

Heathland Birds Survey Data entry user guide

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Introduction

Thank you for taking part in this survey and successful completion of your survey visits. Your data is very important to us and we need to capture it in a systematic manner.

The purpose of this document is to outline the basic data entry processes that need to be followed when you enter the data from the visits to your survey square(s). This guide will cover the different avenues that can be taken when a visit is completed and what to do if you encounter an error.

Data entry is split into five separate sections:

- 1 Visit Details
- 2 Map additional suitable habitat (if present)
- 3 Record Focal species
- 4 Record other key heathland bird species
- 5 Estimated counts of males/territories across all visits

On completion of each section of the form, it is important that the respective 'Save' buttons are clicked to 'bank' the data submission. These are outlined in the relevant sections of this guide.

A **Data Entry Quick Start** is provided at the start of this guide and is designed to be a quick reference. Full details are provided in the main guide.

A **Help and Support** section is provided at the end but please do send any suggestions for improvements or additions to the guide to us at: <u>heathlandbirds@bto.org</u>



Data Entry Quick Start

<u>BEFORE YOU START</u>: to ensure that you are using the current version with Data Entry enabled, please clear the cached version, by simultaneously pressing the following keys:

Windows users: (ctrl + shift + r)



Mac users: (command + shift + r)



Accessing data entry

Data entry is accessed via the homepage (heathland/data-home/data-home.jsp).

To complete a specific survey visit click on the '+' button in the table for the site you want to enter data for. (e.g. If I want to enter visit data for visit A for square TM4874 I would click the '+' button highlighted below).

My Survey Squares and Visits Show 10 v squares Search for squares								
Square 🎍	Species	A	В	c	D	E	F	Actions
TM2344	Woodlark	~	+	+	+	+	+	⊜ <u>Print survey map</u>
TM2344	Dartford Warbler	1	+	+	+	+	+	⊜ <u>Print survey map</u>
TM4874	Dartford Warbler	+	+	+	+	+	+	⊜ <u>Print survey map</u>
Showing 1 to 3 of 3 squares								
								Request additional survey squares

Once a visit is started, the icon is changed from a '+' to a pencil. This means it is still in progress and not complete. The steps below briefly outline the data entry process.



Section 1 - Visit Details

Please complete at least the Visit A section for all survey squares allocated to you, even if you did not make a visit. You can add a comment on the form to indicate why no visit was made.

Go to Section 2 or

If you know from recent experience, without visiting this spring, that the square did not contain the focal species or any suitable breeding habitat, then this should also be recorded in Visit A.

Section 2 - Map additional suitable habitat (if present)

If there was more suitable habitat than indicated on the survey maps, you can draw the extent of one or more areas here.

If there was no other suitable habitat, go to Section 3.

Section 3 - Record Focal species

Plot the exact locations where each bird was observed. If the same bird moved during the visit you can plot all locations.

For each Registration (number individuals separately) you can add the Sex, Age and Activity, along with Habitat within 50 m (ideally one main type, but two are permitted if present in equal amounts.). Please see the reference table at the end of this guide to see which category combinations are accepted, as certain combinations will be invalid.

Relationships can then be added to confirm which registration relates to **definitely Different** individuals, or if **Uncertain** and also confirming those that were definitely **the Same individuals.**

Section 4 - Record other key heathland bird species

For the 15 listed species please enter the Total Count of all birds detected and then the Count of males/territories.

Go to section 5

Section 5 - Estimated counts of males/territories across all visits

Enter the Minimum and Maximum estimate of breeding territories for all visits completed. If a male was present on the first visit but not seen on later visits, i.e. may have moved away or just not been detected, record this as Minimum = 0 and Maximum = 1.

Then, Mark the Visit Complete

Next, complete the other visit(s) for the same square or enter details for the next square(s).



Main Data Entry Guide

BEFORE YOU START: to ensure that you are using the current version with Data Entry enabled, please clear the cached version, by simultaneously pressing the following keys:

Windows users: (ctrl + shift + r)



Mac users: (command + shift + r)



Accessing data entry

Data entry is accessed via the homepage (heathland/data-home/data-home.jsp).

To complete a specific visit click on the '+' button in the table for the site you want to enter data for. (e.g. If I want to enter visit data for visit A for square TM4874 I would click the '+' button highlighted below).

My Survey Squares and Visits									
Show 10 v squares									
Square 🗍	Species	$\overset{\mathbb{A}}{\nabla}$	A	В	c	D	E	F	Actions
TM2344	Woodlark		~	+	+	+	+	+	⊜ <u>Print survey map</u>
TM2344	Dartford Warbler		1	+	+	+	+	+	⊜ <u>Print survey map</u>
TM4874	Dartford Warbler		+	+	+	+	+	+	⊜ <u>Print survey map</u>
Showing 1 to 3 of 3 squares									
									• Request additional survey squares





Section 1 - Entering Visit details

The various tabs of the data entry page are numbered in order to help guide you through the process step-by-step. However, it should be noted that based on certain options that are chosen when completing various forms, certain tabs will not need completing. These will be outlined in the various sections of this guide.

Data entry starts with completing the first tab, the '1. Visit details tab'. Various elements of this form are prefilled for ease of completion (based on the button you clicked on the data-home page table).

The process of entering visit data has numerous different paths based on options that are selected throughout completing the form. The first of these is based on the option selected for the question 'Was the square visited/surveyed'.

Survey square was not visited/surveyed

If you select that the square was not visited/surveyed the form becomes very simple. You can select one of three reasons why the square was not surveyed; **No access**, **Access denied** or **No suitable nesting habitat**. Note, 'No access' would suggest there was a physical barrier preventing access (e.g. difficult terrain), whereas 'Access denied' would imply you have been instructed not to enter the land via some form of communication.

If you don't provide this, validation will prevent your submission and you will need to choose a reason before saving the visit details. Once you have selected a reason and entered any other notes in the 'Notes' field (if you have any) click the green 'Save visit details' button at the bottom of the form to save your visit. Notably this will also mark the visit as completed. This will conclude data entry for this visit. On the homepage the visit will be marked with a green tick.

imes 1. Visit Details		
Species:	Dartford Warbler	
Square:	TM4874	
Was the square visited/surveyed:	Yes No	
Select reason why not surveyed:	Access denied ~	
Notes:	I wasn't allowed to onto the land.	
		🖺 Save visit details



Survey square was visited/surveyed

If you select that the square was visited/surveyed then the main bulk of the 'Visit details' form is open to you. You are required to enter data or select an option in all of the fields apart from the 'Notes' field. This field can be left blank if you have no comments to add.

imes 1. Visit details		
Species:	Dartford Warbler	
Square:	TM2344	
Was the square visited/surveyed:	• Yes • No	
Visit:	Α	~
Visit date:	23/04/2025	
Start time:	12:25	0
End time:	13:33	0
Was suitable breeding habitat present:	• Yes • No	
Suitable habitat covered (%):	98	
Notes:		
Were Dartford Warbler present on this visit:	O Yes No	

Visit date:

The date is required to be in **dd/mm/yyyy** format (e.g. 24/04/2025). You can click on the icon at the end of the date field to open up a calendar to help select your date.

Visit date:	23/	23/04/2025								
Start time:	April	202	5 -			\uparrow	\downarrow		0	
	Mo	Tu	We	Th	Fr	Sa	Su			
End time:	31	1	2	3	4	5	6		Q	
	7	8	9	10	11	12	13			
eding habitat	14	15	16	17	18	19	20			
present	21	22	23	24	25	26	27			
covered (%):	28	29	30	1	2	3	4			
. ,	5	6	7	8	9	10	11			
Notes:	Cle	ar				То	day			



Start time/End time:

The start and end times are required to be in 24-hour clock **hh:mm** format (e.g. 09:30 and 10:45). You can click the icons at the end of the start/end time fields to show a time selection helper.

Start time:	12:25			0
End time:	12	25		O
	13	26		
eding habitat present:	14	27	o	
	15	28		
covered (%):	16	29		
Notes:	17	30		
	18	31		

Was suitable breeding habitat present?:

Select whether or not suitable breeding habitat was present. If you choose 'Yes' you are required to enter a number which represents the percentage of the total *suitable* habitat in the square that you covered. If you choose 'No' you will not need to provide a coverage percentage. If no suitable habitat was present, please add a comment in the 'Notes' section.

Was suitable breeding habitat present:	Yes	O No	
Notes:			
Was suitable breeding habitat present:	Yes	No	
Suitable habitat covered (%):	98		

Was the focal species present on this visit?:

Select whether or not the focal species was present. The selection of 'Were [your chosen focal species] present on this visit' is the last option for this part of the 'Visit details' that will dictate the next steps of completing the full form. If you select 'Yes', then once you've saved the visit details, section 3. '**Record focal species'** tab will be available to you. If you select 'No' upon saving the details you will be moved onto section 4. '**Record other key Heathland bird species**' tab.



To save the 'Visit details' click on the 'Save visit details' button.

Was suitable breeding habitat present:	Yes	O No	
Notes:			
Were Dartford Warbler present on this visit:	O Yes	No	<i>a</i>
			🖺 Save visit details

Saving may be unsuccessful if incorrect or unexpected data is inputted which will need checking/correcting before it can be saved correctly. Where this is an issue, errors will be displayed at the top of the 'Visit details' form. You will need to resolve these errors before the details can be saved. If an error occurs that cannot be resolved, at that point it should be reported to the Survey Organiser with a screenshot, or copy and paste of the error message, if possible.

A There were error(s) with your visit details please check below and resubmit							
Species:	Dartford Warbler						
Square:	TM2344						
Was the square visited/surveyed:	O Yes No						
Visit:	Α ~						
Visit date:	dd/mm/yyyy						



Section 2 - Map additional suitable habitat

Some (not all) squares will have 'suitable habitat' pre-displayed in green to allow you to focus your survey effort when conducting the survey. This layer is fixed and not editable. You can add any additional 'suitable habitat' that you have identified to the map, which will be displayed orange. If on your visit you have found additional suitable habitat that needs to be reported to us then you can do this in section 2 of the page. If you believe the predisplayed (green) suitable habitat layer is not *broadly* accurate, then please inform us by contacting the Survey Organiser.

Draw new suitable habitat

To start the creation process, click on the 'Draw new suitable habitat' option under the 'Map tools' header to enable the draw tool.



New habitat area is shown by boundaries or shapes that you draw on the map. Click on the map to place the first point of your new suitable habitat area. Move the mouse and click on the map to place subsequent points to create the area. To finish the creation process when placing the final point for the area, if you double click, this will finish your drawing on the map. Alternatively you can join the last point you recently created to the first point of the area and this will complete your drawing. Your cursor should magnetise to the first point when you move the mouse close to it to help with this method of completion.



If you need to cancel the drawing at any time *during* the creation process you can simply shift + left mouse click on the map and this will remove the drawing.

To save the new areas you have drawn you need to click the 'Save new suitable habitat' button which is below the 'Map key'.



Map key	
Suitable habitat (known)	
Additional suitable habitat	
	🖹 Save new suitable habitat

Edit a newly drawn suitable habitat area

You are able to edit the shape of a new suitable habitat area you have drawn on the map if you need to. To begin this process first click the 'Edit new suitable habitat' option in the 'Map tools section'.



Click on one of the shapes in order to select it for editing. You will know when the area is selected as the area will change from orange to red and the turning points on the edge of the shape will be highlighted. You can then click and hold on any of the points (vertices) and move them about to change the shape of the suitable habitat area. You can also add new turning points by clicking along the suitable area boundary lines.



If you wish to delete a turning point on the boundary line simply hover over the point and press alt + left mouse click to delete it from the shape. If you are hovering over a turning point, it will change colour from white to light blue.





Delete a newly drawn suitable habitat area

To delete a new area you have drawn, first toggle the 'Delete new suitable habitat' option in the map tools.



With the tool enabled click on the shape on the map you wish to delete. To confirm the removal of the shape click the 'OK' button in the popup that appears. You will see which shape is selected for deletion if you look at the map as it will have changed colours to indicate it is selected.





Section 3 - Record focal species

There are two main parts to focal species data entry, registrations and relationships (between the registrations).

Registrations

Registrations refer to the field codes you added to your recording maps that represent a focal species and their observed activity. These same registrations need to be replicated in the data entry process.

Adding a new registration

To add a focal species registration to the map you need to click the 'Add registration' toggle which is located under the 'Map tools' heading.



With this enabled click once on the map at your desired location to start the 'create registration' process. A new blank registration will be added to the map and a form will appear with various fields and selections which need to be completed. Only the notes field or any sub-habitat selections are not required for completion of the form.

0	Map key O Registration Same individual relat	tionship Different individuals relationship Uncertain relationship	
	Registration details		
	Sex:	Select bird sex	~
025 TomTom Terms of Use	Age: Activity:	Select bird age Select bird activity	* *
	Main habitat(s): General sub habitat(s):	Bare ground present - burnt	
		Bare ground present - natural Bare ground present - habitat creation Grazed	
	Notes:		
		× Cancel registration 🛛 🖉 Save registra	tion



Bird:

This will be pre-populated with the Visit letter, but you will need to add the registration number after the letter. The first registration on Visit A, would therefore be completed as A1, the second registration as A2 etc (if they were two different birds).

Sex:

Select from Male / Female / Pair / Family / Unsexed / Nest.

Age:

Select from Adult / Juvenile / Unaged.

Activity:

Select from Singing / Carrying food / Bird with nesting material / Courtship Display / Agitated/Alarm / Distraction display / Calling / Seen only.

Main habitats:

Select from Farmland / Heathland / Woodland/forestry / Other habitats. It should be noted that when you select a main habitat, a dropdown of that main habitat's sub-habitats will appear. You can then select some of these additional options. You are limited to 2 main habitat selections but any number of sub-habitats can be selected.

Main habitat(s):		woodland/forestry		
	Woodland sub habitat(s):	× Mixed × Trees 2-4m		
	General sub habitat(s):	 Bare ground present - burnt Bare ground present - natural Bare ground present - habitat creation 		

Notes:

Please enter any pertinent comments related to this registration that you feel that the Survey Organiser should be aware of.

When you have entered all the details you can click the 'Save registration' button.



Saving may be unsuccessful if incorrect or unexpected data is inputted which will need checking/correcting before it can be saved correctly. Where this is an issue, errors will be displayed at the top of the form and you will need to check and correct these before resaving. To give you a better understanding of the registrations that may not save correctly, you will find a reference at the end of this guide.

If you wish to add another registration or a relationship you will need to click on the toggle in the 'Map tools'.



Registration details					
A There were error(s) with your bird registration please check below and resubmit					
Rird-	() A7				
Sex:	Select bird sex	0 ~			
	You must select a sex for the bird.				

Cancelling a new registration (during the creation process)

You are able to cancel a new registration once it has been placed on the map before you save it. To do this you must first click on the 'Cancel registration' button to enable the cancel tool. You will know if the cancel tool is enabled as the button will have a black border around it and some help text will appear.



With the tool enabled, click on the newly added registration on the map (indicated by it not having a label yet). You will be asked to confirm the cancellation, click the 'OK' button to remove the registration. You will know the registration has been selected too as the border colour will change to red. Upon cancellation you will need to re-toggle a map tool to add a new registration or add a relationship.

- a	the registration.
× Are you sure you want to cancel th	wit te selected bird registration? t i on
	Cancel OK ale
	Map tools
	Map key O Registration Same individual rel
RANKS AND A	



Editing or deleting a registration

After adding a registration to the map you will have the opportunity to edit the registration details or even delete the registration if necessary. The buttons to trigger these processes can be found in the 'Registration(s)' table below the map.

Registration(s): Show 10 v registrations									
Bird	÷	Sex	÷	Age	÷	Activity	÷	Habitat(s)	Options
A2		Male		Adult		Singing		Woodland/forestry, Mixed	🔋 Delete 🥒 Edit

To edit a registration simply click the 'Edit' button for said registration located in the Registration(s) table. This will show the registration details form and populate it with the data of the registration you chose to edit. Make any amendments (ensuring any validation error isn't triggered) and then press the 'Save registration' button to save the updated data.

To delete a registration simply click on the 'Delete' button for the registration in the table you wish to delete and then click the 'Ok' button to confirm the deletion. Please note that this will also delete any relationships that the registration is a part of. If you wish to cancel the 'delete registration' process, either click on the 'Cancel' button or the 'x' in the top left hand corner of the popup.



Relationships

A relationship describes the link between two or more registrations. Relationships can be described as "different", "same" or "uncertain".

Adding a relationship

The one prerequisite for adding a relationship on the map is that there must be two registrations on the map to form the relationship. You can add more than two registrations to a relationship, i.e. if you have three birds singing simultaneously and want to link all three. The 'Relationship Details' table will only allow you to register/save two birds at one time e.g. link A1 to A2 first, save, then link A2 to A3.

To add a relationship between two registrations first click on the 'Add relationship' toggle in the 'Map tools' area. This will show the 'Relationship details' form and enable the relationship map selection tool.



> Focal species data entry instructions
Map tools
Add registration
14 I

To start creating the relationship you need to click on the first registration on the map. You will know when the registration is selected as the colour of the registration on the map will change and the label of the registration will appear in the relationship details form. After you have selected the first registration you then need to select a second one for the relationship.

With two registrations selected you then need to describe their relationship by choosing an option in the form.

Relationship: Select from Same individual (known to have moved within visit) / Different individuals (known to be definitely different e.g. simultaneously singing) / Uncertain relationship.

Relationship:	Same individual (known to have mov $$
Bird 2:	A2
Bird 1:	A1





With all that data provided you can then click the 'Save relationship' button to confirm the relationship.

Relationship:	Same individual (known to have mov $ \smallsetminus $			
× Cancel relationship	 Clear selection(s) 	🔋 Save relationship		

As with other forms, if you do not provide certain data, the validation will be triggered and you will need to correct it and retry the saving. These error(s) will be displayed above the form and you will need to correct these and press the save button again. You will be notified of a successful save and the relationship details form will disappear. You will then need to reselect any of the map tools toggles to add more data to your map.

A There were error(s) with the relationship details please check below and resubmit					
Bird 1:	A1				
Bird 2:	A2				
Relationship:	Select relationship type ① ~ You must select the type of relationship.				

Additional relationship help

There are a couple of other 'relationship type' options available that can create a relationship. If any errors occur during when assigning registrations to relationships then you will need to completely reset the map of any selections by simply clicking the 'Clear selection(s)' button.

If you decide that you do not want / need to add a relationship to the map then you can click the 'Cancel relationship' button. This will un-toggle the 'Add relationship' tool, hide the form and also un-select any selected registrations.



Relationship:	Same individual (known to have mov $ \sim $		
imes Cancel relationship	 Clear selection(s) 	🖹 Save relationship	

Relationships can also be deleted via the buttons location in the Relationship(s) table below the map. They cannot be edited. If you need to amend a relationship simply delete the relationship with incorrect data and add a new relationship with the correct details.

Relationship(s): Show 10 v relationships					
Bird 1 🛓	Bird 2 \Rightarrow	Relationship \ddagger	Options		
A1	A2	Same individual (known to have moved within visit).	官 Delete		
Showing 1 to 1 of 1 relationships and the second se					



Section 4 - Record other key heathland bird species

In section 4 of the form you can enter the details about any of the 'key heathland bird' assemblage species featured in this survey. All assemblage species are represented in the table. Against any of the species you have recorded on your paper form, find the relevant species in the table and enter the total count and then enter the total males / territories.

When you have completed the form and entered all the details for the species you have observed, you can then click the 'Save assemblage species details' button to complete the process.

Whinchat	Enter total count	Enter total males / territories
Woodcock	2	2
		Save assemblage species details

You are required to enter values in both of the fields for a species you have seen. If you fail to input one of the fields the validation will prevent your submission and highlight the field you need to add a value to.

▲ The assemblage species submission contains error(s). Please look in the table below to see which fields have issues.					
Heathland Assemblage Total count Species Total count Total males / territories					
Cuckoo	2	Enter total males / territories (2) You must provide a total males / territories value			



Section 5 - Estimated counts of males / territories across all visits

Section 5 is the final part of the form that is required (if you surveyed the square). Here you need to provide estimated counts of the males/territories for the <u>focal</u> species the visit concerns.

You are required to provide a minimum and maximum estimate of the males/territories for the focal species. There is validation to protect against invalid counts (i.e. if the minimum count exceeds the maximum count) and missing values. If your submission triggers any of these validation warnings they will be detailed above the form elements and you will need to correct the errors and resubmit by clicking the 'Save estimated territories' button again.

Enter the minimum and maximum esti completed visit.	mated males/territories of your focal species (Da	rtford Warbler). Please update this summary after each
Minimum estimate:	1	
Maximum estimate:	2	
		Save estimated territories

Enter a value in each of the fields and then click the 'Save estimated territories' button to save these counts. Note, a value is required for both minimum and maximum estimates and you are required to update your estimates on subsequent survey visits Your last visit will be your final and best estimate of males/territories.

Maximum estimate:	2	
		Save estimated territories



Marking the visit as complete

Once you have completed form sections 2, 3, 4 and 5 (as necessary) then simply click the 'Mark visit as complete' button located at the bottom of the page to complete the submission for that visit.

Enter Visit Data - Dartford Warbler [TM2344]	
> 1. Visit details	
$>$ 2. Map additional suitable habitat \odot	
> 3. Record focal species (Dartford Warbler)	
> 4. Record other key heathland bird species	
> 5. Estimated counts of males/territories	
	✓ Mark visit as complete

If no errors occur during the process then you will be notified of the successful completion of the visit and you will be returned to the homepage. If an error occurs it will be displayed at the top of the page. Your page will be scrolled to the error message if an error does occur.

In order to be able to mark a visit as complete, a visit must have one of the following:

- If the square was not surveyed then a 'reason why not surveyed' option in the visit details section 1 is required.
- If the square was surveyed and you select 'Yes' to the 'were focal species present on this visit' in section 1, then a registration on the map is needed and the estimated males/territories counts in section 5 are required.

If you surveyed the square but you recorded that your focal species <u>were not present</u> then this will be recorded with a '0' count of your focal species, which will meet the validation of needing some focal species data.

Help and support

If you encounter problems during data entry, details of items that need to be corrected/amended will be displayed as messages that are highlighted in red, either within or at the top of each section.

Where an item cannot be resolved please make a note of any error message, or take a screen shot to help us identify the issue. Then please email us at: <u>heathlandbirds@bto.org</u>.

Timing out during data entry!

All input data is saved at the completion of each Section, so if there is a problem during entry, no data is lost apart from that unsaved section. Please be aware that if a Section is left open from more than 20 minutes without any activity the system will time-out (an inbuilt security measure). This means that data will be lost and you will have to login and re-enter that Section again. If this happens the following error message is generated.

An error occurred when persisting the visit details (The session for this request is not authorised)					
Species:	Dartford Warbler				



Reference Information

Editing Data

- If you need to make changes to <u>numerical</u> data that requires a zero count to be entered, the system will no longer allow the field to be left blank, so you now need to enter '0'. This does not apply when you initially enter your data.
- Suitable habitat is applicable for all visits in a season (calendar year). E.g. if you create a new suitable habitat shape in visit A and save it, it will also appear for any subsequent visits you enter data for. If for instance you recorded new suitable habitat in visit A but said habitat had been destroyed in visit D then you can simply delete the shape and leave the map blank if there is no other new suitable habitat. It would also be good to indicate this habitat change in the notes field in section 1 of the visit details form.
- Estimated territory counts in section 5 of the form are cumulative for all the visits you complete in a season (calendar year).
- Focal species relationships cannot be edited. They need to be deleted and recreated if they are incorrect.
- Once placed on the map, the position of the registration cannot be changed. If you
 have placed the pin in the incorrect location, you will need to do either of the following
 actions. If this occurs during the add registration process you will need to use the
 'Cancel registration' button to remove the new registration and then start the add
 registration process again. If you have already saved the registration you will need to
 delete the registration and recreate it.



Validation rules for registration data

You may find that you are unable to successfully save registrations with particular combinations of sex, age and activity. The below tables show you which combinations are permitted (Y), not permitted (N) and where there are no restrictions (n/a) on the data you can save.

	Age	Adult	Juvenile	Unaged	
Sex	Male	Y	Ν	Ν	
	Female	Y	Ν	Ν	
	Unsexed	Y	Y	Y	
	Pair	Y	Ν	Ν	
	Family	n/a	n/a	n/a	
	Nest	n/a	n/a	n/a	



	Activity	Singing	Calling	Carrying Food	Carrying nesting material	Courtship display	Agitated	Distraction display	Seen only
Sex	Male	Y	Y	Y	Y	Y	Y	Y	Y
	Female	Ν	Y	Y	Y	Y	Y	Y	Y
	Unsexed	Ν	Y	Y	Y	Y	Y	Y	Y
	Pair	Y	Y	Y	Y	Y	Y	Y	Y
	Family	Ν	Y	Y	N	N	Y	Y	Y
	Nest	Ν	Ν	N	N	N	N	N	Y

	Activity	Singing	Calling	Carrying Food	Carrying nesting material	Courtship display	Agitated	Distraction display	Seen only
Age	Adult	Ν	Y	Y	Y	Y	Y	Y	Y
	Juvenile	Ν	Y	N	N	N	N	N	Y
	Unaged	Y	Y	N	N	N	N	N	Y

