As with **Nest Subsites Report**, this report is accessed from the **Setup Reports** menu option.
• County Codes Compare Report	The produces a list of all your places, showing the five letter county code for each, with the older four letter county code equivalent alongside. It is found in the **Reports** menu that appears on the menu bar when you load the **Places** form.

6.2 Summaries and statistics

Five of the summary reports are accessed from the **Species Summary** form, which can be opened by going to **Standard Reports** option in the **Nest Records** main menu. You can run each report by selecting its button on the right of the form. Each report can be filtered by choosing one or more of the parameters on the left before running it. So, for example, by selecting a specific year the report will produce a summary for that season only. By changing the Place, the report summarises nests found only in that Place. By choosing a species, the report is run for that species only. For several of the reports you must select a species from the parameter list.

The main form for the Species Summary Reports. Before selecting one of the report buttons on the right, enter the required parameters on the left.

Here are the five reports generated from the **Species Summary** form:

• Species summary	Summarises the overall nesting performance of each species for which you have recorded nests in your database. Figures include the average number of eggs and pulli per nest, and the percentage of successful and failed nests.
• Single Species Summary 1	Produces exactly the same summary information as **Species Summary**, but reports it instead for a single species, year-on-year. For example, it will show a summary for blue tit nest records in 2001, 2002, 2003 and 2004. You must select a species from the parameter list before running the report.

- *Single Species Summary 2*   Produces nesting statistics for a single selected species year-on-year, just as does Summary 1, but it reports a different selection of figures, including the total number of eggs and young produced for a year, and the proportion of eggs and pulli that eventually fledged.

- *Species Survival*   Displays both productivity and survival data overall for each species recorded, by Place. Figures include the total number of eggs, pulli and fledglings, average (per nest) figures for each, and some indicative survival statistics. As with all the reports, the results can be filtered by specifying parameters (i.e. reporting only on one place).

- *Species Survival by Year*   Shows exactly the same productivity and survival data as **Species Survival**, but produces the summaries by year, as well as by species and place. So, for example, it would show the productivity data for blackbird, in a garden, in 2005.

As well as selecting these reports from the **Species Summary** form, they can also be accessed via the **Reports** menu that appears on the main menu bar when the **Nest Selection, Reporting and Processing** table is loaded. When selected, the reports summarise whichever records are present in the Nest, Selection, Reporting and Processing table. Therefore, you can filter the reports by running queries in the table.

The rest of the Summary/Statistical reports are:

- *Year end totals submission*   This report provides a count of all the nest records found for each species over a specified season. It further breaks down the totals into the number of successful, failed and unknown-outcome nests. The report may be opened by selecting the **Submissions** option in the **Nest Records** main menu, and then selecting **Year end totals submission**. The report is useful for seeing how many nests you will be submitting to the BTO at the end of the season.

- *Nest Site Summary*   This is a very simple query that shows a line by line summary of each nest. The records are not grouped like they are in **Nests Summary** (see next page), and the year and place data are simply listed in fields as part of the nest summary. The report is found in the **Standard Reports** menu, and brings up a form for filtering the report, as with **Nests Summary**. However, this report is designed to allow filtering by subsite and nestbox, so the parameters you can select are different.

- *Nest captures of a ringed adult*   Produces a report showing which nests a particular ringed bird has been captured at. The report is found in the **Standard Reports** menu. When selected, asks for the ring number of the adult bird you wish to see reported.

- ***Nest Captures***   Provides a simple line by line summary of every nest capture. The place, box and subsite are shown, along with species, pullus stage code, ring number and date ringed. This query is found in the **Standard Reports** menu. When clicked, it produces a form appears allowing you to specify a report title and filter the query using various parameters.

- ***Nest Visit Checking***   This report is also selected from the **Standard Reports** menu. A form will appear asking you to enter the date of the nest visit and then, optionally, the Place. The report will show you all the nests visited on the date entered, with details of the nest location and habitat, and then the nest contents and status codes on the visit. It also gives the adult ring number, if an adult was eventually trapped and ringed on the nest. It will show all nests from all places unless a particular place is specified.

- ***Nests Summary***   This report provides a summary of every nest, line by line. It shows the nest record number, species, subsite used, box used, outcome, first egg date, and the number of eggs, pulli and fledglings. The nests are grouped into both Year and Place, and the report may run over many pages if not filtered. At the bottom of each year and place grouping there are statistical summaries of the data. This query is found in the **Standard Reports** menu option, and, when clicked, a form appears allowing you to specify a report title and then filter the query using various parameters. This report can be very useful for providing a breeding performance summary of a species at a Place in a certain year, and so allows year-on-year comparisons. The data presented can then be used in Excel to produce graphs or can be tested in a statistical package.

7.2.1 Exclude nests where all eggs not counted

This is an important check box that appears in several of the report forms, and so is being given a special mention. To produce many of the statistics in the reports, IPMR uses the summary statistics that can be seen at the bottom of the **Nest Visits** menu, when a nest has been completed and given an Outcome code. One of these statistics is the **clutch size**, which IPMR calculates in two seperate ways:

1   *The maximum number of eggs counted (that is at least equal to the number of subsequent chicks).*

2   *An assumption based on the highest number of pulli recorded. For example, if a ringer or observer found that there were 7 pulli in the nest, then there must have been at least 7 eggs. The problem with this assumption is that the ringer or observer cannot know if there were actually more than 7 eggs. Therefore, any report that uses clutch sizes derived from this assumption will end up producing an over-estimate of nest success. This is because the mortality at the egg-to-chick stage is effectively missed off- if the number of eggs is based on the number of hatched pulli then the proportion of eggs hatched for that nest will always be 100%.*

By selecting the **Exclude nests where all eggs not counted** button, only nests that have a recorded maximum count of eggs will be used for a report's statistics.

6.3 Nest recording tools

- *Outstanding nests*   This report is summary of all your **outstanding nests**. For each nest it shows the species, the Place details, and also the nest contents and status codes from the last visit. It also tells you the estimated early and late ringing dates, to provide you with a time window for visiting the nest and ringing the chicks. This report is opened from the **Standard Reports** menu and opens with a form that allows you to refine the report by place, and allows you to limit the report to nests last visited after a certain date. You can also have the report display blank boxes **that you can use in the field to record data**, should you wish to print the report and take it with you.

- *Owl Hatching*   This report estimates expected hatching dates for Tawny and Barn Owl broods, using egg measurement data that have already been entered. It opens from the **Standard Report** menu, and begins with a form that allows you to enter a title, and refine the report by Place and year.

6.4 Cross Tabulation and the Reports Manager

- **Reports Manager-** The reports manager is opened from the **File** main menu. It is a way of creating your own custom reports. You begin by selecting a table or query from your database on which your report will be based. You then select the fields from the table/query that you wish to report and finally add any special features such as counts of sums of the data. These can then be displayed and printed just as with any of the **standard reports**.

- **Cross tabulation reports-** When the **Nest Selection, Reporting and Processing** table is loaded, the **Report** menu on the main menu bar has an option to **Cross-tabulate nests** and **Cross-tabulate visits**. These two reporting options allow you to select your own fields to produce cross-tabulation reports. In addition, you can save a cross-tabulation as a query and then load it into the **Report Manager** to produce your own custom reports. Both reports work in an identical fashion, the only difference being the available Nest Record fields; the **Cross tabulate Nests** report makes use of the nest location and habitat fields and the **Cross Tabulate Visits** report uses the nest visits fields.

6.5 Printing and saving reports

Each time a report is opened, you will notice that the menu bar changes, so that only two menus appear: **File** and **Help**. In the **File** menu there are various display options, such as **Zoom**, and options to view two or more pages at once (helpful if the report is large). There is also an option to print and an option to **save** the report as an external file for opening in another program. When the **saving** a report, you need to select the format in which you wish to have the report saved. The options are a **Rich Text File** (opens in MS Word), an **Excel** file, an **HTML** file, or a **Plain Text File**.

7.0 Group/Partnership for Ringing & Nest Recording

There are many nest recorders who operate as part of a group, such as a ringing group or a nest recording group. In a group, several different members collect nest or capture records separately, and then each passes them on to the group secretary, so they can be compiled and sent to the BTO as a group contribution.

IPMR has been designed to take account of group set-ups, and so it is perfectly possible for each member of a group to keep their own records on their own IPMR database, and then submit their records in submission files to the secretary, who can then import each file onto **one overall database for the group**. So by using the import and export facility, nest records can be moved from one database to another.

In order to use IPMR as a group, there are a number of things you will need to bear in mind:

● **Setting up IPMR for group recording.**

● **Exporting records from one database and importing them into another.**

● **Sending records to the BTO as a group.**

Each of these subjects shall be dealt with in turn, but firstly there is some terminology to understand: a group **Member** is a person who is gathering nest records on behalf of a **Group** and entering the nest records onto their own database using IPMR. A **Secretary** is the person in the group who has the responsibility to collect together all the nest records from different members and import them into one **Group IPMR Database.**

7.1 Setting up IPMR as a group

There are several initial steps to be taken when setting up both member's databases and the group database to ensure that, when the group's records are eventually brought together, all nest records are imported successfully. It is also essential that the 'owner' of each record can still be identified, and any necessary links between imported records, such as between nest records and capture records, can be created successfully.

7.1.1 Group and Members' Observer Codes

When group members are setting up their own databases, each member of a group must use an **individual observer code** which is different to both that of the other group members and also the **group observer code** used for the group database. Each individual observer code should take the form of the first three letters of the group code, followed by the suffix 1, 2, 3 etc. To give an example, if 'Local Nest Recorders Group' was to begin using IPMR, they would have a **group observer code**, LNRG, for the group database, and then each group member would have their **own observer code**- LNR1, LNR2, LNR3 etc- for use in their own database.

This approach to setting up group members' databases is essential for two reasons:

1. Tracing the source of nest records- IPMR keeps a log of the submission file that each imported nest record came from. You can view this log by running the **Imported Nests** report. As the submission file name is derived from the source database observer code, the report allows you to trace from which database a nest record originally came from. If everyone used exactly the same observer code, however, there would be no such 'paper trail'.

2. Ensuring no data is lost or destroyed- Because of the way IPMR uses the observer code and nest record number to check incoming records, some nest records could be overwritten or skipped if all the members' databases were set up with the same observer code. **Nest records could be lost unless members of a group each use different observer codes for their individual databases.**

7.1.2 Keeping track of who did what

We have just learned that by using different observer codes, we can ensure that a nest record can be traced back to an individual member's database . The **Imported Nests** report can be used to see when each nest record was imported and what submission file it came from. However, this data cannot be seen on an actual nest record and it is also not available on many of the nest record reports that you may want to create at the end of a season. But it would be nice to see at a glance exactly who recorded a nest record, and even be able to create reports that summarise each member's collection of nest records.

To allow for this, when you set up your IPMR database, whether as an individual or a member of a group, you can set up **Observer Details** in a table, which is simply a list of names and initials. You can then select observers from this list when you create a nest record, and their name and initials will become part of the nest record. **This is not the same thing as entering your observer code as the owner of a database.**

Here's how to fill in your Observer Details:

1 Go to the **Setup** menu and select **Observer Details**.

2 Enter your name and initials in the appropriate fields.

If you are a member of a group, and are setting up your own database for you own records, obviously you will only need to enter your own observer details. However, when the secretary imports submission files from each observer, the observer details from each will be imported as well. So the **Observer Details** table on the group database ought to contain the details of all the group members.

Having created these observer details, you can now use them when you create nest records. If you open the **Nest Record Card** form, you can see the field for **Observer Details** in the top right quarter of the form. When nest records are imported into the group database, this information is imported also, allowing you to see at a glance who originally created a record.

The Observer Details are not submitted to BTO, they are solely for your benefit, and they are very useful for producing end of year reports and totals for each person. For example, if you load the **Species Summary** report form, you will see that Observer Details is one of the parameters on which you can refine your search.

7.1.3 Setting up Places and subsites for a group

When a group plans to record nests and then bring their records together in one database, consideration must be made as to whether members will be nest recording in the same spots.

Let's imagine a 1km² wood with three nest recorders operating within it, each working on their own in a different part of the wood, with the intention of bringing their nest records together into the group database at the end of the season. If each member creates their own **Place** record for the whole wood, each with a different code, then when the submission files from each recorder are brought together on one database, there will be three Place records for the same wood, with nest records scattered between them. Obviously this would not be a good way to hold the data, and it would create many problems when trying to produce reports for the nesting activity in the wood.

The problem is exacerbated if there is one member of the group recording the nests, and another member ringing the pulli for the same nests. At the end of the season, the group will want to pull the records together into a group database, and then link the capture records to their associated nest records. However, in order to link a nest record and a capture record, each must have the same associated Place record. If the nest recorder and ringer have independently created their Place records, as described above, they will find that they cannot link their captures to their nest records.

To avoid this problem, members of a group should consider where their nest recording and ringing ranges may overlap, whether they will be recording nests on the same sites and whether they will be ringing and nest recording at the same nest. They should then agree on setting up a number of common Place records, subsite records, and nestbox records that will be identical on each of their databases. Once this has been established, the Place records can be set up in the normal way on one database (the **group database** is probably the best choice) and then **exported** to all the other databases belonging to group members.

Place, subsite and nestbox information can be exported in a **Control File** from one database and then imported into other databases. Once imported, the Place records can then be used for nest recording in the normal way. **If groups follow this procedure, they can be assured that their records will be harmonious when imported into the group database at the end of the season.**

To export the Control information:

1   *Go to the **Setup** main menu, select **Import/Export** and then select **Export Setup data**.*

2   *The **Export Control Information** form will then appear, which will allow you to specify exactly what data you want to export by ticking the appropriate boxes. To ensure all Places, subsites and nestboxes are transferred, you need to tick **own places**, **nest subsites**, **nest boxes** and **nestbox types**.*

3   Click on **Export**. A standard 'Save As' window will appear, showing the contents of the **Output** folder IPMR has been set up to export to. The control file name will begin with **ctl**, followed by your **observer code** (or ringing permit number if you entered it) and another number. It will end with the **.exp** file extension.

4   Save the **Control** file, then attach it to an e-mail (or save it on a disk) and send it to all the members of the group. You don't need to go through the export process lots of times- simply make copies of the one file you have created.

The members of the group will then want to import the control information:

1   When you receive the **Control** file, copy it into your designated IPMR **Import** folder.

2   Go to the **Setup** main menu, select **Import/Export** and then select **Import Setup data**.

3   An 'Open File' window will appear, showing the contents of the **Import** folder. Select the file you have placed in the Import folder. The **Import Control Information** form will then appear (see below).

4   If you want records already in the database to be overwritten with the records in the control file (if you want to update them for example) then ensure that the relevant **Overwrite** boxes are ticked. IPMR will normally skip any records in the control file that already exist in the database, and you should not normally need to overwrite records.

5   Tick the **Display messages during import** check box. This ensures that pop-up explanations appear if IPMR has any trouble importing the data.

6   Click **Import** and you will see the progress of the import process in the progress bar at the bottom left of the screen.

The **Import Control Information** form

If you have trouble importing the data, you can review the error messages that may have appeared by clicking **View Import Messages** after selecting the **Import/ Export** menu option from the **Setup** menu. Please report any difficulties to the **IPMR advisors forum**, or contact the nest records officer.

7.1.4 The Check Places Button

This function is present on the **Import Control Information** form, and when clicked it compares the control file to sites already in IPMR. The comparison takes a while, but, when it is finished, a text file will open containing a list of all the new records in the file and any records which already exist in your database but with altered details (such as habitat data). If you do this prior to importing the file, you will then know what changes will occur when you import it.

7.2 Importing and exporting nest records

Having set up their individual databases, and finished their nest records, the time will come for the members of a group to submit their nest records to the group secretary, who will import them into a single group database, before sending all the records together in a submission file to the BTO.

7.2.1 Exporting nest records

Creating a submission file to send to a group secretary is essentially the same as creating one to send to the BTO, so you are referred to **Section 5.0** for details. Obviously, when it comes to e-mailing the submission file, it is this time sent to the group secretary instead of the BTO. As with submissions to the BTO, please use the zip file that is created, not the raw text file.

Ideally, you should export the records to the secretary in the same calendar year that the records were created, and if you only have your current season's records to submit, you can just choose **All Outstanding Nests** from the **Create Submission File** form. Otherwise, choose the **All outstanding nests for Year** option and select the year for which you want to export records.

7.2.2 Importing nest records

Eventually the group secretary will be in a position to import several submission files into the group database. Only one file may be imported at a time, though it does not matter in what order you import the files. To import submission files:

1 *Take the zip file from it's e-mail or disk and place it in the folder that is designated as the IPMR import location (see here).*

2 *Go to the **Nest Records** main menu, select **Import** and then **Import Nest Submission file**.*

3 *Choose the correct file from the 'Open File' window and click **Open**.*

4 *Tick the* **Overwrite existing duplicates** *button if you have records already in the database that you wish to see overwritten with the nest records in the submission file. This is a very unlikely scenario, and you would normally not tick this box. Please do not use the overwrite option if you have created a resubmission and want to import it into the Group database for forwarding to the BTO- see* **section 7.3** *for details. If the overwrite box isn't ticked, IPMR will skip any duplicate records it encounters, and inform you of all skipped records at the end of the process.*

5 *You must then choose whether the imported records will be marked* **NOT** *(to be submitted), or* **OLD** *(not to be submitted). The group secretary would rarely have cause to import 'OLD' records into the group database.*

6 *Click* **Import**. *You can see the progress of the import in the progress bar at the bottom left of the screen. If the file contains several hundred records, you can expect to wait several minutes for the process to complete. When the import has finished, a message will tell you how many records were imported, and how many were skipped (or overwritten).*

7 *A message will then appear, asking if you wish the import file to be moved to its own subfolder in the import folder. This is done so that imported files can be stored away, and distinguished from those files in the import folder still waiting to be imported.*

The secretary should now be able to view and examine the nest records that have been imported, just as if they were 'native' to the database. Once all the records have been imported from every file, the records can be exported and submitted to the BTO just as in **section 5.0**.

7.2.3 Skipped records

If during an import, IPMR unexpectedly skips records, you should investigate why. If you believe nest records are being skipped or lost, please report this to the **IPMR advisors forum**, or else contact the nest records officer.

You can view all the warning and error messages IPMR generated for the last file import by opening the **Nest Records** menu and selecting **Import** and then **View warnings and errors from last import**. A text file will be produced showing all the warning and error messages in order, and the nest records that the errors applied to.

7.2.4 Import history

You can check back and see the history of all your file imports in two ways. The first is the **Imports Summary Report**, which we have already looked at. The other way is to open the **Import History** form, which can be selected by opening the **Nest Records** main menu, selecting **Imports** and then selecting **Import History**.

The **Import History** form is very useful because it not only lists a complete history of submission file imports in date order, but it also holds copies of each of the submission files. To view an actual submission file, just click once on the small text icon representing

the file you are interested in. The list may be filtered by typing in parts of filenames and pressing **Filter**. For example, you could view all the submission files from the member with an observer code of 'JACK' by typing in 'jack' and pressing **Filter**. As the observer code forms part of the submission file name, the table will show only those submission files which contain the word 'jack'.

The **Import History** table. Clicking on the text icon will bring up a text file of the submission file. The filter query can be seen at the bottom of the form.
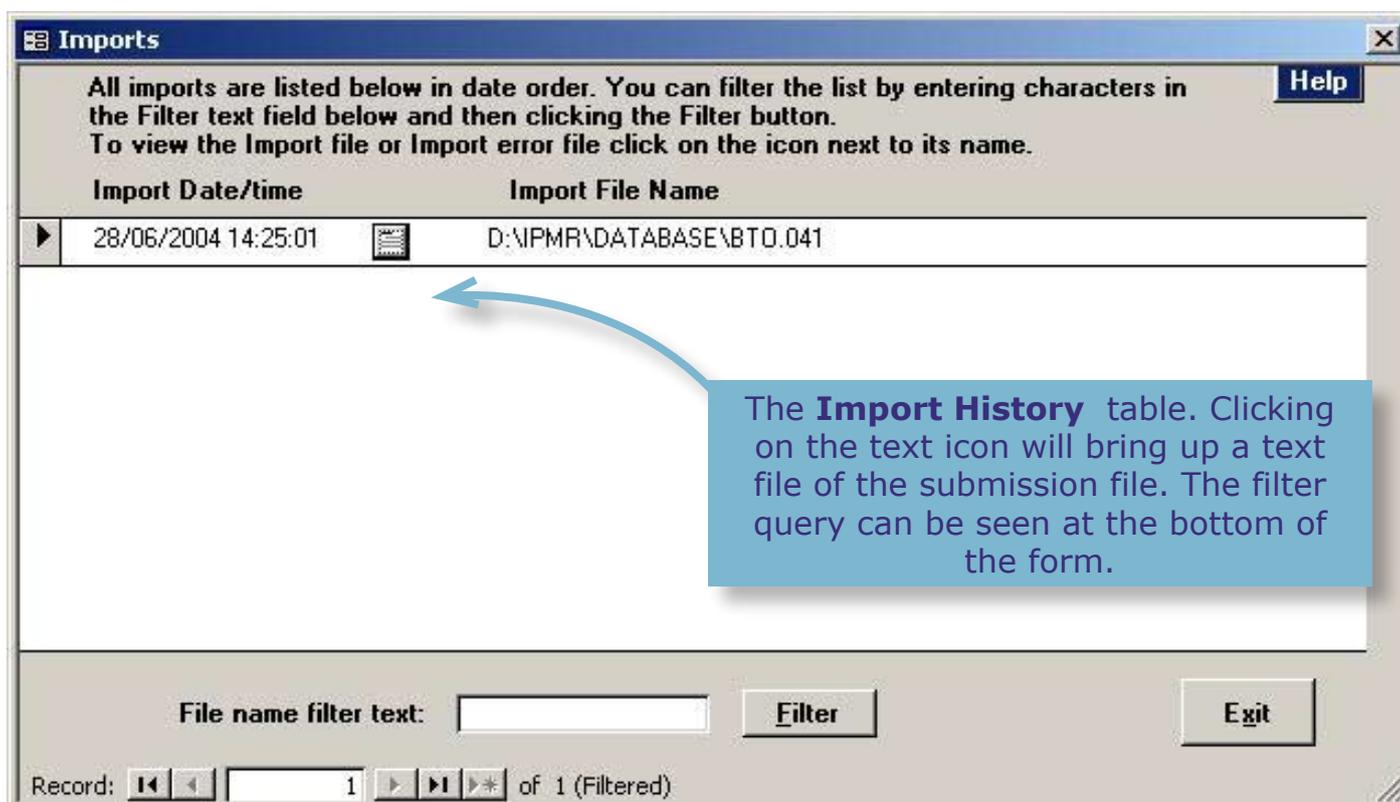
7.3 Resubmissions

If a member of a group needs to resubmit a nest record, they should follow the instructions given in section 5.1 except that the submission file containing the resubmission should go to the group secretary instead of the BTO, as per normal group protocol. The resubmission will then be imported onto the group database, and sent on to the BTO in due course.

8.0 Appendix

8.1 Schedule 1 reports

If you use IPMR to record nests of **Schedule 1 species**, you can have IPMR produce a **report** for a chosen year in the format of a **Schedule 1 Licence report**, which can then be printed off and sent in with your licence renewal. The information for the report comes from all the nest records in your database for UK Schedule 1 Species (IPMR does not currently support the Eire Schedule 2 equivalent.) Of course, not all the required information for the licence report is held in your database, so IPMR cannot fill out the entire form, however it will do most of the work for you.

To run a Schedule 1 report:

1 *Visit the **Nest Records** main menu, select **Submissions** and then select the option **Schedule 1 Submission**.*

2 *A form will then appear, asking you for the year that you wish the Schedule 1 report to be based on, and whether you would like the report to appear as a **print preview**, or else as a **rich text file** in a word processing application (such as MS Word). Select your options and then press **OK** to produce the report.*

IPMR produces separate Schedule 1 report sheets for each species in each county/region, for the chosen year, so the report may take up several sheets of paper. **IPMR does not fill in all the details required on the report, so you will need to edit some of the report manually**, hence the option to create it as a text file in word processing application.

When a Schedule 1 report is created from IPMR, the following details are populated for each report sheet:

- Your personal details- name, ringing permit number and schedule 1 licence number (if issued by Agency).

- The Year and Species name.

- The county/region for the Nest record(s).

- The Place name from the Nest record(s).

- The grid reference, taken from the Nest Record(s). The full two letter and six digit NGR must therefore be completed for the nests of Schedule 1 species. If there are nest records on the Schedule 1 report for which the associated Place is confidential then the 'Open' grid reference and accuracy and the 'Open' Place name will be used together with the Schedule 1 site code, if present. If Schedule 1 codes are used these must have been agreed in advance with the Licencing Officer of the relevant Country Agency or the BTO's licencing officer.

- The number or eggs and young fledged. These are populated for each nest from the Nest Statistics and must have been set manually or generated using the Estimate statistics button on the **Nest Visits** form.

- The number and dates of nest visits.

- An 'NRC number' column, which is populated with your nest recorder code and the nest record number for each nest. This provides a cross reference to the BTO's Oracle database.

- Additional notes, which includes the nest's Outcome description, Ring numbers of adults and/or ring numbers of pulli.

- The observer name if any Observer initials have been recorded for the nest(s).

You will see on the report that there are other sections that are annotated with question marks. **These are parts of the report that are not populated using information from your database, and so will have to be filled in manually.** For this reason, the Schedule 1 Reporting Form allows you to create the report as a rich text file. The report can then be edited manually, saved, and then either sent in by post or e-mail to the BTO Licensing Officer: ringing.licensing@bto.org

The sections of the Schedule 1 report that must be completed manually are:

- The number of adults seen. You must complete it using M for male and F for female e.g. 2F, 1M.

- The number of pairs in each of the European Atlas categories (A, B, C below), plus the overall total. If you do not know the exact figures give the likely range, such as 6-9. Please note that for some species it is appropriate to count units other than breeding pairs, such as calling males in the case of Bittern. In the notes, please indicate the units used. The categories are:

  A **Possible breeding**- *Birds observed in possible nesting habitat or singing male (or breeding calls) in the breeding season.*

  B **Probable breeding**- *Pair observed in suitable nesting habitat in breeding season or permanent territory presumed through registration of song or other territorial behaviour on at least 2 occasions a week or more apart; or observation of courtship, visiting probable nest site, agitated behaviour of adults, nest building or brood patch on adult.*

  C **Confirmed breeding**- *adults injury-feigning, or at apparently occupied nest, or carrying faecal sac or food for young; or current year's used nest, fresh eggshells, recently fledged or downy young, or nest with eggs or young.*

- Any additional details in the 'notes' section.

8.2 Shared nests

When a nest contains eggs or chicks of more than one species simultaneously, such as a reed warbler and a cuckoo, you should create two nest records, but then link them using the **Shared Nest Link** facility, which is accessed by pressing the button on the **Nest Record Card** form.

If you have already created a nest record, and want to create a second nest record to link with it:

1   *Create a new nest record using the **Nest Record Card** form and fill in the species and place fields before clicking the **Shared Nest Link** button.*

2   *You will see a message box with an explanation ending with the question 'Is this a shared nest?' Click **Yes** and you will see that an extra field has appeared on the bottom right quarter of the **Nest Record Card** form.*

3   *Open the drop-down list for the **Nest NRC no.** field and select the record you wish to link.*

4   *IPMR will ask if you want to copy the details from the first nest record to this one. Select **yes** and all the habitat information will be filled in.*

5   *Complete the visit information for the species for which the record has been created.*

If you wish to create two new nest records and link them:

1   *Start a nest record for the host species using the **Nest Record Card form** and fill it in, including the nest visit information.*

2   *Click the **Shared Nest Link** button.*

3   *You will see a message box with an explanation ending with the question 'Is this a shared nest?' Click 'Yes' and you will see that an extra field has appeared on the bottom right quarter of the form.*

4   *Open the drop-down list for the **Nest NRC no.** field and select **New** to create a new record.*

5   *You will then see a message about the details of the host nest being copied to the shared nest – click **OK**. A nest record number will then appear in the **Linked NRC no.** field.*

6   *In the **Species sharing nest** field, choose the name of the other species sharing the nest.*

7   *Click on **Save and Exit** and you will see a message that explains that a new nest record has been created but that you cannot see it until you re-enter the nests function again from the main menu.*

8   *If you have the **Nest Selection, Reporting and Processing** table open, refresh it by pressing the sorting arrow for the **nest rec no.** column, or else load the table from the **Nest Records** menu.*

9   *You will see in the table that the newest nest record is the one which you have just created. It's nest record number will have another number in brackets next to it. This is the number of the record you have linked it to.*

10   *If you select the record and press **View Nest**, you will see that the place and habitat information for the new record has been duplicated from the first.*

11   *Click on **Visits**, and you will see the normal **Nest Visits** form but with an extra data line at the bottom, just above the statistics summary for the nest. If you then enter visit data for this new nest, you will see that, for the visit you have selected, data from the linked nest appears in the extra row. You can therefore edit visit data for both nests at once (the only limitations being that for the other nest you can only enter one visit code via the extra row).*

12   *If you click on the 'Shared nest – XX' button (where XX is the record number of the shared nest), the details on the Visits screen are reversed – the other nest record will appear as the main record and visit data for the previous one will appear in the extra row.*

Visit details for the shared nests can be entered in the same way as if they were separate nests, however please do ensure that you enter the final visit and outcome code for each nest on the same date, even if one nest finishes earlier than the other. Entering an outcome code for one of the shared nests on a date earlier than the other will cause an error.

Please do not confuse the shared nest scenario with that of a subsequent nesting attempt by a different species in a nest where one species has already raised a brood. In this case, the second nesting attempt should be recorded as a separate nest at the same site (not linked). The same is the case for a second attempt by the same pair, although please see the next section (8.3). Also, if you have species that use the same nest or box, but one species is usurped by the other, each nest should be entered as a separate record (not linked). The first nest should have the outcome code **EU** if the nest was usurped at the egg stage or **YU** if it was usurped at the chick stage.

8.3 Nest pairs

If you complete a nest record for a pair of birds and you then record the same pair making another nesting attempt, either in the same nest or a different one, you can record this fact using the **Pairs** facility. By creating **Pair** records, you can record the fact that two or more nest records in IPMR represent nesting attempts by the same pair of birds.

This must not be confused with the situation of another pair of birds using a nest site after a previous nesting attempt has finished, or a situation where you do not know whether the second nesting attempt is being made by the birds you saw last time. In both of these cases you would simply record separate nest records for each of the nests.

To make use of the nest pairs facility:

1 *Go to the **Setup** main menu and select **Pair Details**. This brings up a table where you can record your multi-brood pair.*

2 *Select the appropriate **species** from the drop-down menu.*

3 *Enter a code for the nesting pair you have identified. The code must be unique to the database, not just unique to that species.*

4 *Enter ring numbers for the pair if you have ringed them.*

5 *Add any comments you wish to make and then press 'Exit'.*

When you next create a nest record for this identified pair, or when you edit an existing one, you can enter the pair code in the **Pair Code** field on the **Nest Record Card** form, near the middle left. Each nest that is positively identified as an attempt by that pair can have the pair code written in this field.

For nest recorders who have submitted records on card, this process is the equivalent to stapling together cards representing nesting attempts by the same pair.