# RASnews

The newsletter for the British Trust for Ornithology's Retrapping Adults for Survival Scheme

BTO Looking out for birds

**Number 12** **May 2011**


FOR THE LATEST RAS RESULTS see page 4 & 5

# RAS survival trends launched in 2010

**Record numbers of projects registered for RAS as the first ever survival trends are produced.**

Since the scheme was launched in 1998, hundreds of ringers have contributed to RAS, helping to collect survival rate data for a wide range of species, focussing primarily on those less frequently encountered during general mist-netting. Over the last year, the RAS team have been working to develop analytical programs that can produce automated annual survival trends similar to those in breeding success and abundance calculated from Nest Record Scheme (NRS) and Breeding Birds Survey (BBS) datasets respectively. The first results are presented in this newsletter (see page 4 & 5 for more details); in total, sufficient data were available to produce trends for 35 species, although accuracy of the estimates varies according to the number of projects and the number of individuals recaught.

The survival rate trend for House Sparrow (Fig 1) is based on the information provided by five individual RAS projects. National and site-specific results where they can be generated reliably, will be sent to all contributing ringers shortly. Further details will appear on the RAS web pages (www.bto.org/ras) and trends will be updated annually to incorporate new sites and datasets.

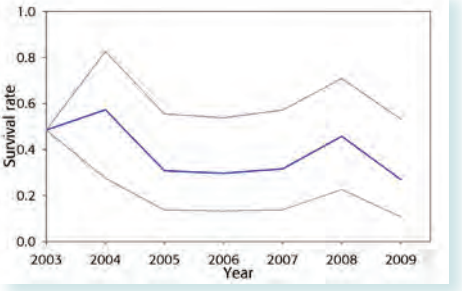



**FIGURE 1.** RAS survival trend for House Sparrow.

## The value of RAS

The CES scheme provides good estimates of adult abundance, survival and breeding success for 24 species, many of which favour woodland and scrub habitats. General ringing provides survival data for common and widespread species in other habitats, but a more targeted approach is necessary for scarce species, those that are found at low densities and those that have a localised distribution.

The key to a good RAS project is selecting a study site with at least 30 breeding pairs of the target species. The area covered will depend on the species, but production of reliable survival trends is dependent on the ability to catch or resight a significant proportion of those adults that do return to breed the following season. For species with large territories, such as owls and waders, it may be necessary to cover a considerable amount of habitat, but checking can be restricted to areas with suitable nesting sites.

## Priority species for new RAS projects

The number and variety of current projects (Table 1, Fig 1) are impressive, especially considering the amount of effort required to catch sufficient numbers of some species. The priority targets for new projects are those species not adequately covered by CES or other intensive monitoring

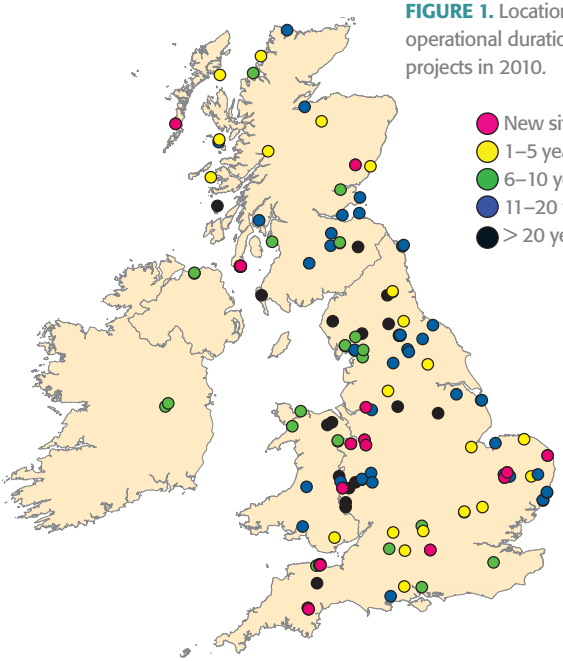



**FIGURE 1.** Location and operational duration of RAS projects in 2010.

**TABLE 1. Summary of RAS projects contributing data 2006–10 and current survival trends. Parentheses indicate new projects in 2010. Birds of Conservation Concern are indicated with the relevant colour.**

| Species | 2006 | 2007 | 2008 | 2009 | 2010 | Survival Trend |
|---|---|---|---|---|---|---|
| Eider | 3 | 2 | 1 | 2 | 3(1) | Unreliable |
| Manx Shearwater | 2 | 1 | 1 | 1 | 2(1) | Moderate |
| Storm Petrel | 3 | 3 | 2 | 2 | 3(1) | Unreliable |
| Shag | 2 | 2 | 2 | 3 | 3 | Unreliable |
| Little Ringed Plover | 1 | 1 | 1 | 1 | 1 | n/a |
| Ringed Plover | 1 | 1 | 1 | 1 | 1 | Good |
| Dunlin | 2 | – | – | – | – | Unreliable |
| Common Sandpiper | 2 | 2 | 2 | 2 | 1 | Good |
| Black-headed Gull | – | – | – | 1 | 2(1) | n/a |
| Kittiwake | 3 | 2 | 1 | 1 | 1 | Moderate |
| Guillemot | 1 | 1 | – | – | 1(1) | Unreliable |
| Razorbill | 1 | 1 | – | – | 1(1) | Unreliable |
| Puffin | – | – | 1 | 1 | 1 | n/a |
| Barn Owl | 1 | 1 | 1 | 1 | 1 | Unreliable |
| Swift | 1 | 1 | 1 | 1 | 1 | Unreliable |
| Sand Martin | 17 | 15 | 15 | 12 | 14(2) | Good |

projects (*eg* colonial seabirds) but all species will still be considered provided adequate numbers (around 30 recaptures or resightings of ringed adults) can be obtained during each breeding season.

We would be very pleased to hear from ringers monitoring species meeting these criteria that are not currently covered by RAS. We would also welcome the registration of more projects on species already included in Table 1, particularly those for which fewer than 10 are currently active.


Twite

## The 2010 season

| Species | 2006 | 2007 | 2008 | 2009 | 2010 | Survival Trend |
|---|---|---|---|---|---|---|
| **Swallow** | 5 | 5 | 4 | 4 | 4 | Good |
| **House Martin** | 3 | 2 | 2 | 2 | 2(1) | Good |
| **Tree Pipit** | 1 | 1 | – | – | – | n/a |
| Dipper | 3 | 3 | 2 | 2 | 2 | Moderate |
| **Dunnock** | 1 | 1 | 1 | 1 | 2(1) | Unreliable |
| Robin | 1 | 1 | 1 | 1 | 2(1) | Unreliable |
| Stonechat | 1 | 1 | 1 | 2 | 3(1) | Good |
| **Wheatear** | 2 | 2 | 1 | 1 | 1 | Good |
| Blackbird | 2 | 1 | 2 | 2 | 3(1) | Moderate |
| **Song Thrush** | 1 | 1 | – | – | – | n/a |
| Sedge Warbler | 3 | 3 | 3 | 3 | 2 | Unreliable |
| Reed Warbler | 5 | 5 | 5 | 5 | 5 | Moderate |
| **Whitethroat** | 2 | 2 | 2 | 1 | 1 | Moderate |
| **Willow Warbler** | 1 | 1 | 1 | 1 | 1(1) | Unreliable |
| **Wood Warbler** | 1 | 1 | 1 | 1 | 1 | Unreliable |
| **Firecrest** | – | – | 1 | 1 | 2(1) | n/a |
| **Pied Flycatcher** | 21 | 19 | 18 | 17 | 22(3) | Good |
| **Bearded Tit** | 1 | 1 | 1 | 2 | 2 | Moderate |
| Blue Tit | 1 | 1 | 1 | 1 | 1 | Unreliable |
| Great Tit | 3 | 3 | 3 | 3 | 4(1) | Moderate |
| Coal Tit | – | – | – | 1 | 1 | n/a |
| **Marsh Tit** | 1 | 1 | 1 | 1 | 2(1) | Unreliable |
| **Willow Tit** | – | – | – | – | 1(1) | n/a |
| **Starling** | 1 | 2 | 3 | 2 | 2 | Unreliable |
| **House Sparrow** | 9 | 9 | 8 | 8 | 8(1) | Good |
| **Tree Sparrow** | – | 1 | 1 | 1 | 1 | n/a |
| Chaffinch | 3 | 4 | 4 | 4 | 6(2) | Moderate |
| Greenfinch | – | – | – | – | 1(1) | Unreliable |
| Siskin | 5 | 4 | 5 | 5 | 7(1) | Unreliable |
| **Twite** | – | – | – | – | 1(1) | n/a |
| **Bullfinch** | – | – | – | – | 1(1) | Unreliable |
| Common Crossbill | 1 | 1 | – | – | – | n/a |
| **Yellowhammer** | – | 1 | 1 | 2 | 2 | n/a |
| **TOTAL** | **118** | **110** | **102** | **103** | **129** | |

Twenty-eight new registrations contributed to a total of 129 active projects in 2010 (Table 1), surpassing the previous highest figure of 121 set in 2005. Of the 50 species for which datasets have been collected, 11 are red-listed and a further 24 are amber-listed, making a significant contribution to the monitoring of many Birds of Conservation Concern. Three new species featured in the 2010 totals: Greenfinch, Twite and Bullfinch.

A good number of applications for new RAS projects, poised to start in 2011, were also received during 2010. The majority of these will provide additional data on species that are currently underrepresented (*ie* Wheatear, Wood Warbler, Bullfinch and House Martin), but a number will cover novel species, including Redstart, Coot, Moorhen, Jackdaw and Tree Pipit. If you might be able to add to this list, or if you are aware of any suitable ongoing projects, please get in touch with us at **ras@bto.org**.

# New in 2010: RAS survival trends

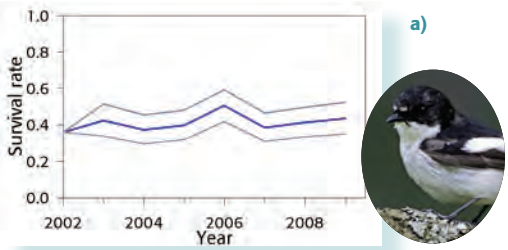
**The RAS team reveal selected highlights from the annual trends, produced for the first time in 2010**

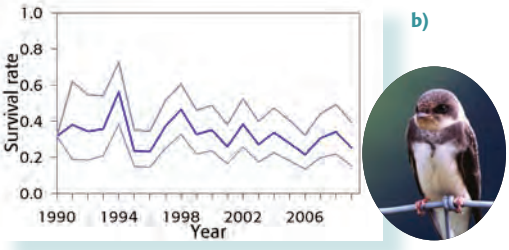
After all the hard work and effort that has been involved in generating the RAS datasets, spanning many years or even decades in some cases, it is great to finally be able to provide some feedback. The results are very encouraging, providing robust survival trends for a number of species while also highlighting those for which a slight increase in the number of studies or in catching/re-trapping/resighting effort could pay the greatest dividends.

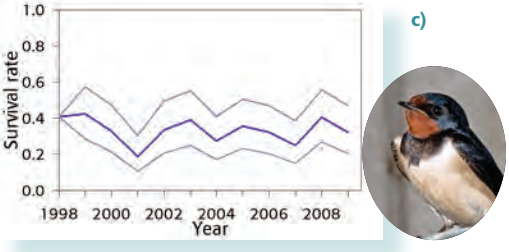
A total of 116 individual projects, each spanning at least five years, were analysed, allowing survival trends to be produced for 39 species. This analysis is the just the first step in evaluating the quality of the trends that can be obtained using the information currently available. The results will help inform us of the minimum requirements (sample size, data sets, recaptures) needed in order produce good survival trends for particular species. This will also assist in targeting aspects of future data collection, such as the number of projects and recaptures required.

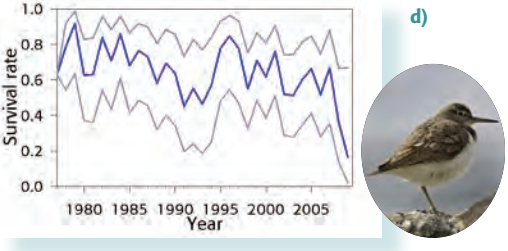
Survival trends considered to provide good or moderate reliability (Table 1, page 2) were produced for 19 species, nine of which are illustrated here. The most accurate estimates (those with the narrowest confidence intervals) were obtained for Pied Flycatcher and Sand Martin (Figs 1a & 1b) thanks to the large number of projects, 12 and 17 respectively, and the high numbers of recaptures.

Trends for Swallow, Common Sandpiper, Wheatear and Ringed Plover (Figs 1c-1f) also have reasonably narrow confidence limits despite the relatively low number of active projects (7, 2, 1 and 1 respectively), but more studies would be welcome to ensure that the results are representative of the wider population.



Four of the eight species for which moderately good survival trends could be obtained (Blackbird, Chaffinch, Great Tit and Whitethroat) are already well covered by CES, at least in woodland and scrub habitats, and new projects focussing on habitat specialists such as Bearded Tit and Dipper (Fig 1g) would be of relatively greater value. Moderately reliable survival trends could only be produced for two seabird species, Manx Shearwater (Fig 1h) and Kittiwake (Fig 1i). It may be that, despite the high levels of recapture/resighting achieved when compared to many passerine projects, the relatively low proportion of the population marked results in a reduced probability of encountering returning individuals in each breeding season.

Survival trends could not be produced for the remaining 20 species (Table 1, page 2), either because there are too few projects currently active (only one in many cases) or because too few individuals are recaptured/resighted.

## Priority species

Immediate priority species are those that are not already well covered by CES (*eg* pipits, buntings, waterfowl, waders, owls, raptors) and those where survival trends are currently classed as moderate or unreliable (Table 1, page 2). All species will be considered for new projects but the target of retrapping around 30 adults a year should be realistic. Please contact Greg Conway at **ras@bto.org** if you have project ideas or any questions about RAS.

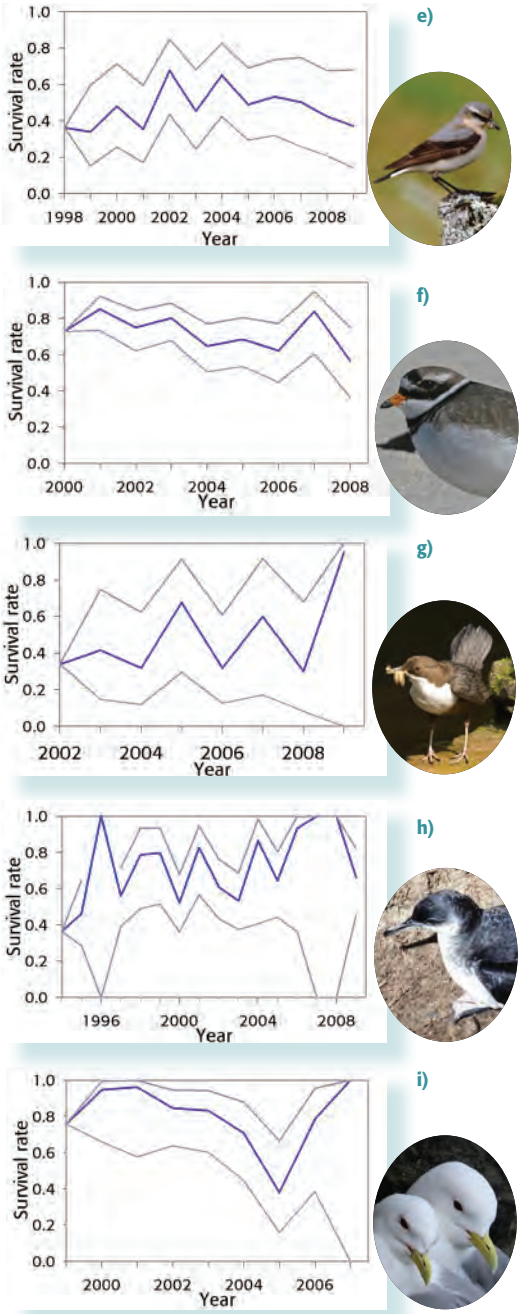



**FIGURE 1.** RAS survival trend (blue line = mean and grey lines = confidence limits): a) Pied Flycatcher (John Harding), b) Sand Martin (Tommy Holden), c) Swallow (John Harding), d) Common Sandpiper (John Harding), e) Wheatear (Derek Belsey), f) Ringed Plover (Ron Marshall), g) Dipper (John Harding), h) Manx Shearwater (John Bowers), i) Kittiwake (Jill Pakenham).

# Adding value to your RAS

**Peter Coffey and Bob Harris explain how RAS can provide more than just survival estimates**

Merseyside Ringing Group has been ringing Pied Flycatchers at numerous sites in North Wales ever since Cedric Lynch put up the first nest boxes in 1968. The two largest sites, at Prion and Glyn Arthur, both in Denbighshire, are 'long-running' to the extent that we have continuous data extending from 1986 and 1987 respectively. The sites and data are a valuable resource (over 600 adults and 3,200 pulli ringed since 2000) and the Group considers itself very much as custodians of these projects. In our changing environment and climate, and in line with the BTO's current Out of Africa project, which seeks to identify reasons for the decline of our African migrants, the least we can do is maintain the supply of our data in order to improve our knowledge of the Pied Flycatcher population, both at home and abroad.

Committing to such long-term projects is easier said than done when you live more than 40 miles from your site, have additional responsibilities and pressures, from both work and home, and need to maintain at least weekly visits to the site over a minimum of 10 weeks - just when the weather is at its best!

PETER COFFEY AND HANNAH ROWLAND

**Female Pied Flycatcher with white patches on forehead, resembling male.**

In earlier years, data were biased; females could be 'lifted' off nests far more easily than males could be trapped (80% of females ringed, compared to 30% of males). Since 2002, with a shifting emphasis and more commitment, time and effort has been devoted to catching males – and the results have been worth it. In one year at Prion, Peter caught every male and female, and consistently catches 100% of females and 80% of males. The bonus for this effort is that we are now finding more cases of polygamous behaviour by the males. Catching the quiet, elusive males involved in late breeding attempts requires patience and persistence, probably because their behaviour changes if they have started moulting.

We are keen not to disturb the breeding adults unnecessarily, but are eager to acquire 'added value' every time a bird is in the hand. With remarkably little extra effort we have been photographing the head, wing and tail of adults captured. Additionally, it is easy to record plumage details that make Pied Flycatchers such a fascinating species to handle. For example, why do some males appear more brown than black? And why do females have white patches on the forehead (see left). Some years ago a study was reported that indicated that the 'blaze' on the head of a male was an indication of its quality as a breeding male. With time we hope to add data to check this finding.

We have been working with Dr Hannah Rowland from the Universities of Liverpool and Glasgow on a project, CCW approved, which involves filming adults bringing food to their chicks (see right). The theory is that, when under stress from more demanding chicks, the parents feed increasingly less palatable foodstuffs to satisfy their young. A pilot study helped to refine our techniques and last year we gathered over

PETER COFFEY AND HANNAH ROWLAND

**Nest camera image with female Pied Flycatcher bringing prey to nestlings.**

1,000 minutes of film, which is currently being analysed. Preliminary analysis has thrown up some interesting surprises about the range of prey items fed to chicks and the relative contributions made by males and females. Next year we hope to extend filming further, increase the number of repeat filmings during brood development and monitor more closely the frequency of individual male and female feeding. We then hope to compare the results between pairs on the same site as well as investigating the feeding strategies at each site (possibly related to habitat data).

We also wish to look at incubation times, as a Spanish study reported that females, which started incubating before clutches were complete had better reproductive rates than those that waited until clutches were finished. Is this the case in Wales? In addition, an American study indicated that offspring 'quality' was related to male rather than female provisioning; is this true of Pied Flycatchers? All of these data are relatively easy to collect and serves to bring greater purpose to continuing our RAS studies.

RAS has been a surprisingly easy way to add considerable value to our existing studies. We both look forward to many more years of traipsing around 'our' sites in North Wales catching and ringing these wonderful little birds.

## RAS in the Czech Republic


Zprávy RAS

Retrapping Adults for Survival

Opakovaný odchyt dospělců pro určení míry přežívání

O projektu RAS

Zdeněk Valeš, the RAS organiser in the Czech Republic, very kindly sent a copy of their RAS newsletter, though unfortunately in Czech! However, it is very encouraging to hear that the RAS concept is being promoted and embraced by ringers in other countries. There has been a very impressive increase from 14 projects contributing data in 2009 to 29 projects in 2010, covering a diverse range of species (see below), some of which would appear to be quite challenging!

The increasing number of RAS schemes in other countries, particularly across Europe, provides the opportunity to compare survival rates for species using different wintering locations. This may provide some useful insights into factors influencing population changes across species' ranges by contrasting survival of individuals using range margins with that of individuals inhabiting core ranges.

| Species | Active Projects |
|---|---|
| Sand Martin | 8 |
| Swallow | 5 |
| Wood Warbler | 3 |
| Wryneck | 2 |
| Kingfisher | 2 |
| Grasshopper Warbler | 2 |
| River Warbler | 1 |
| Whinchat | 1 |
| Collared Flycatcher | 1 |
| House Sparrow | 1 |
| Tree Pipit | 1 |
| Goldcrest | 1 |
| Great Reed Warbler | 1 |

# Nets (and nests) full of Reed Warblers

MALCOLM CALVERT

**Malcolm Calvert explains how ringing Reed Warblers at all ages can help to determine both breeding success and subsequent survival**

It's mid September and I'm reflecting on the fate of the Reed Warbler season. My study area is Rostherne Mere National Nature Reserve, based around Cheshire's largest water body. This was my 38th season of coverage and I remain as keen as ever to record events.

Initially, nest finding in the reed beds was all-important and I was surprised to realise how simple it was to find the nesting baskets and easily win a supply of nestlings for ringing. In more recent years such progress has been hindered as the traditional Starling roost has ballooned from some 3,000 birds to 200,000 or more. Broken canes in trashed reed beds make formidable obstacles for the nest finder so I have to be content with recording fewer nests. The antidote to this is to be more determined in mist-netting, so marking the missed pulli as juveniles.

In the late 1990s, I was delighted when the BTO set up the RAS scheme and I immediately joined to monitor Reed Warblers. By continuing my interest (obsession!) I was contributing to both the Nest Record Scheme and RAS, thereby putting my findings to wider use.

It is very rewarding to approach a net at the start of a season and meet up with a Reed Warbler that I have ringed years before; these birds are very parochial, with several years of captures of an individual in the same net site or usually within 50 metres of its original ringing location.

In 2010, the catch of 124 adult birds exceeded my estimate of 50 pairs on territory, the surplus being accounted for by some birds passing through in May before settling for the season. Seventy-two birds were new to ring – two were from a site 11 km away (ringed by the Merseyside RG at Woolston) and the remaining 50 were returnees to the reserve.

No very old birds were evident in 2010. However, the most senior individual was ringed on the reserve as an adult male in May 2004 and has been caught on 14 subsequent occasions,

MALCOLM CALVERT

**Reed Warbler chicks one day old (above) and eight days old (right)**

embracing each year except 2008. In 2010, I ringed 183 birds of the year (44 pullus, 139 juveniles), which should mean that only a small percentage of young have escaped the ringing pliers. It has been a positive breeding season.

I am always amazed at the fast transformation of a Reed Warbler, from egg to nest-leaving young. These tiny chicks (above, left) are no more than one day-old and totally dependent on the parents to prevent chilling and to provide food. At eight days (above, right) they are already well feathered and clearly resemble Reed Warblers. In three days they will climb out on to the reeds; within a further five days their rounded wings will have developed sufficiently for the fledglings to achieve first short flights within the reed swamp. By 30 days they will be independent and venture further away from the nest. Their fresh rufous plumage (see main picture) contrasts with that of an adult, which sports feathers of a faded, greyer hue.

When checking reed stands to confirm fledging, it is worth glancing at nests from earlier in the season, which are presumed obsolete. Occasionally, you may find a new clutch of eggs evidencing nest re-use. An example occurred in 2009 when a nest, found with four eggs on 23 June, held two ringable young on 12 July but on 20 July it had been relined with grass. The nest progressed to three eggs on 25 July and it contained a single chick (six days old) on 13 August. Both breeding attempts were successful, with respective juveniles netted on 8 August and 24 September.

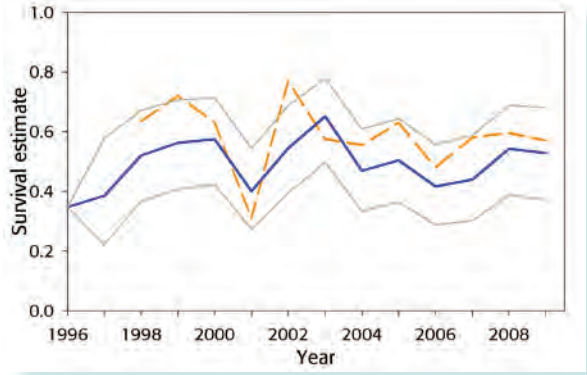



**FIGURE 1.** Overall Reed Warbler RAS survival trend (blue line and grey lines) and survival trend for Rostherne Mere NNR (orange dashed line).

# Ringing four RAS

**John Wilson reports on the diverse range of RAS projects run by North Lancs Ringing Group.**

JILL PAKENHAM

The North Lancs Ringing Group is currently involved in four RAS studies and much of our spring and summer ringing is centred on these projects with one – the Bearded Tit study – extending into the autumn.

## Sand Martin

Our Sand Martin RAS covers two large colonies situated in the banks of the River Lune. Besides the usual hazards of mist-netting, such as wind and rain, we also have to watch the state of the river, which can rise two to three metres after heavy precipitation, at times flooding out the colonies. Our study fits in well with the Waterways BBS, for all the Lune colonies are censused each year. We attempt to undertake three to four visits to the colony during a season, starting when the first brood is on the wing.

Last year was exceptional, with all the Lune colonies reporting a marked increase, our two colonies increasing from 270 occupied holes in 2009 to 540. In previous years, the between season retrap rate has been quite low but it was higher in 2010, suggesting the main reason for the upsurge in the breeding population was increased survival on their African wintering areas.

## Pied Flycatcher

The oak woods of the Lune valley are the focus of our Pied Flycatcher RAS. Here, in 10 'mainly small' woodlands, we have almost 500 nest boxes. We are justifiably proud of our efforts here, for prior to our starting the nest box schemes there had been only one record of Pied Flycatchers nesting in the Lune valley – in 1895! This year we had 63 occupied boxes. There have been reports of Pied Flycatcher populations declining elsewhere but our population has remained stable and survival is high. We attempt to catch all of the females on the nest late in the incubation period, or when they have small young, and as many males as possible using nest box traps. An analysis of birds returning reveals that, as might be expected, only 17% of adults changed woods within the Lune Valley in successive years but 73% of nestlings that returned nested in a different wood than the one in which they were hatched. A small number of ringed nestlings move elsewhere to breed, mainly in northern England, but one enterprising youngster decided on a complete change and was found breeding in Denmark!

## Bearded Tit

Leighton Moss RSPB Reserve is the site of two of our other RAS studies. I have been studying the Bearded Tit population there since its colonisation in 1973 and have published my results in two papers. We only recently decided to register the study as a RAS and I am in the process of converting my results for past years to RAS format. Our ringing provides the reserve staff with a good estimate of the breeding population and productivity for this hard to census species. The population has varied in recent years between seven and 76 pairs, the decline occurring after a prolonged period of extremely high water levels. We ring at five sites in rotation spread throughout the reedbed,

usually commencing in early June when the first broods have started to flock. We have been so successful in catching the young birds that we average only one un-ringed adult each year!

For the past seven years the birds have been individually colour-ringed as part of a DNA study with Ian Hartley, which has greatly increased the effectiveness of the projects. We identify some birds during the breeding season but the main focus of sightings is on the specially provided grit trays (right) from mid-September to mid-December, where we usually get at least 300 sightings. Interestingly, the adult birds mainly take grit early in the period and the young birds later.

We usually catch more adult males than females; in only two of the last 15 years have females exceeded males and, interestingly, in two successive years. However, in 2010 we again had a surplus, with 49 males but only 28 females identified. There definitely appeared to be an excess of males, as 10 of the males had not developed brood patches, suggesting they were not mated. The males possibly survived the rather harsh 2009/10 winter better than the smaller females.

## Reed Warbler

Our Reed Warbler RAS is really a spin off from the Bearded Tit study, for we can't help catching large numbers of the species. Again, the results are useful to the reserve staff in providing monitoring data. Numbers of adults caught have varied between 153 and 248, with retraps from previous years averaging around 50%. Two things amaze me about Reed Warblers. The first is their well known longevity – our record is just short of 10 years - and the second is the number of adults that turn up after being missing for several years. This was the case in 2010 in particular, with one individual retrapped for the first time seven years after ringing. The reed bed was thoroughly trashed last winter by roosting Starlings making large areas unsuitable for nesting, at least early in the season, which may have caused a re-distribution of breeding birds.

JOHN WILSON

## Conclusion

To undertake a successful RAS you need commitment and determination, but the satisfaction of undertaking meaningful ringing increases as the years go by and the results accumulate. Other than the usual entering of data onto IPMR, the only other recording is the number of visits and hours spent and any details about the size of the population studied, such as the numbers of occupied holes in the case of Sand Martins or occupied nest boxes with Pied Flycatcher. After that it is just the click of a mouse and IPMR does the rest.

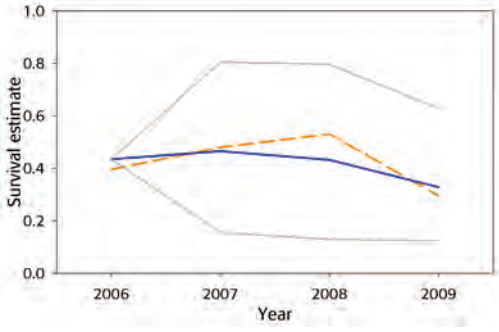
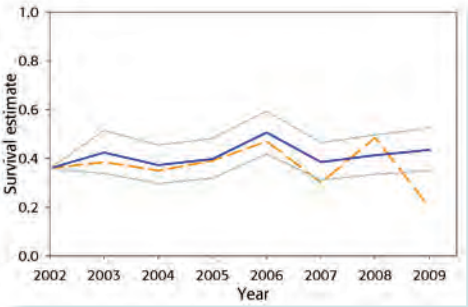



**FIGURE 1.** Bearded Tit RAS survival trend (blue line and grey lines) and trend for Leighton Moss Reserve (orange dashed line).

# A PIEFL RAS in a novel habitat

**Chris Whittles documents the changes in an alder woodland Pied Flycatcher population**




Most Pied Flycatcher nest box schemes are situated in hanging oak woodland, mainly in the southwest of Britain, where there was a rapidly expanding population in the 1970s and 1980s. The northern English and Scottish populations were regarded as stable and distinct from the southwest English and Welsh populations.

In 1986, I started my scheme at Clun Valley, in a somewhat atypical habitat; livestock grazed streamside alder woodland, in Shropshire. The trees had not been managed since the war and, because of their slow growing nature, had few natural holes but presented an ideal breeding habitat for cavity nesting species if nest boxes were installed. The scheme was completed in 1990, with about 1,000 boxes installed, all at about 1.5 m from the ground so that you did not need ladders to inspect them; this way you can cover about 500 boxes per day. The only difference in the habitat is altitude; at the lower end of the scheme the height is about 180 m and at the highest points is reaches 300 m. The length of the scheme by road is about 15 km but on foot it is nearer 30 km.

GEORGE H HIGGINBOTTOM

The best occupancy that has been achieved was in 1990 with 480 boxes occupied; 316 of these nests were Pied Flycatchers and in that year I ringed 2,645 pulli. An unusual feature of the scheme was the very low number of retraps, with a very high proportion of unringed and control birds when compared to the oak woodlands. Our ringed birds do not start breeding until they were full adult (6), which again is unusual.

In the late 1990s, it was suggested that organo-phosphorus sheep dips contributed to the death of shepherds, so the farmers started to change to pyrethrum sheep dips. While these are safe for humans to handle, they are lethal to riparian insect life. This started a major reduction in the insect populations along the stream at my site and a consequent reduction in breeding Pied Flycatchers. I had not realized how bad it had become until a dip tank burst and polluted the river, resulting in the death of all of the chicks in the boxes downstream.

In the early years, the most productive areas were the lower reaches of the stream where the habitat was better. After the change to pyrethrum dips, the failure rate increased dramatically the further you went downstream and the upper reaches became the best areas.

Over the years there have been various schemes to help manage the habitat and encourage regeneration. The first was a charcoal scheme and the second was a logging scheme,

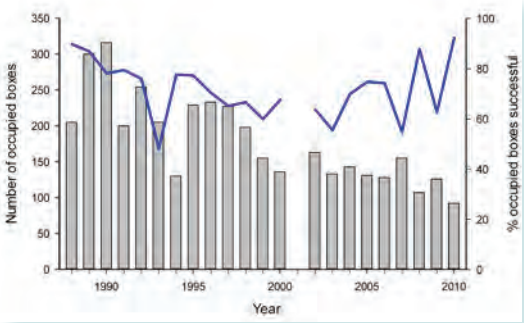



**FIGURE 1.** (Far left) Overall Pied Flycatcher RAS survival trend (blue line and grey lines) and trend at Clun Valley (orange dashed line).

**FIGURE 2.** (Left) Number of occupied nest boxes (grey bars) and percentage of the occupied boxes which were successful (blue line) at Clun Valley.

the combined effect of which was to reduce the numbers of trees and nest boxes. This has had a major effect on the habitat, but because the trees are so slow growing it will take time to reap the benefits.

The last change is an agri-environment scheme whereby the stream is fenced off, the standing trees radically thinned and more trees planted. I suspect that this will cost me a lot of boxes while the chainsaw gang is rampant, but hopefully it will improve things in the future!

JOHN HARDING

Pyrethrum sheep dips have now been banned for four years and it is becoming noticeable that insect numbers are improving and that there are more and bigger trout coming back in the river. In fact, 2008 was the most productive year since 1991.

There were indications that the Pied Flycatcher numbers were starting to recover in 2009, but for some reason spring did not happen in that year and very large numbers of chicks died in the boxes, giving the worst ever productivity across all species.

2010 turned out to be an early season with the best productivity ever recorded (1.07 eggs per chick ringed, compared with 2.21 in 2007, the worst year), albeit over a lower number of boxes, with the very early broods of tits being missed. If the whole scheme had been covered one wonders how many more birds could have been ringed?

I suspect that the 2010 season could have been a turning point in the fortunes of the Newcastle Pied Flycatchers, going from the devastation and poor post fledging survival of 2009 to the superb productivity and excellent post fledging survival of 2010. From a peak of 316 Pied Flycatchers in 1990 to a low of probably 100 pairs in 2010, I can only hope that that the recovery is at long last starting.

I'm looking forward to ever improving results over the next 25 years!

# Starlings in Essex - easier than you think

**Robyn Vallance provides an update on the first few years of a new Starling RAS**

JOHN HARDING

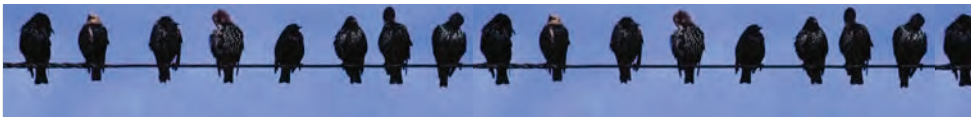
We live in a small rural village in northwest Essex, with gardens backing on to arable farmland, surrounded by common land that is heavily used by Starlings to find cranefly larvae to feed their nestlings. The local population is quite extensive but we are able to monitor it quite closely.

Prompted by the ease with which Starlings were caught in Potter traps in 2007 (79 adult and 313 juveniles), mostly between mid-May and mid-July, my trainer, Ted Ponting, and I decided that a RAS study would be viable and would provide an interesting addition to our usual mist-netting activities.

In 2008, we started colour-ringing Starlings in our gardens but we were initially advised only to colour-ring adults because of the expense and the potentially high mortality and dispersal rates of first-year birds. We assumed it would be easy to add colour rings to any retraps the following year but this proved to be a mistake! Starlings will happily walk into a Potter trap once, but they are unlikely to do it again as they are extremely 'trap shy'. We were therefore unable to individually identify the vast majority of the 489 juveniles ringed that year but we did still manage to colour ring 120 adults. During the following two years, the population declined considerably, and so in 2009 we decided to colour ring all 115 juveniles (presuming that the earliest arrivals at the fat feeding stations would almost certainly be local birds), plus 73 adults. During 2010 we colour-ringed all 176 juveniles, probably about 80% of the population, and 46 adults. We will continue to do this in future.

Each spring and summer we observe and identify the returning colour-ringed individuals whilst they feed on hanging fat bars, which they consume with relish, often at a rate of two per day. A tentative estimate is that about 25% of marked birds return the following spring, joined by an influx of outsiders. After mid-July, the local Starlings disperse, which has resulted in sightings throughout Essex, east Hertfordshire and south Cambridgeshire

We view our study as being long-term and are therefore disinclined to draw any firm conclusions as yet. The severe dip in numbers could be due to two successive years of early summer drought, during which young and adults were struggling to find enough insects in the hard ground. We are gradually building up a substantial dataset and are now looking forward to watching the colour-ringed birds returning in many future seasons.



EDMUND FELLOWES

# The Swallow season in Worcestershire

**Garth Lowe looks back on a successful season**

In 2010, 18 of the 43 adult Swallows caught in 2009 returned to our parishes, a slightly higher proportion than in the previous year (38%). This is a rough percentage as some of the nesting birds are impossible to catch, either because they are in difficult sites or because they are just that bit cleverer than me!

The weather during the summer of 2010 was a vast improvement on the previous year, but the number of young ringed was very similar at 233 (compared to 248). A total of 55 broods were ringed from 39 pairs, which gave 4.2 nestlings per attempt; this compares with 4.1 in 2009 and 4.4 in 2008.

As usual there were some failures, mainly due to a few hot days at the wrong time when young died in nests under roofs, but this only accounted for 7% of the overall total. One sad failure occurred when a skillful cat managed to get to one nest with four young under a ceiling and pull it down for a tasty meal. The owners were not at all happy! There were also a few clutches laid without being incubated subsequently. The last clutch of three eggs laid in early August was probably abandoned when the bird's genetic chip woke up to tell it the season was far too advanced to complete the cycle.

Yet again, former sites failed to attract a pair to nest, which is sad for the owners who enjoy having them nesting. Oddly, most of these were in Lulsley, but it has to be remembered that a lot of adults do not make it back and the site may not be discovered by another pair.

The hay-making season came at the right time for two pairs who nested in nearby stables. On visiting to check progress, I found both stables had been used to store bales of hay, with just enough room left for the birds to fly in over them. Fortunately, it looked as if the young had just flown as they would have been easy prey for a cat. Both pairs then moved to nearby empty stables and had a second brood.

At another site, I was unable to locate the second attempt in a small barn for one of the pairs, only to discover that they had moved out into a large modern woodshed nearby. This is the first time any individuals had nested there and their presence only became apparent when a bird flew off the nest as I walked by. Sometimes the pair builds an entirely new nest for the second clutch, as the first may contain too many parasites. This may also explain why some sites have numerous swallows' nests in them, even though only one pair may have been present each year.

To end on a related story, at the start of September we were on holiday in Yorkshire and visited Bolton Castle where, to our surprise, we found a swallow nest in a niche at the top of a spiral staircase used by lots of visitors. There were still very large young present and I am puzzled why the female wasn't disturbed while incubating for over two weeks. I can only assume she sat quietly watching everyone go by!

## RAS submission deadlines

We would strongly encourage everyone to submit their RAS data as soon as possible after the end of the breeding season, ideally before **31 October**. Early submission means that we have more time to check and analyse the data and can provide a more rapid turn-around of results.

Remember, to qualify for your 2011 RAS refund, all RAS submission files must be received by the RAS organiser by **28 February, 2012**.

Data submissions should be sent to: **ras@bto.org**

## Do you need extra help with your RAS project?

If your RAS project could do with some additional help from other ringers, please post a request on the BTO Ringers' Forum (see below), or contact the RAS Organiser **(ras@bto.org)**, who would be pleased to request help from ringers in your area.

## BTO Ringers forum

If you have not already done so, please do join the BTO Ringers' Forum. This is a great way to obtain help and advice, and share experiences, on all manner of ringing and catching issues. To join, please send an email (including you name and permit number) to: **btoringers-subscribe@yahoogroups.com**

**RAS News**
Number 12, April 2011

RAS

The newsletter for the British Trust for Ornithology's Retrapping Adults for Survival Scheme

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