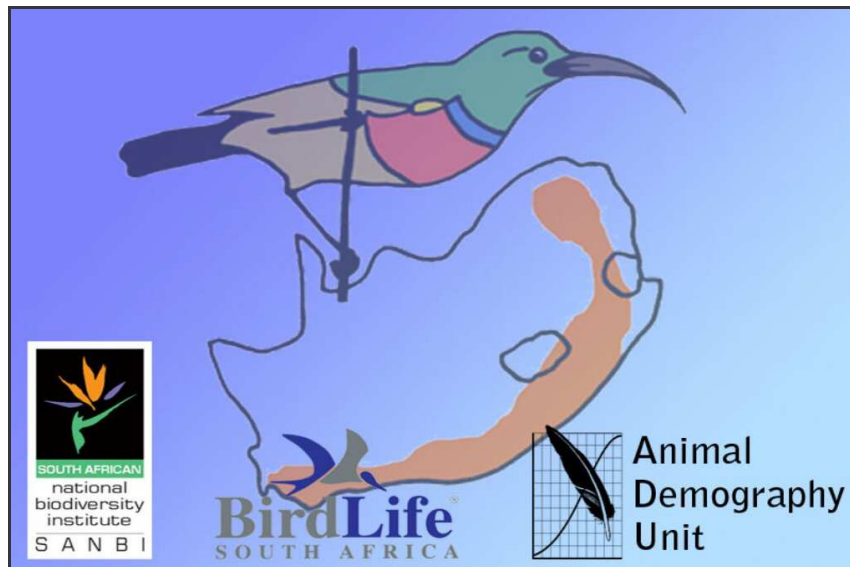# SABAP2 Data Management Software

Instruction Manual (ver. 2)

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1. Quickstart guide

This is the shortened version, designed to get you up and running without any major fuss. It briefly summarizes the process for capturing your data into the system.
(Text in blue shows which menu to use)

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1. When you install the software, open it and fill in your personal details in the settings form. This only has to be done once. Click on OK to save the information. **(Tools → Settings)**

2. Add your pentad to the system. You need to do this only the first time you use the pentad as once in the system, you will be able to access it on any input form. **(New Data → New Pentad)**

3. Now that you have added your pentad, you can move to entering your observations from either your notebook or the field data sheets. (**New Data → New Field Sheet)** Open the form and enter the header information into the relevant fields. You will see that a card number has been generated from the information you have entered. Once you have done that, you can start entering the species into the form (see page 6 for options on how to enter the species).

4. When this is done, **save the card** by clicking on the 'Save' button on the toolbar. This will check the data for any errors or omissions, and prompt you to correct them. When correct, the data will be saved to the system.

5. Once you have captured your card(s) you can then submit them to the ADU. **(Tools→ Submit data)**

Happy atlasing.

2. Detailed guide

2.1 Adding your personal information

Select: Tools → Settings

Fill in the relevant details and press OK. If you intend to use the built in data submission system, ensure that you enter a valid email address.

You can select your preferred species list sequence, based on either the New Roberts sequence, the Old Roberts Sequence (Traditional) or Alphabetical.

> **Species naming conventions used in this software follow Roberts birds of southern Africa (7th edition), with the older names in brackets where possible.**

If you change your address, you can use the Submit button to send your new details to the project. Please ensure that you are connected to the internet before doing so.

You can store up to three different observers on the system, so long as they have an ADU Observer No.

2.2 Adding your pentads to the system

Select: New Data → New pentad

Here you can enter your pentad in two ways.

> (a) Enter the Pentad code, as defined in the instruction manual (Page 4 section 2.2.2). The software will calculate the Latitude and Longitude, as well as the Quarter-Degree Grid Cell (QDGC) of the pentad automatically.

> (b) Enter the latitude and longitude of the pentads top left hand corner. The software will calculate the correct pentad for the coordinates you enter, as well as the QDGC.

The name you use is for your own reference to the pentad. This will make it easier to find in your list of pentads. It can be anything, but we encourage you to use a name that another person could understand and find with relative ease.

The system cannot accept invalid pentads, and will convert any values you enter to the nearest valid pentad code, or an error message will be displayed.

> "A pentad is a 5' × 5' grid cell. Thus, each 1:50 000 map which is 15' × 15' is made up of nine pentads. For SABAP2, each grid cell will be coded by the coordinates of the north-west (or top left-hand) corner of the cell, e.g. 2920_2935 refers to the pentad that has the coordinates of 29°20' south and 29°35' east."

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2.3 Adding your Field Data Sheets to the system

2.3.1 Adding the header information

Select: New Data → New Field Sheet

To start, add the header data to the form, i.e. the select the start date and end dates for your observations as well as the start time for the first day. Make sure your name and observer code are correct, and select a pentad from the drop-down list, using the name you entered when adding the pentad to the system. Ensure you answer the two questions (Did you cover all habitats, and Does this field sheet include Night observations). The card number will be calculated based on these inputs.

If your survey has covered a minimum of 2-hrs intensive atlasing make sure that the box next to this option is ticked (it is ticked by default when you open a new field sheet). If you only made *ad hoc* observations, i.e. you did not carry out an intensive atlas survey, then un-tick this box. By un-ticking this box the hourly totals section is greyed out and becomes unavailable, as it does not apply to *ad hoc* records.

Enter the hourly sequence values in the correct fields, as well as the total number of hours spent observing. ***Remember that these are cumulative totals and not the number of new species seen each hour***.

The software will automatically calculate the number of species recorded and the number of days you have atlased, the latter based on the start and end dates.

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2.3.2 Adding the species sequence

There are numerous ways to add the species you have observed to the system.

(a) Entering the code from the field sheet

If you have used the printed field data sheets, you can enter the species observation data directly by simply entering the sequence of numbers into the box from the field data sheet and press enter.

For example, if Red-eyed Dove is the 13th species seen, then you enter 0314413 in the box.

You don't have to enter the species in the sequence order as the programme will allow you to correct the sequence when you save the card. (Click on the 'Correct sequence' button)

(b) Searching for the species in the list

You can also search for a species by typing in part of the species name and pressing enter (see below). This will reduce the list to only those species that match the search criteria you specified. The more specific your criteria the more refined your search will be. Usually searching on the family name (e.g. lark, duck) will provide you with a shortened list from which to make your selection.
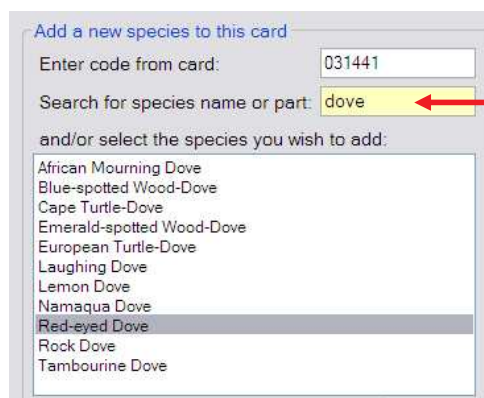
In this example, the word 'dove' was entered in the search box which brings up a list of species in which the word 'dove' appears. You can then select the species you require to add to your list.

(c) Selecting the species from the list

You can also select the species from the drop down list by scrolling up or down. This is probably easiest done when you sort the list alphabetically.

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Note:

If you have recorded your species using a *notebook* or the *field record sheet*, you will most likely use either (b) or (c) above as you can enter your species in the order that you observed them. Simply by double-clicking on your species (or using the arrow-keys and pressing Enter) it adds it, in sequence, to the observed species list but you need to check the sequence before saving the entry.

If you have missed a species you can always add it manually by selecting the species, entering the sequence number (see 4 below) and pressing 'Add'.

Use this block when entering records from the field data sheet

Use this block to search for a species. Type in part of the species name or family name and hit Enter

Use this block to scroll up or down for a species.

Use this block to enter a specific sequence number for a particular species. If you are entering your species in sequence this number increments automatically.

These buttons represent the colour-coded regions for the field data sheets. If you select the colour-code for the relevant region where you have atlased, the species list will be reduced to show only the species that have been reported in that region.

 If you click on the red button (marked A) the complete southern African bird list will be shown.

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2.3.3. Saving your field sheet

Once you are satisfied with the data you have entered, click on the 'Save' button on the taskbar. This will check the records you have entered for any problems, and inform you of any corrections that you need to make.

Possible problems that might be highlighted include:

- You selected an end date before the start date.

  → *Ensure the start and end dates are correct.*

- Observer did not enter a start time for the first day.

  → *Enter the start time for the card.*

- There are two entries with the same sequence number.

  → *To correct this error, select the second entry by clicking on the row, and press the 'Correct sequence' button. This will re-sequence the list with the species in the correct place. Make sure you select the species which needs to be placed in the correct place in the sequence. If you do not, the species will be moved to the end of the list. Please check to ensure that the sequence is correct.*

- There is a sequence number missing form the list.

  → *Should 3 and 4 be relevant, a button will appear on the top right of the selected species box. This will allow you to re-sequence the species and fill the gaps or correct the duplicates. If you use this function, ensure that you check the sequence manually/visually to make sure they are still in the correct order.*

- You have entered an hourly sequence total that is less than the previous hours sequence total. Remember that the totals are cumulative.

  → *Ensure that the hourly sequence totals are correct. Remember that they are cumulative, so the total for hour 2 cannot be less than the total for hour 1 etc.*

- You have not entered the total number of hours that you observed over the period.

  → *Enter the total number of hours for the card*

- The total species you have entered does not match the number of species in the list.

  → *Check to see if you have missed a species on your list, or added an extra species to the system.*

2.3.4. The Come-back button

This button allows the user to save the field sheet they are currently entering in a partially complete state. This allows them to "come-back" to the sheet at a later stage, and complete entering your species list. The system will only save one sheet at a time, so the user will have to complete the sheet they are busy with before entering a new one. Great for taking a coffee break without the risk of having to start over!

2.4 Adding Additional Information to the system

Select: New Data → New Additional Information Sheet

• First select the Date and species, and ensure the observer name and code are correct.

• Select the pentad that the observation was made in.

• Enter the information you wish to submit into the relevant fields. For breeding you can add as many breeding descriptions as you need. Any breeding description that is not in the list or any other important breeding information can be added using the text area.

• Consult the project instruction manual to find out what types of additional information you need to add to this form and under what category to add it.

When you have entered you observation, click on the 'Save' button on the taskbar.

2.5 Adding Incidental Observations to the system

Select: New Data → New Incidental Observation

• Enter the date the incidental or rare species was seen, select the species, and enter your observer code.

• Enter the location description. This is a required field. You can enter any of the other three location options, i.e. Pentad, QDGC or Latitude and Longitude (decimal degrees). If you choose to enter the Latitude and Longitude, the system will automatically assign the correct pentad and QDGC for you.

• When you have entered you observation, click on the 'Save' button on the taskbar.

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3. Browsing your Pentads in the Gazetteer

Select: Browse Records → Gazetteer (Pentads)
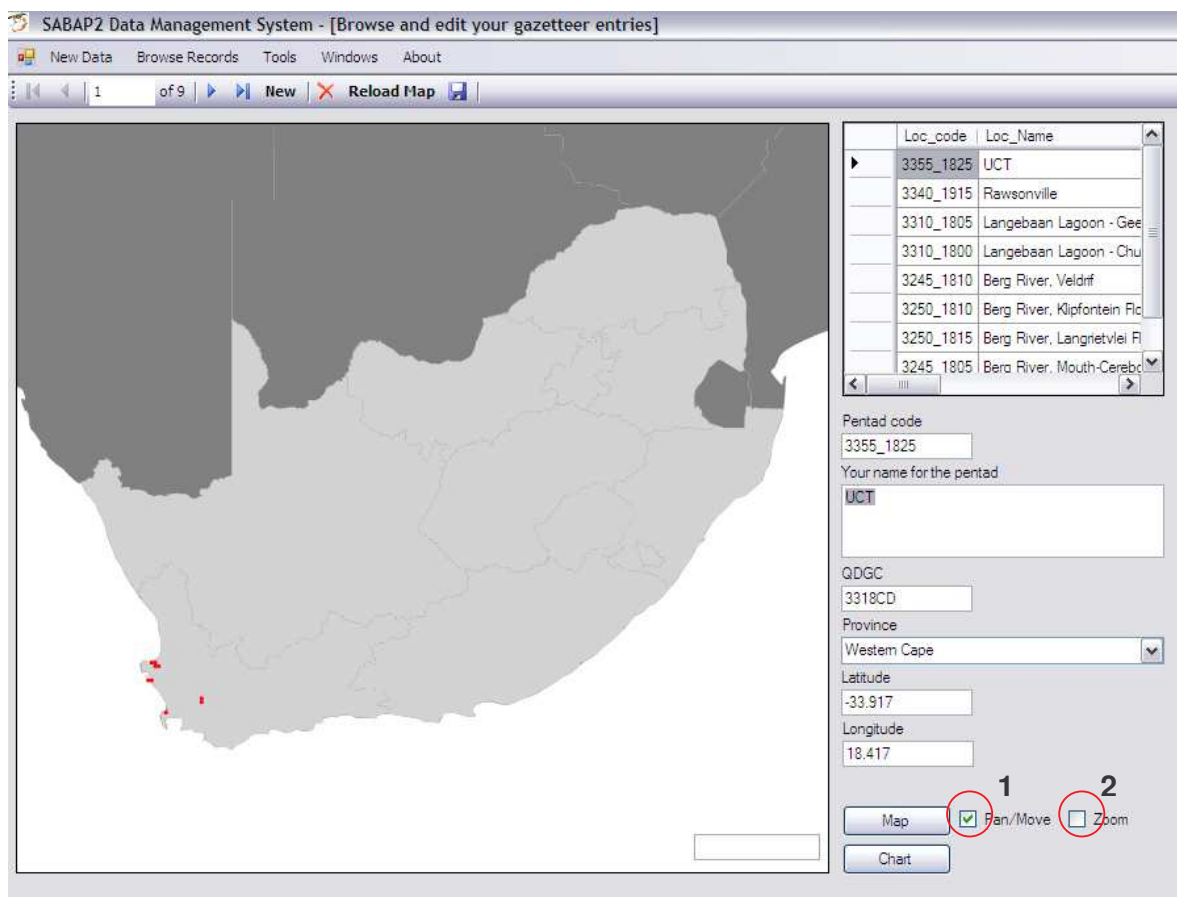
This form is used to browse and edit any pentads you have in the system. You can also view how many cards are entered, and an indicative species accumulation curve for the pentad.

3.1 Mapping

Clicking on the 'Map' button will allow you to do basic navigation on the map. There are two options available, namely the Pan and Zoom functions.

To Pan, select Pan/Move (1). With the mouse, click on a point and hold down the left mouse button. Now move the mouse to move the map!

To Zoom, select the Zoom tool (2). There are two ways to use this tool. You can either click on the map, which will zoom in 1 level, or you can click and hold down the left mouse button, and simply move the mouse up (zoom out) or down (zoom in) to zoom to the required level.

As you move the mouse around the map, the pentad code of the position on the map is displayed in the bottom right hand corner.

3.2 Graphs

By clicking on the 'Chart' button you will be able to access two graphs:
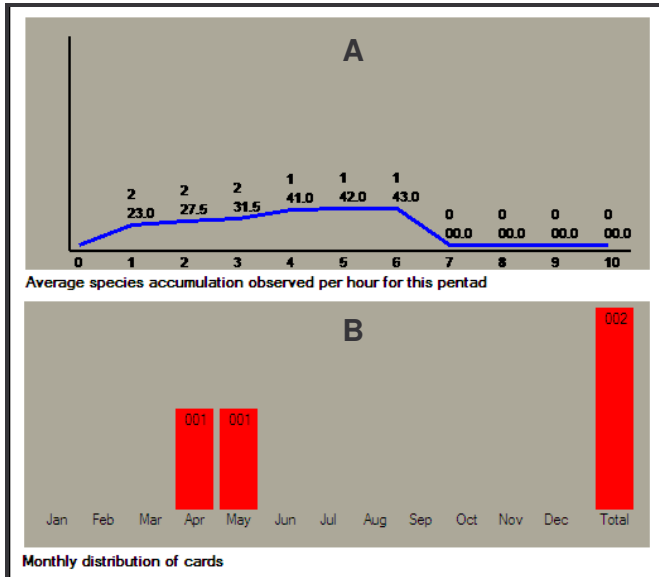
3.2.1 Species accumulation curve (A)

This graph shows the average number of species observed per hour for the current site. There are two numbers. The top number is the number of data sheets that have information for the hour, and the bottom number is the average number of species counted for the hour. The higher the top number the better. i.e.

Hour	Text	Description
1	2 23	Denotes 2 cards have data for hour 1, with an average of 23 species observed during that hour.
2	2 27.5	Denotes 2 cards have data for hour 2, with an average of 27.5 species observed during that hour.
…	…	…
6	1 43	Denotes 1 card with data for hour 6, with 43 species.

3.2.2 Monthly distribution of cards (B)

This shows the number of cards you have entered per month for the site. It allows you to see whether or not you have atlased the area through all seasons, and identify any gaps.

3.3 Editing your pentad records

You can edit any pentad record by changing the information in the relevant fields. Remember to save your changes before closing the form.

4. Browsing your Field Sheets

Select: Browse Records → Field Sheets

The primary difference between this form and the New Field Sheet form is the species adding functions and the record navigation functions. All other functionality is the same as the New Field Sheet form. An indicator field on the top right will inform you if this card has (blue) or has not (red) been submitted to the project.

4.1 Adding a species
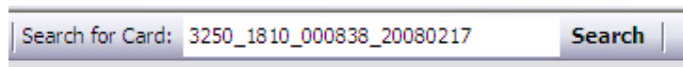

You are able to add additional species to the list at any time, by selecting the species from the list, entering the sequence number and pressing the 'Add' button.

After adding any additional species you must save your updated field sheet.

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4.2 Searching for a card

You can search for a card using the search function in the taskbar. Type in the full card number (e.g. 3250_1810_000838_20080217) to select a specific card.

You can also type in the pentad code (e.g. 3250_1810), or observer number (000838) or date (20080217) to search for cards using these specific criteria.

5. Browsing your Additional Information Sheets and Incidental observations

Again, the browsing forms are almost identical to the input forms, with the addition of browsing buttons, and saving functionality. You can edit or delete entries from this form.

6. The Species list

The species list form allows you to search through the species list and view the reference number, as well which regions (based on the colour codes) the species has been recorded in. This is useful if you have made a list of the species that you saw in the field, and wish to find the reference number before entering the data.

You can add the species to any region by changing the value for the species in the relevant column to 1, or visa versa remove one by making the value 0. This will affect the lists on the Field Data Sheet entry form.

7. The Tools menu

There are various functions on the tools menu.

The first is the Settings form. This is discussed on page 3.

The second is the Back-up Data option. Use this to back up your data. This should be done every few days, or whenever a software update is made available. (The data is backed up to C:/ADU/SABAP2/Backups/CurrentDate/*.xml)

The third option is the Restore Backup option. Here a calendar form will open. Dates that are bolded have backup data stored. To select a backup, highlight the date you wish to restore data from and press OK.

The last option on the tools menu is the Submit Data and close option. To use this option to submit your data, open an internet connection (for dial-up users, "always on" connections will not need to do this). Then press Submit Data and close. This will extract any new data, compress it to make the files smaller, and automatically email it to the data processing centre.

The data will then be vetted against existing datasets and evaluated for errors and out-of-range species. All data will be captured into the SABAP2 database, and out-of-range forms sent to the

observer and regional coordinator for verification. We will attempt to vet and capture submitted data within 24 hours of submission.

8. The About menu option

This will let the user see what version of the software they are using, and thus determine if they need an update, or which update they should download.

9. Buttons

	Save the data you have entered, or the edits you have made.
New	Add a new record
✕	Delete the current record
◄ ◄	Move to the first record or the previous record
► ►|	Move to the next record or the last record
Reload Map	In the gazetteer, this will reload the map to show any changes you have made to the data.(you need to save the changes first)

10. Troubleshooting

Problem:	Species list has only a few birds listed.
Solution:	The list is filtered. Go to the species list, place the cursor into the search box and press enter. This will clear the filter.
Problem:	When I try to submit my data (Tools --> Submit data) I get an error message that says *"The parameter 'address' cannot be an empty string. Parameter name: address".* What does this mean?
Solution:	This message indicates that you have not filled in your email address in your settings options. You will need to go to Tools --> Settings and make sure that you have filled in your and email address (and observer no.). These are the required fields needed in order for you to submit your data using the DMS.
Problem:	When I try to submit my data (Tools --> Submit data) I get an error message *"Failure sending mail".* What does this mean and how can I submit my data?
Solution:	This usually indicates that firewall settings are preventing the email from being sent and are usually set by your service provider or within a corporate network environment. If these settings cannot be changed you will need to submit your data manually - follow the steps below to do this:
	First, always go to Tools --> Submit data. Once you get the error message, click on OK.
	Open your mail client (Outlook, Outlook Express, Thunderbird, etc.)
	In the To: field type: data@adu.org.za
	In the Subject line type: SABAP2: Auto-data submission
	Attach the following four files from the directory c:/adu/sabap2/backups/
	xml_records.adu xml_headers.adu xml_addinfo.adu xml_Incid.adu
	Click Send
Problem:	After submitting my data, I get an email which says that my submission was found to be empty? What must I do?
Solution:	This indicates that the cards you had entered were not saved. Please remember to save each card after you have captured your records before submitting. You will need to go and check if the cards have been saved and then do a 'Re-submit all data'. Cards that haven't been saved will need to be re-entered.
	Note: (1) if you close the window, without clicking the 'Come-back' or 'Save' buttons, the card will not have been saved automatically. (2) if, after capturing your records for a card you go directly to Tools --> Submit data, the card will not be sent as it needs to be saved first BEFORE being submitted