



Monitoring of aquatic warbler *Acrocephalus paludicola* in southern England in 2011



*Aquatic warbler ringed at Lytchett Bay on 20th August.
Photo taken by Shaun Robson of the Stour Ringing Group.*

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May 2012

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Summary

Standardised monitoring of aquatic warbler *Acrocephalus paludicola* was carried out at key sites along the south coast of England during the autumn of 2011. This was a joint Natural England and RSPB project funded through the Action for Birds in England programme, a conservation partnership between NE and the RSPB.

Based upon current knowledge of records, this year was typical of the number of aquatic warblers recorded in recent years with four birds being trapped. However, this is far fewer than has been recorded historically (during the 1990s the annual average number of aquatic warblers recorded was 38). This decline is not mirrored in the global trend (from www.aquaticwarbler.net) or the number of birds caught on migration in France (Bretagne 2009). The reason for the disparity in these trends is not fully known but it may indicate that the importance of the UK as a migration stopover point is less than it has been in the past.

Management to improve the habitat for aquatic warblers has been carried out at Marazion and Radipole and areas to be improved at other sites have been identified. The need to highlight the importance of the complex habitat mosaic favoured by aquatic warblers and important for other species should be highlighted.

Recommendations:

- **Continue to regularly monitor existing SPA sites using recommended methodology.**
- **Monitor non-SPA sites periodically using above methods and with reference to the scarce migrants database.**
- **Further clarify recent trends when data becomes available.**
- **Continue to disseminate best practice management advice to site managers.**
- **Encourage further SPA designation for aquatic warblers at suitable sites and those with consistent records of aquatic warblers.**
- **Facilitate further information exchange through the aquatic warbler e-mail group and the Aquatic Warbler Conservation Team.**



*Juvenile aquatic warblers ringed at Marazion on 22nd (left) and 23rd (right) August.
Photos taken by Ashley Hugo and Dave Flumm respectively.*

1. Introduction

In autumn, aquatic warblers are known to take a westerly migration route from their breeding grounds in Eastern Europe and the former Soviet Union. Their course follows the coast of France, continues down the Iberian Peninsula and down to Western Africa. During this migration aquatic warblers have been recorded regularly at a number of sites in southern England. Three sites, Marazion Marsh, Lytchett Bay (Poole Harbour) and Icklesham (Dungeness to Pett Level) are classified as a Special Protection Area (SPA) for the autumn passage of this species. Monitoring the numbers passing through sites relies mainly on ringing during August and September.

In 2003 the UK became a signatory for the Memorandum of Understanding concerning Conservation Measures for the Aquatic Warbler (*Acrocephalus paludicola*). Within the action plan for this MoU, recommended actions for the UK include:

- Identify the major UK migration sites and establish their importance to aquatic warblers. Restore ringing activities at appropriate reserves, encourage the continuation of current ringing programmes and ensure more systematic trapping of aquatic warblers at a range of sites in the UK in order to establish more accurately the numbers involved.
- Ensure the protection and appropriate management of all UK sites regularly used by aquatic warblers on migration.
- Monitor the numbers of aquatic warblers on passage through the UK.
- Identify habitat requirements of the aquatic warbler while on passage through the UK.
- Provide advice to owners/managers of migration sites in order to ensure appropriate management.

Although numbers of aquatic warblers recorded on migration in the UK is small, the continuation of adequate monitoring, habitat management and protection is vital if we hope to continue to record birds here.

In 2007, coordinated monitoring was carried out across the most important aquatic warbler sites in southern England (St Pierre 2008). The primary objective of this project was to monitor the use of a network of sites by aquatic warbler through setting up a standardised repeatable monitoring programme, to enable improved understanding of the status and importance of the network of sites. Since then, ringing effort has continued to some extent in all years although the scale of the monitoring effort at sites has been subject to change depending on the availability of ringers and the weather conditions.

This project also aimed to improve understanding of habitat requirements and management of sites for this species through work with international partners. In 2010 management guidelines were developed and distributed to land managers at key sites.

Through this work the actions recommended in the MoU above have been achieved. The aim of this report is to follow up on this work and assess the current situation of aquatic warblers in the UK.

2. Objectives

- Monitor aquatic warblers across the most important aquatic warbler sites in southern England in 2011.
- Update the summary of aquatic warbler records in England since 2000.
- Review the current habitat management for species at the above sites, following management advice developed in 2010.
- Report on aquatic warbler trends in the UK and overseas.
- Make recommendations for future action, particularly with regard to monitoring and future management, of the above sites.
- Maintain the network of site managers and those involved in monitoring aquatic warblers in southern England, and link this with European sites used on migration.

3. Monitoring

3.1 Site network

The main sites reported on included all of those in the 2007 report, but this year also included South Milton Ley and Thurlestone Marsh. The list of sites is shown in Table 1.

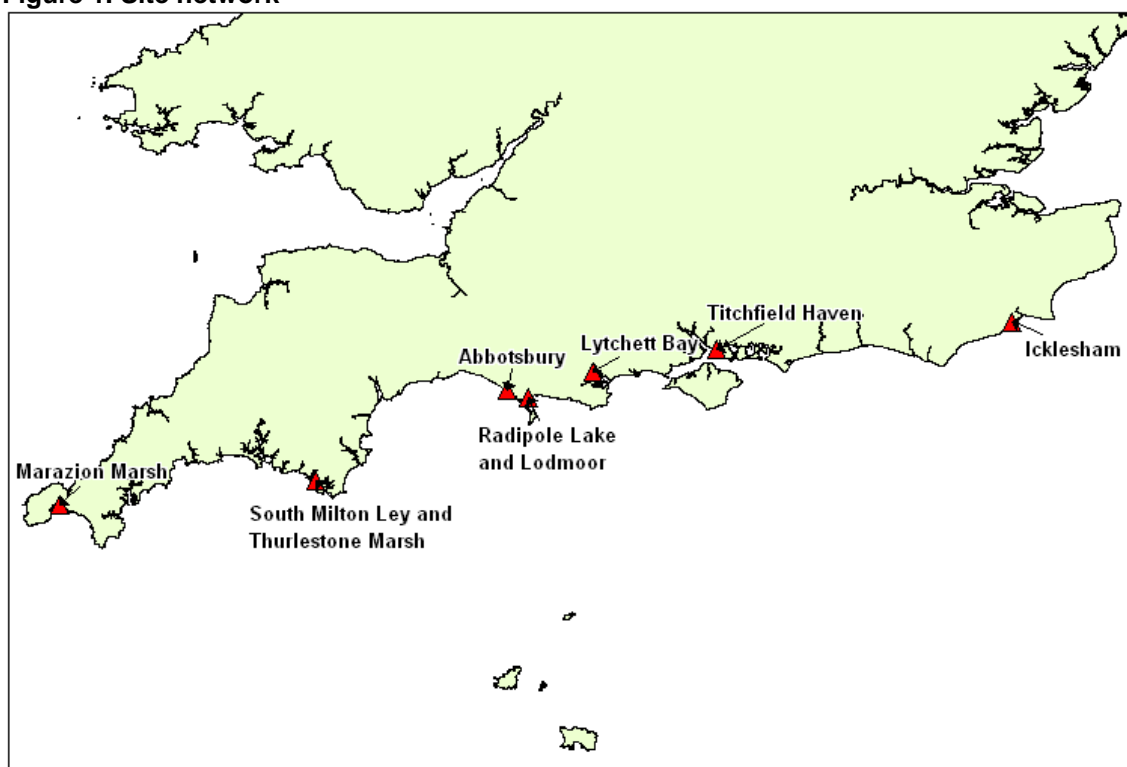
Table 1. Site network and designations

Site	Designation
Marazion Marsh	SSSI and SPA*
South Milton Ley and Thurlestone Marsh	SSSI
Abbotsbury	Chesil Beach and the Fleet SSSI and SPA
Radipole Lake and Lodmoor RSPB Reserves	SSSI
Lytchett Bay	Poole Harbour SSSI and SPA*
Titchfield Haven NNR	SSSI and Solent and Southampton Water SPA
Icklesham	Dungeness, Romney Marsh and Rye Bay SSSI and Dungeness and Pett Level SPA*

*SPAs designated for the autumn passage of aquatic warblers.

These sites are shown in Figure 1 below.

Figure 1. Site network



3.2 Recommended monitoring effort methodology

It is recommended that nets are set just prior to first light and ringing continues for approximately three hours thereafter. Ringing effort was set at a minimum to focus on the known migration periods of aquatic warbler. The minimum day effort identified for each period was advised as:

- 16 – 29 July: 1 day per week
- 30 July – 12 August: 2 days per week
- 13 August – 7 September: 3 days per week
- 8 September – 30 September: 2 days per week

3.3 Ringing methodology

All ringing was carried out using standard guidelines set out by the British Trust for Ornithology (BTO). Mist nets set in ringing 'rides' cut through the *Phragmites* and *Schoenoplectus/juncus* beds were based, where applicable, upon the locations used in previous ringing effort at the sites. The net lengths were recorded and set, locations mapped and repeated hereafter. Tapes were used where possible to maximise numbers of birds caught and used in accordance with the guidance issued in the Ringers Bulletin (V11, N12), particularly with regards volume and location and would, in any case, not be switched on more than 30 minutes prior to first light.

3.4 Data collection

All ringing was carried out using guidelines set out by the BTO, and by BTO registered and qualified ringers. All of the work was undertaken by locally based ringers, with some RSPB staff time in set up and management of volunteers and data analysis and report writing. Only ringers on RSPB sites were registered as RSPB volunteers. Health and safety for RSPB sites was covered the RSPB. Private and non-RSPB sites covered their own health and safety requirements.

Standard data (e.g. time of capture, age, sex and ring number [either new or existing]) were collected as with any ringed bird. A standardised set of biometrics was also taken, including wing length (maximum chord), weight, fat and muscle scores and overall moult score (primary moult score optional).

3.5 Results

Information summaries were collected using the questionnaire set out in Appendix I.

Across the project sites, four birds were trapped in 2011 at three sites. When and where these were caught is shown below.

Table 2. Aquatic warblers trapped in 2011.

<i>Birds trapped</i>	<i>16-29 July</i>	<i>30 July – 12 August</i>	<i>13 August – 7 Sept</i>	<i>8 – 30 Sept</i>
All sites	0	0	4	0
Marazion Marsh	0	0	2 (22/08 and 23/08)	0
South Milton Ley and Thurlestone Marsh	0	0	1 (03/09)	0
Abbotsbury	0	0	0	0
Radipole Lake and Lodmoor	0	0	0	0
Lytchett Bay	0	0	1 (20/08)	0
Titchfield Haven	0	0	0	0
Icklesham	0	0	0	0

There were a further 5 individuals recorded between 17 August (Devon) and 28 September 2011 (Isles of Scilly) [per birdguides]. These came from Devon (two), Kent (one) and (Isles of Scilly (two). However, it is difficult to know whether to include these records as they cannot be verified. This low number of birds follows the trend of recent years.

In addition to aquatic warblers, **21383** *acrocephalus* warblers were caught shown in Table 3.

Table 3. Other *acrocephalus* warblers caught in 2011.

Birds trapped	16-29 July	30 July – 12 August	13 August – 7 Sept	8 – 30 Sept
All sites	3164	6933	8540	2746
Marazion Marsh	0	181	244	4
South Milton Ley and Thurlestone Marsh	131	399	200	100
Abbotsbury	157	193	157	9
Radipole Lake and Lodmoor	0	21	145	0
Lytchett Bay	141	338	283	36
Titchfield Haven	Data not available			
Icklesham	2735	5801	7511	2597

At several sites (South Milton Ley and Thurlestone Marsh, Lytchett Bay and Icklesham) 2011 was a record year for other *Acrocephalus* warblers.

Trapping covered the period 19 July – 30 September. All sites had a good spread of coverage with Lytchett Bay and Icklesham covered fully. At Marazion, trapping intensified during the middle recording period, and South Milton and Thurlestone Marsh also had good coverage. Both weather and the availability of volunteers affected coverage.

The project proposed a number of trapping days per period. Table 4 below sets out the number carried out and numbers in bold indicate that the number of trapping days proposed were achieved.

Table 4. Ringing effort in 2011

Trapping days	16-29 July	30 July – 12 August	13 August – 7 September	8 – 30 September
<i>Trapping days target</i>	2	4	9	6
Marazion Marsh	0	4	18	1
South Milton Ley and Thurlestone Marsh	5	6	5	5
Abbotsbury	3	3	2	1
Radipole Lake and Lodmoor	0	2	5	0
Lytchett Bay	3	5	9	7
Titchfield Haven	Data not available			
Icklesham	13	13	25	22

The summer period until the end of August was slightly wetter and cooler than average although not as cool and wet as summers 2007-2009, but this did not compensate for the very dry spring which affected much of southern England and left many sites drier than normal for the rest of the year. Unfortunately there were very few favourable SE winds within the core period.

4. Important Sites and Designations

Aquatic warbler is a UK Biodiversity Action Plan Species and as such has an action plan produced by Natural England which can be viewed on the UK BAP website. Two local Biodiversity Action Plans include this species within their plans; Cornwall and Gwent.

Marazion Marsh, Lytchett Bay (part of Poole Harbour SPA, and Icklesham (part of Dungeness to Pett Level SPA) are the only sites that are designated for their aquatic warbler interest. Other sites receive protection through SSSI status (and are managed as nature reserves); however aquatic warbler is not a designated feature, and therefore there is no requirement for specific management or monitoring. Both Marazion Marsh and Radipole Lake include aquatic warbler within their RSPB Reserve management plans.

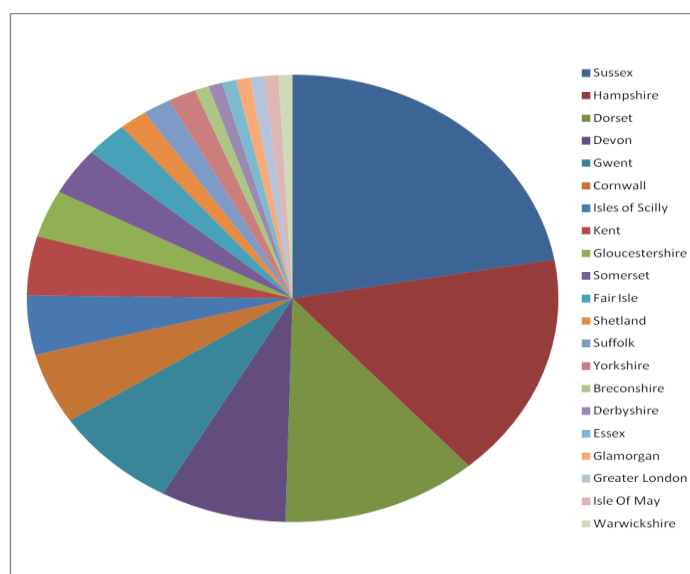
Since 2000, records gathered from the scarce migrants' website and county recorders list 50 different sites that have had aquatic warbler records on site. Only 18 of these have had more than one record and these are listed in Table 5. Icklesham has been the site with the greatest number of records in recent years although this may be in part because this is the site with the greatest recording effort. It is notable that despite this continued effort 2011 was the first year in over 20 years that no birds were recorded. Titchfield Haven in Hampshire has the second highest number of records during this time. This site lies within the Solent and Southampton Water SPA but currently aquatic warbler is not an interest feature at this site. Further recognition of the importance of Titchfield Haven for this species should be considered. At time of writing, the data from Titchfield Haven for 2011 is not available but further effort will be made to obtain this information and highlight the importance of this site.

With the exception of Fair Isle, all sites with aquatic warbler records have been in southern Britain. Figure 2 shows these records by county and although this shows a lot of spread across counties more than half of these records are from Sussex, Hampshire and Dorset.

Table 5. Sites with more than 1 record since 2000 (Source: Scarce Migrants website, County recorders).

Site	County	Number of birds recorded
Icklesham and Pett Level	East Sussex	21
Titchfield Haven	Hampshire	13
Uskmouth	Gwent	7
Farlington Marshes	Hampshire	6
Isles of Scilly	Isles of Scilly	5
Stear	Somerset	4
Stanpit Marsh	Dorset	4
Fair Isle	Shetland	3
South Milton Ley	Devon	3
Slapton Ley	Devon	3
Gwent Levels	Gwent	2
Radipole Lake	Dorset	2
Marazion Marsh	Cornwall	2
Orfordness	Suffolk	2
Lodmoor	Dorset	2
Marazion	Cornwall	2
Slimbridge	Gloucestershire	2
Lytchett Bay	Dorset	2

Figure 2. County records of aquatic warblers since 2000



5. Habitat

5.1 Aquatic warbler recording habitat

At Marazion, both aquatic warblers were trapped in pure *Phragmites* on the wetter edge of the *Schoenoplectus*. At South Milton Ley, the bird was caught in 'Marsh' ride between *Phragmites* reeds. At Lytchett Bay, the bird was caught on a river bank between reeds and rush covered wet grassland.

5.2 Ringing site habitat

Many of the ringing rides crossed different habitat types where it is thought the edge effect increases the chances of catching birds. The following habitats are included in the ringing programmes at the various sites.

Table 6. Ringing habitat across sites

Site	Salt marsh	Tyfa beds	Schoenoplectus beds	Rush pasture	Reed bed	Other tall Vegetation	Scrub
Marazion Marsh		X	X		X		X
South Milton Ley and Thurlestone Marsh					X		
Abbotsbury	X				X		
Radipole Lake and Lodmoor				X	X	X	X
Lytchett Bay	X			X	X		
Titchfield Haven			Data not available				
Icklesham			X		X	X	X

5.3 Management advice

Management recommendations for aquatic warblers are focused on providing roosting and feeding habitat during the crucial migration period. Aquatic warblers have two main requirements on migration; they roost in reedbeds and then move to feed in a range of other adjacent wetland habitats. The invertebrates they feed on are often most abundant in a highly varied and diverse wetland mosaic which includes an open or sparse ground layer allowing the birds to move around to forage for food, a medium strata 0.5-1.0 m of rushes, club-rushes and sedges, and an uppermost layer of sparse reed 1-1.5 m in height.

This complex habitat mosaic is often absent on many floodplain wetland sites. Management has traditionally focused on maintaining specific habitat types (grazing marsh, reedbed etc), rather than creating the more intricate and dynamic habitat mosaic that aquatic warblers (and other species such as spotted crake) require. Conversely, a lack of management of existing feeding sites can lead to scrub encroachment and a reduction in habitat structure and diversity, which may reduce their value for aquatic warbler.

All sites included in the 2007 survey were visited by Arnaud Le Nevé from Bretagne Vivante in 2009 and specific management recommendations were given to site managers. After this visit management guidelines were developed in 2010 (Appendix 2) and disseminated to site managers. Management to improve the habitat for aquatic warblers has been carried out at Marazion and Radipole and this is included in the management plans for these reserves. Part of the site at Lytchett Bay (and the area where ringing is carried out) is managed by the RSPB (French's Farm) but there has been no specific habitat management for aquatic warbler and they are not mentioned in the management plan. This is currently being rewritten and there is therefore the opportunity to include reference to habitat creation for aquatic warblers.

At Icklesham *Phragmites* has excluded the habitat that the aquatic warblers have favoured in the past and a suitable area of *Schoenoplectus* beds was drier than normal. The Wetland Trust is currently looking at the management of the Icklesham reserve to make it more suitable as a stopover for aquatic warblers.

6. Historic information and trends

The global population of aquatic warblers declined dramatically between 1970 and 1990 (BirdLife International 2004). However, although small isolated populations have continued to decline in Pomerania and Hungary, intensive management and conservation projects in place in the core Eastern European populations have meant that populations have stabilised there ([BirdLife datazone](#)) (see Figure 3).

The annual totals of aquatic warblers recorded in the UK between 1990 and 2011 are shown in Figure 4 below. This downward trend of birds recorded in the UK is despite continued and increased ringing effort.

Records of migrating birds have also been collated in other nearby countries. Figure 5 shows the number of aquatic warblers caught in France since 1982. However, because this bird is mainly detected through catching and ringing, this apparent increase in numbers represents an increase in ringing, not in population. Further analysis of records which takes the increase of effort into account suggests the number of post-breeding migrating birds is stable (Bretagne 2009). This is in line with the global population trend.

The reason for the disparity in these trends is not fully known but it may indicate that the UK as a migration stopover point is less important than it has been in the past.

Figure 3. Global populations 1996-2009 (from www.aquaticwarbler.net)

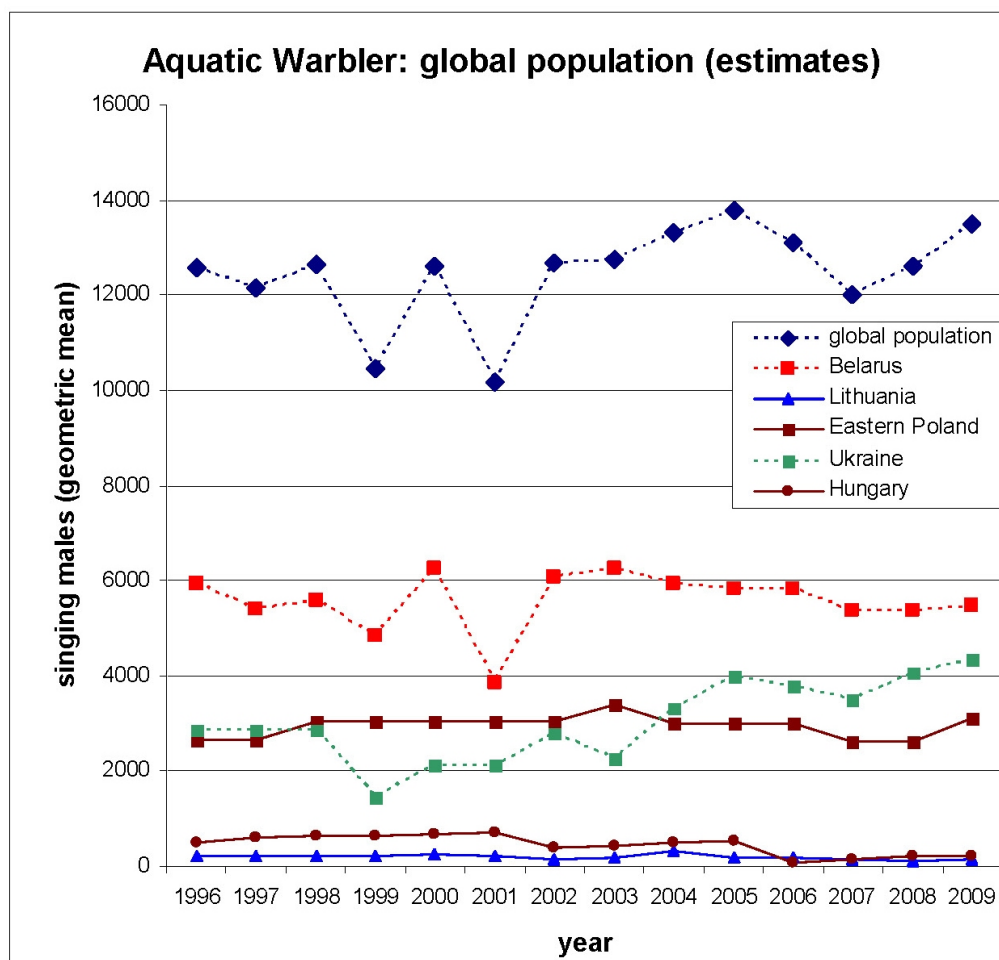
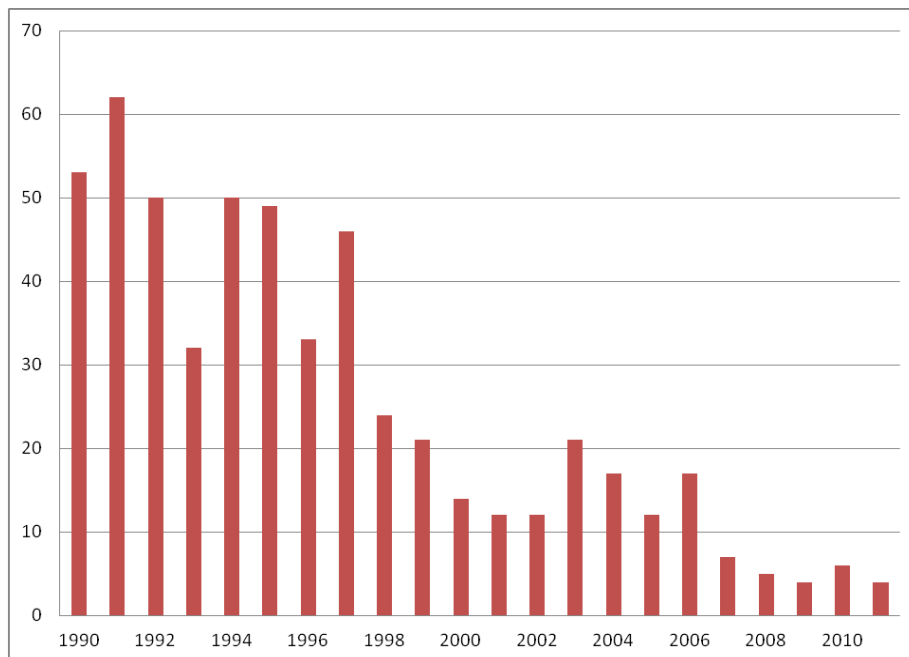
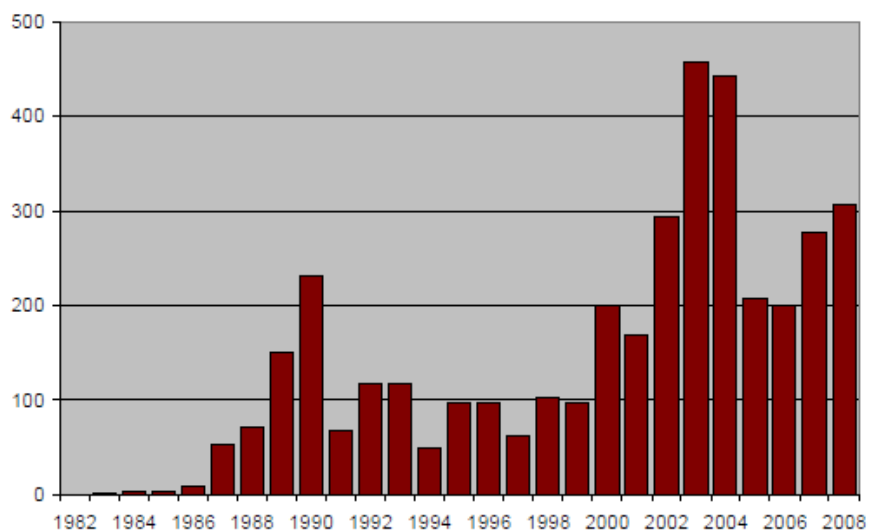


Figure 4. Aquatic warbler records in the UK 1990-2011



Source: Scarce Migrants website, County recorders.

Figure 5. Annual number of aquatic warblers caught in autumn, in France, 1982-2008. (from Bretagne 2009)



7. Publicity and communication

Email communication between project sites was encouraged in order to share information and encourage future action. Short-term and final reports will be submitted to Natural England. An article for publication in *British Birds* or similar is currently under development to summarise the historic and current trend of aquatic warblers in the UK.

8. Discussion and conclusion

In the UK 2011 again was a poor year for aquatic warblers with few birds trapped or seen. The four birds recorded in 2011 continue the recent low numbers recorded (less than 10 annually since 2006). Despite the historical declines in the global population the more recent UK declines since 2000 are not in line with the global trend or the trend in numbers of birds recorded in France during this time. The reason for the disparity in these trends is not fully known but it may indicate that the UK as a migration stopover point is less important than it has been in the past.

The ringing coverage across the network of sites was good. Weather occasionally prevented ringing and there were few SE winds which would have increased the chances of migrants being blown across the channel.

Habitat improvements have taken place at Marazion and Radipole over the past few years which have created the wetland mosaic favoured by aquatic warblers. This should give the best possible chance of recording aquatic warblers at these sites in the future and may have been a contributing factor to two birds being ringed at Marazion in 2011 for the first time since 1996. Continued ringing effort at these two sites is important to test whether the habitat changes will result in more birds being recorded there.

Specific habitat management for aquatic warbler has not been included in the Lytchett Bay management plan so far but this is currently being redrafted and there is an opportunity to include aquatic warbler management in this in the future. As this is within an SPA designated for aquatic warbler, this would be an important inclusion to any future management plan.

No aquatic warblers were caught at Icklesham for the first time in over 20 years despite a significant increase in other more common warblers. This is thought to be because the *Phragmites* has excluded the habitat that the AWs favour and the trapping area in the one area of suitable habitat was quite dry in 2011. A management regime is being adopted to try to recreate more suitable habitat types at this site.

No data is currently available for the monitoring effort or habitat management at Titchfield Haven but this is recognised as an important site. Further effort will be made to obtain this information and encourage the monitoring of aquatic warblers at this site in future.

Despite the small number of aquatic warblers recorded annually in the UK, due to the globally threatened status of this species, there is a need to continue to monitor the network of sites across southern England during the migration period. There is a specific requirement for regular monitoring of aquatic warblers at the 3 SPA sites – Marazion Marsh, Lytchett Bay (part of Poole Harbour SPA, and Icklesham (part of Dungeness to Pett Level SPA). It is recommended that this is combined with some periodic monitoring of non SPA sites with reference to the scarce migrants database to provide an indication of wider patterns of occurrence. The assessment and improvement of habitat at all sites should continue with reference to management guidelines developed in 2010.

9. Recommendations

- **Continue to regularly monitor existing SPA sites using recommended methodology.**
- **Monitor non-SPA sites periodically using above methods and with reference to the scarce migrants database.**
- **Further clarify recent trends when data becomes available.**
- **Continue to disseminate best practice management advice to site managers.**
- **Encourage further SPA designation for aquatic warblers at suitable sites and those with consistent records of aquatic warblers.**
- **Facilitate further information exchange through the aquatic warbler e-mail group and the Aquatic Warbler Conservation Team.**

10. Acknowledgements

Many thanks to Dave Flumm (RSPB), Mark Grantham and all other ringers at Marazion Marsh, Roger Short, Mike Passman and Bob Burrage at South Milton Ley and Thurlestone Marsh, Steve Hales at Abbotsbury, Nick Tomlinson, Toby Branston and Luke Phillips (RSPB) at Radipole Lake, Shaun Robson and the Stour Ringing Group at Lytchett Bay, and Stephen Rumsey, Ian Hunter and the Rye Bay ringing group at Icklesham, for providing technical input and ringing data. Thanks to all relevant county recorders for supplying records and also thanks to Leigh Lock, Paul St Pierre (RSPB) and Allan Drewitt (NE) for comments on drafts of the text.

This was a joint Natural England and RSPB project funded through the Action for Birds in England programme, a conservation partnership between NE and the RSPB.

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www.scarce-migrants.org.uk

www.jncc.gov.uk

www.birdguides.co.uk

www.aquaticwarbler.net

www.cms.int/species/aquatic_warbler/pdf/AW_Action_Plan_Final_Eng.pdf

Appendix 1 Aquatic Warbler Questionnaire 2011

1.

Site Name: **Marazion Marsh**

Site Ringers: *Mark Grantham (Margaret Rawlins, Peter Robinson, Genevieve Bridgeman, John Black, Vicky Gilson)*

	16-29 July	30 July – 12 August	13 August – 7 September	8 – 30 September
Trapping (dates)	0	4 visits	18 visits	1 visit
Total number of Aquatics caught (and date) [and ringing ride]	0	0	1 on 22 nd and 1 on 23 rd . Both in main reedbed (net 3 on photo)	0
Total number of Acros caught	0	55 Reed and 126 Sedge	97 Reed and 147 Sedge	3 Reed and 1 Sedge
Net area (m2)	0	96m full-height, 36m single-shelf		
Trapping hours	0	26	82	2
Tape hrs	0	9.5	79	2
Number feathers retained for isotope analysis (date)	None			
Weather				
Wind direction on trapping days				
Dominant wind direction for the period				
Precipitation for period (mm)				
Temperature for period (mean)				

Have you attached a map with net rides marked and locations of caught aquatic warblers: Yes

Other records for aquatic warbler that were not ringed (no's and date): None

Any comments on the season: *No accurate weather details taken, except noting periods of strong wind and rain, but not specific. Dave Flumm may have more specific details. In general the site was much drier this year than last and perhaps the driest for several years.*

Ringing Ride description

It would be useful to assess the type of vegetation that people are ringing in to see whether aquatic warblers show any preferences? Please use the descriptors in the table below to describe the habitat within 10m of the ride. Please identify the dominant vegetation type.

Ringing ride	Area (m ²) of net	*NVC communities (if known)	Habitat descriptors (reedbed, saltmarsh, <i>schoenoplectus</i> , <i>scirpus</i> (sea club rush), <i>typha</i> bed, short grass/sedge (<15cm), long grass/sedges (>15cm), rushes, open water, ditches, grazed or ungrazed, willow scrub, any other dominant species)
Number 1	18m full-height		Young reedbed with wet understory.
2	18m full-height		Wet Sallow scrub and reed edge.
3	48m full-height		Mature reedbed with dry understory with litter.
4	36m single-shelf		Dry <i>Schoenoplectus</i> bed (wet in 2010).
X	12m full-height		Over water at reed edge.

*NVC = National vegetation classification

Have you sent any photographs of ringing rides: Yes

2.

Site Name: **South Milton Ley and Thurlestone Marsh**

Site Ringers: *Roger Short*

	20-31 July	1 August – 14 August	15 August – 22 August	23 August – 3 September
Trapping (dates)	21 st , 23 rd , 24 th , 30 th and 31 st	3 rd , 6 th , 8 th , 10 th , 13 th & 14 th	17 th , 19 th , 20 th , 21 st , & 22 nd	24 th , 25 th , 26 th , 27 th August & 3 rd Sept
Total number of Aquatics caught (and date) [and ringing ride]	0	0		1 on 3 rd Sept. Caught in 'Marsh' ride between phragmites reeds.
Total number of Acros caught	131	399	200	100
Net area (m2)	Generally 4x18m 4 panel	Generally 5x18m 4 panel	Generally 5x18m 4 panel	Generally 4x18m 4 panel
Trapping hours	5 hours per session	5 hours per session	5 hours per session	5 hours per session
Tape hrs	1 or 2 ps	1 or 2 ps	1 or 2 ps	1 or 2 ps
Number feathers retained for isotope analysis (date)	0	0	0	0
Weather				
Wind direction on trapping days	<i>Wind not noted. Usually in a westerly direction.</i>			
Dominant wind direction for the period				
Precipitation for period (mm)				
Temperature for period (mean)				

Have you attached a map with net rides marked and locations of caught aquatic warblers: *No*

Other records for aquatic warbler that were not ringed (no's and date): *None*

Any comments on the season: *A record season for acros. 23 Grasshopper Warblers caught, a record year for this species.*

Ringing Ride description

It would be useful to assess the type of vegetation that people are ringing in to see whether aquatic warblers show any preferences? Please use the descriptors in the table below to describe the habitat within 10m of the ride. Please identify the dominant vegetation type.

Ringing ride	Area (m ²) of net	*NVC communities (if known)	Habitat descriptors (reedbed, saltmarsh, <i>schoenoplectus</i> , <i>scirpus</i> (sea club rush), <i>tyfa</i> bed, short grass/sedge (<15cm), long grass/sedges (>15cm), rushes, open water, ditches, grazed or ungrazed, willow scrub, any other dominant species)
Number 1			<i>Each of our rides is placed either in reedbeds. The predominant reed is phragmites.</i>
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3			
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*NVC = National vegetation classification

Have you sent any photographs of ringing rides:

3.

Site Name: **Abbotsbury Swannery**

Site Ringers: *Steve Hales, Luke Phillips*

	16-29 July	30 July – 12 August	13 August – 7 September	8 – 30 September
Trapping (dates)	<i>3 days</i>	<i>3 days</i>	<i>2 days</i>	<i>1 day</i>
Total number of Aquatics caught (and date) [and ringing ride]	<i>nil</i>	<i>nil</i>	<i>nil</i>	<i>nil</i>
Total number of Acros caught	<i>157</i>	<i>193</i>	<i>157</i>	<i>9</i>
Net area (m2)	<i>3x60 foot</i>	<i>3x 60 foot</i>	<i>3x 60 foot</i>	<i>3x 60 foot</i>
Trapping hours				
Tape hrs	<i>2hrs</i>	<i>2 hrs</i>	<i>2 hrs</i>	<i>2 hrs</i>
Number feathers retained for isotope analysis (date)	<i>none</i>	<i>none</i>	<i>none</i>	<i>none</i>
weather				
Wind direction on trapping days				
Dominant wind direction for the period	<i>Weather poor this summer</i>	<i>Weather poor this summer</i>	<i>Weather poor this summer</i>	<i>Weather poor this summer</i>
Precipitation for period (mm)				
Temperature for period (mean)				

Have you attached a map with net rides marked and locations of caught aquatic warblers *No*

Other records for aquatic warbler that were not ringed (no's and date): *None*

Any comments on the season:

Also caught a few Grasshopper Warblers

Weather dreadful for us on this coastline. Also affected other project with wagtail roosts. A few good evenings end of August early Sept but no good for acros then. Just yellow wags. We caught 275 yellow wags.

Ringing Ride description

It would be useful to assess the type of vegetation that people are ringing in to see whether aquatic warblers show any preferences? Please use the descriptors in the table below to describe the habitat within 10m of the ride. Please identify the dominant vegetation type.

Ringing ride	Area (m2) of net	*NVC communities (if known)	Habitat descriptors (reedbed, saltmarsh, <i>schoenoplectus</i> , <i>scirpus</i> (sea club rush), <i>tyfa</i> bed, short grass/sedge (<15cm), long grass/sedges (>15cm), rushes, open water, ditches, grazed or ungrazed, willow scrub, any other dominant species)
Number 1	3x60's		<i>Predominantly Phragmites, hemp agrimony, sea aster, etc</i> <i>2x60's Over standing water 1x60 over saltmarsh edge</i>
2			
3			
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*NVC = National vegetation classification

Have you sent any photographs of ringing rides: No

4.

Site Name: **Radipole Lake and Lodmoor**

Site Ringers: *Nick Tomlinson, Steve Hales and Luke Phillips*

	16-29 July	30 July – 12 August	13 August – 7 September	8 – 30 September
Trapping (dates)	0	2	5	0
Total number of Aquatics caught (and date) [and ringing ride]	0	0	0	0
Total number of <i>Acros</i> caught	0	21	145	0
Net area (m2)	30m	30m	30m	30m
Trapping hours				
Tape hrs				
Number feathers retained for isotope analysis (date)	0	0	0	0
Weather				
Wind direction on trapping days				
Dominant wind direction for the period				
Precipitation for period (mm)				
Temperature for period (mean)				

Have you attached a map with net rides marked and locations of caught aquatic warblers *No*

Other records for aquatic warbler that were not ringed (no's and date): *None*

Any comments on the season:

Ringing Ride description

It would be useful to assess the type of vegetation that people are ringing in to see whether aquatic warblers show any preferences? Please use the descriptors in the table below to describe the habitat within 10m of the ride. Please identify the dominant vegetation type.

Ringing ride	Area (m2) of net	*NVC communities (if known)	Habitat descriptors (reedbed, saltmarsh, <i>schoenoplectus</i> , <i>scirpus</i> (sea club rush), <i>tyfa</i> bed, short grass/sedge (<15cm), long grass/sedges (>15cm), rushes, open water, ditches, grazed or ungrazed, willow scrub, any other dominant species)
Number 1			
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*NVC = National vegetation classification

Have you sent any photographs of ringing rides:

5.

Site Name: **Lytchett Bay**

Site Ringers: *Stour Ringing Group – contact Shaun Robson*

Please complete the following table or send details of relevant information.

	16-29 July	30 July – 12 August	13 August – 7 September	8 – 30 September
Trapping (dates)	20 th , 23 rd and 27 th	30 th , 3 rd , 5 th , 6 th , 10 th	14 th , 17 th , 20 th , 21 st , 24 th , 27 th , 31 st , 1 st , 2 nd	14 th , 15 th , 19 th , 21 st , 24 th , 28 th , 30 th
Total number of Aquatics caught (and date) [and ringing ride]	0	0	1 on 20 th . Caught in ride on bank of Sherford River between reeds and rush covered wet grassland.	0
Total number of Acros caught	141	338	283	36
Net area (m2)	3x18m 4 panel 1x9m 4 panel	Generally 3x18m 4 panel 1x9m 4 panel	Generally 3x18m 4 panel 1x9m 4 panel	Generally 3x18m 4 panel 1x9m 4 panel
Trapping hours	3 hours per session	3 hours per session	3 hours per session	2-3 hours per session
Tape hrs	3 ps	3 ps	3 ps	3 ps
Number feathers retained for isotope analysis (date)	0	0	0	0
Weather				
Wind direction on trapping days	N -NE	SW - NW	NE- SSW. SSW on 20th	Variable all directions between W and E
Dominant wind direction for the period	N	Between S and NW	Between NE and S	Variable
Precipitation for period (mm)				
Temperature for period (mean)				

Have you attached a map with net rides marked and locations of caught aquatic warblers: *No*

Other records for aquatic warbler that were not ringed (no's and date): *None*

Any comments on the season: *A record season for acros. 32 Grasshopper Warblers caught. A record year for this species.*

Ringling Ride description

It would be useful to assess the type of vegetation that people are ringling in to see whether aquatic warblers show any preferences? Please use the descriptors in the table below to describe the habitat within 10m of the ride. Please identify the dominant vegetation type.

Ringling ride	Area (m2) of net	*NVC communities (if known)	Habitat descriptors (reedbed, saltmarsh, <i>schoenoplectus</i> , <i>scirpus</i> (sea club rush), <i>tyfa</i> bed, short grass/sedge (<15cm), long grass/sedges (>15cm), rushes, open water, ditches, grazed or ungrazed, willow scrub, any other dominant species)
Number 1			<i>Each of our rides is placed either in, or on the edge of, reedbeds adjacent to rushes, ditches and open water. The grassland containing the rushes is lightly grazed. There is salt water inundation.</i>
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*NVC = National vegetation classification

Have you sent any photographs of ringling rides:

6.

Site Name: ***Titchfield haven***

Site Ringers:

	16-29 July	30 July – 12 August	13 August – 7 September	8 – 30 September
Trapping (dates)				
Total number of Aquatics caught (and date) [and ringing ride]				
Total number of <i>Acros</i> caught				
Net area (m2)				
Trapping hours				
Tape hrs				
Number feathers retained for isotope analysis (date)				
Weather				
Wind direction on trapping days				
Dominant wind direction for the period				
Precipitation for period (mm)				
Temperature for period (mean)				

Have you attached a map with net rides marked and locations of caught aquatic warblers *No*

Other records for aquatic warbler that were not ringed (no's and date): *None*

Any comments on the season:

Ringing Ride description

It would be useful to assess the type of vegetation that people are ringing in to see whether aquatic warblers show any preferences? Please use the descriptors in the table below to describe the habitat within 10m of the ride. Please identify the dominant vegetation type.

Ringing ride	Area (m2) of net	*NVC communities (if known)	Habitat descriptors (reedbed, saltmarsh, <i>schoenoplectus</i> , <i>scirpus</i> (sea club rush), <i>tyfa</i> bed, short grass/sedge (<15cm), long grass/sedges (>15cm), rushes, open water, ditches, grazed or ungrazed, willow scrub, any other dominant species)
Number 1			
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*NVC = National vegetation classification

Have you sent any photographs of ringing rides:

7.

Site Name: **Icklesham**

Site Ringers: *Rye Bay ringing group - The Wetland Trust – contact Ian Hunter*

	16-29 July	30 July – 12 August	13 August – 7 September	8 – 30 September
Trapping (dates)	<i>All but 17th July</i>	<i>All</i>	<i>All but 6th Sept</i>	<i>All but 12th Sept</i>
Total number of Aquatics caught (and date) [and ringing ride]	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Total number of Acros caught	<i>2735</i>	<i>5801</i>	<i>7511</i>	<i>2597</i>
Net area (m2)	<i>717m in length in reed or Schoenoplectus</i>			
Trapping hours	<i>Average 6 hours per day.</i>			
Tape hrs	<i>As per trapping plus one hour prior to opening nets.</i>			
Number feathers retained for isotope analysis (date)	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Weather				
Wind direction on trapping days				
Dominant wind direction for the period				
Precipitation for period (mm)				
Temperature for period (mean)				

Have you attached a map with net rides marked and locations of caught aquatic warblers: *No*

Other records for aquatic warbler that were not ringed (no's and date): *None*

Any comments on the season: *2010 was the best ever for Reed Warblers, 2011 was best since 1992 for Sedge and best ever for Grasshopper.*

Ringing Ride description

It would be useful to assess the type of vegetation that people are ringing in to see whether aquatic warblers show any preferences? Please use the descriptors in the table below to describe the habitat within 10m of the ride. Please identify the dominant vegetation type.

Ringing ride	Area (m2) of net	*NVC communities (if known)	Habitat descriptors (reedbed, saltmarsh, <i>schoenoplectus</i> , <i>scirpus</i> (sea club rush), <i>tyfa</i> bed, short grass/sedge (<15cm), long grass/sedges (>15cm), rushes, open water, ditches, grazed or ungrazed, willow scrub, any other dominant species)
Number 1			
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*NVC = National vegetation classification

Have you sent any photographs of ringing rides:

Appendix 2. Aquatic warbler Land management guidelines



a million voices for nature



LAND MANAGEMENT FOR WILDLIFE

Aquatic warbler




Arnould Le Névé

Mike Lane (rspb-images.com)

Aquatic warblers roost in reedbeds (right and background) and feed in adjacent areas of transition habitat (low vegetation and pond). Management is essential to maintain this habitat.

BACKGROUND

The aquatic warbler is a migratory species breeding predominantly in sedge fen mires in eastern Europe and Belarus and wintering south of the Sahara in west Africa. The juveniles in particular migrate west in short hops along the Channel coast in autumn (July to October), using wetlands in Brittany to build body fat before flying to Africa. A small number also use the south coast of England during migration.

Aquatic warbler is the only globally threatened passerine in mainland Europe. It has been lost from the western part of its range in Europe, mainly due to habitat loss. Only 10,500 – 14,200 vocalising males were recorded across four sites. These sites support over 80% of the global population.

Numbers on migration in the UK declined from c30 per annum prior to 2000 to about 10 per annum in the last decade.

WHAT DO AQUATIC WARBLERS NEED?

Management recommendations are focused on providing roosting and feeding habitat during this crucial migration period in the UK.

Aquatic warblers have two main requirements on migration. They roost in reedbeds and then move to feed in a range of other adjacent wetland habitats.

Whilst suitable areas of reedbed may be available for roosting birds, the feeding habitat is often absent or occurs only in small amounts in wetland sites in southern England.

Targeted management can enhance both the quantity and quality of this feeding habitat and should be a focus of conservation action, along with the creation of additional areas of reedbed for roosting.

Feeding habitat and use
Aquatic warblers feed on or close to the ground or water on large invertebrates: dragonflies and damselflies, flies, spiders, grasshoppers, crickets and beetles. These invertebrates are often most abundant in a highly varied and diverse wetland mosaic. Reedbed areas may provide additional foraging areas for aphids and other insects.

Although aquatic warblers use saline sites, it is thought that the greatest abundance of suitable food occurs in freshwater habitats. These are usually mesotrophic or slightly eutrophic.

Habitat structure
The feeding habitat usually has three distinct vegetation layers, which combine to form a highly varied and food-rich mosaic:

- 1) an open or sparse ground layer allowing the birds to move around to forage for food.
- 2) a medium strata 0.5-1.0 m of rushes, club-rushes and sedges such as soft rush *Juncus effusus* or glaucous bulrush *Schoenoplectus tabernaemontani*.
- 3) an uppermost layer of sparse reed of 1.0-1.5 m in height (if present).

This complex habitat mosaic is often absent or present only in small areas on many floodplain wetland sites. Management has traditionally focused on maintaining specific habitat types (grazing marsh, reedbed, lagoons etc), rather than creating the more intricate and dynamic habitat mosaic that aquatic warblers need. Conversely, a lack of management of existing feeding sites can lead to scrub encroachment and a reduction in habitat structure and diversity, which may reduce their value for aquatic warbler.

xvi

HOW CAN I ENCOURAGE AQUATIC WARBLERS?

Aim for areas of diverse wetland vegetation, with a complex structure and an abundance of insects.

Diverse 'blue-zones' or transition zones of reedbed/fen/grazing marsh can provide such habitat and benefit other wildlife.

Restoration of habitat

Ensure the area to be restored is adjacent to an existing reedbed so that suitable roosting sites are available. The area needs to be part of a floodplain that can be inundated by water or stands within 1-20 cm depth of water in summer.

Restore reedbed by cutting in August and September and removing arisings.

Restore grazed wet meadows by removing cattle in late summer.

This can be applied to both freshwater and brackish sites, although freshwater sites seem to be preferred. An invertebrate survey is recommended.

Maintenance of habitat

Monitor the structure annually and cut when the reeds are increasing again. This may be once every two/three years depending on whether the site is eutrophic or mesotrophic.

Periodic (once every two/three years) summer grazing may also produce suitable habitat.

Management by machinery

Advantages: Clear large areas quickly, easier to remove arisings.

Disadvantages: The ground needs to be fairly firm and dry, and is more costly at the beginning.

Management by hand

Advantages: The ground can be wetter and it is generally cheaper.

Disadvantages: Smaller areas provided and more difficult to remove vegetation and find the people to do the work.

OTHER SPECIES THAT BENEFIT

Birds: (feeding and/or nesting habitat) teal, garganey, bittern, water rail, spotted crane, snipe, yellow wagtail, bluethroat, sedge warbler and reed bunting.

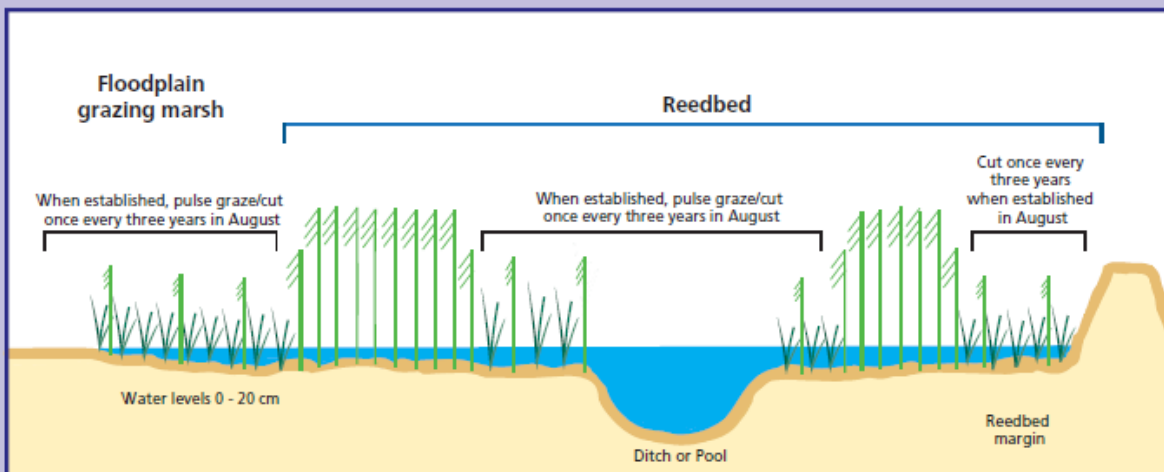
Large Invertebrates: Odonata (dragonflies and damselflies), Dolichopodids (flies), arachnids (spiders) including Clubiona species, Orthoptera (grasshoppers and crickets) and Coleoptera (beetles).

Plants: Juncus (rush), Scirpus (club-rush), Carex species (sedges) and orchids.

KEY POINTS

- Aquatic warblers need feeding and roosting habitat adjacent to each other.
- Ideal feeding habitat comprises a complex mosaic of wetland vegetation, rich in insects.
- Diverse 'blue-zones' or transition zones of reedbed/fen/grazing marsh can provide such habitat and benefit a wide range of wildlife.
- In reedbeds, create fringes of suitable habitat through reed cutting in August to promote a diversity of plant growth.
- On floodplain grazing marsh, leave areas adjacent to reedbeds ungrazed for two/three years.
- Ongoing management should be carried out in August through cutting (appropriate grazing may also have the same effect).
- Prevent scrub and bulrushes encroaching over areas.

The management described in this leaflet may be eligible for funding through Environmental Stewardship. Contact your local Natural England adviser for details.



The Royal Society for the Protection of Birds (RSPB) is a registered charity: England and Wales no. 207076, Scotland no. SC037654

June 2010



The Aquatic Warbler Project is part of Action For Birds in England, a conservation partnership between Natural England and the RSPB

You can get further information on managing your land for wildlife from:



RSPB Conservation Management Advice
UK Headquarters, The Lodge, Sandy,
Bedfordshire, SG19 2DL
01767 680551
www.rspb.org.uk

BirdLife International Aquatic Warbler Conservation Team
www.aquaticwarbler.net