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PUTTING THE PIED FLYCATCHER INTO THE EQUATION

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Much has been written about the BTO's drive to recruit more nest recorders, but we're also working hard to develop the methods that we use to analyse the data and present the results. The latest trends in breeding success are therefore easier to interpret than ever before, as *Dave Leech* and *Carl Barimore* explain.

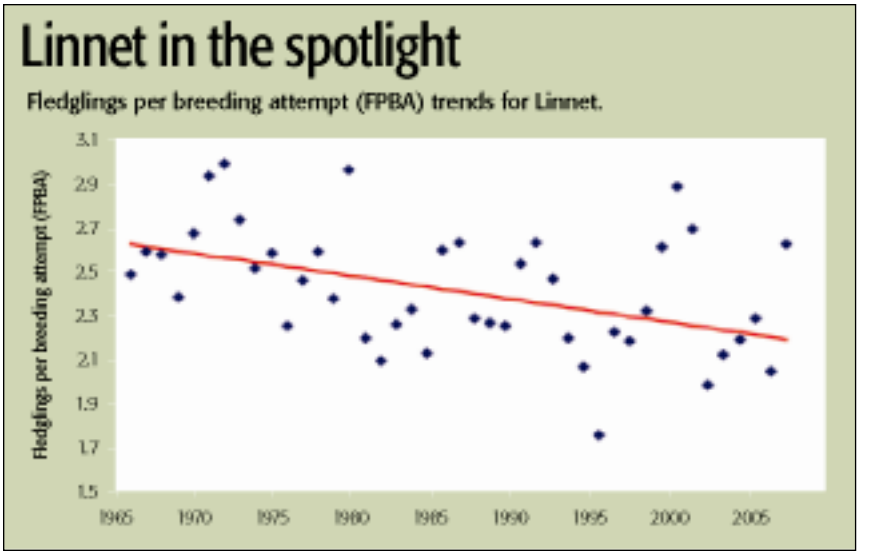
METIENDO AL PAPAMOSCAS CERROJILLO EN LA ECUACION
Mucho se ha escrito sobre la campaña del BTO de reclutamiento de más buscadores de nidos, pero también estamos trabajando duro para desarrollar métodos de análisis datos y presentación de resultados. Las últimas tendencias en éxito reproductivo son por tanto más fáciles de interpretar que nunca, como explican *Dave Leech* y *Carl Barimore*.

MAKING RECORDING SIMPLER

For the Nest Record Scheme (NRS), 2009 has been all about development. Much of the work that we've undertaken since January has focused on making things easier for those of you reading this article who have yet to submit your first nest record. An illustrated Quickstart Guide leads newcomers through the nest recording process, outlining what information to collect and how to record it for us, while our programme of training courses teaches new recorders to locate nests of the trickier species. We have also been working on novel ways to present the results of our annual analyses. Falling numbers of Afro-Palearctic migrants, such as Whinchat, Spotted Flycatcher and Wood Warbler, are a cause for increasing concern. In order to conserve these species effectively, we need to determine whether declines in the number of offspring being produced are responsible and each year NRS data are used to produce trends in clutch size, brood size and nest failure rates. The combined effect of these parameters on a species' annual productivity, however, can be difficult to interpret, so this year, for the first time, we have used these data to produce an overall estimate of the average number of chicks fledging from each nest.

PRODUCTIVITY DECLINES IN LONG-DISTANCE MIGRANTS

Trends in the number of fledglings produced per breeding attempt (FPBA) from 1966 to the present day are published for over 80 species in the latest Wider Countryside Report and those showing significant declines are listed in the Table. Of these 11 species, nine are Red- or Amber-listed Birds of Conservation Concern due to falling population sizes and/or range contractions, including three long-distance migrants: Nightjar, Tree Pipit and Spotted



Flycatcher. Smaller brood sizes and increasing failure rates at the egg and chick stages have meant that both Nightjar and Spotted Flycatcher are producing fewer fledglings, while Tree Pipit breeding success has suffered due to an increase in nestling mortality. While falling productivity may be due to factors such as habitat destruction, disturbance and predation on the breeding grounds, work on North American migrant passerines has shown that conditions experienced on the wintering grounds can also influence breeding success during the following season.

FOCUSING ON THE PIED FLYCATCHER

One migrant receiving a lot more attention from the NRS in 2009 is the Pied Flycatcher. Thanks to the efforts of volunteer data-inputters Michael Palles-Clark and Mike Reed, who have been working their way through our historic data sets, we have been able to include productivity trends for this species in the Wider Countryside Report for the first time. This is a significant advance, as Pied Flycatcher is the model species for much of the cutting-edge climate change research across Europe, to which we are now in an even better position to contribute. Several BTO research projects using these data are already under way, focusing on relationships between breeding success and climatic conditions on both the breeding and wintering grounds, so look out for the results in future editions of BTO News. Larger data sets permit much more powerful analyses so, if you're currently monitoring Pied Flycatchers or have historic data sets that have not yet been submitted to the NRS, please get in touch with us.

FARMLAND BIRDS STILL LISTED

Previous analyses of the NRS data set for Linnet have implicated increasing egg-stage failure rates in the species' decline, while falling productivity is thought to be preventing recovery of the Reed Bunting population, and both species show long-term declines in FPBA. More recent reductions in FPBA have been identified for Yellowhammer, a species producing progressively smaller clutches and broods while experiencing higher failure rates at both the egg and nestling stages, and Bullfinch, which now has smaller brood sizes and increasing failure rates at both the egg and nestling stage. Changing agricultural practices may have influenced breeding success directly, by reducing food availability during the spring and summer, but resources available to adults in winter may also impact on their condition and therefore the effort that they are able to invest in their brood during the following season.

Nests in trouble

Species demonstrating significant negative trends in the number of fledglings produced per breeding attempt (FPBA).

SPECIES	FPBA DECLINE		DECLINING BREEDING PARAMETERS
	Duration (years)	Magnitude	
Nightjar* (R)	43	56%	Clutch size, Brood size, Nest survival (E & C)
Tree Pipit* (R)	20	47%	Nest survival (C)
Dunnock (A)	20	14%	Nest survival (E & C)
Spotted Flycatcher (R)	24	15%	Brood size, Nest survival (E & C)
Treecreeper*	19	21%	Brood size
House Sparrow (R)	15	7%	Brood size
Chaffinch	23	20%	Brood size, Nest survival (E)
Linnet (R)	43	18%	Clutch size, Brood size, Nest survival (E & C)
Bullfinch* (A)	22	54%	Brood size, Nest survival (E & C)
Yellowhammer (R)	18	34%	Clutch size, Brood size, Nest survival (E & C)
Reed Bunting (A)	43	24%	Nest survival (E)

E indicates nest survival at the egg stage. **C** indicates nest survival at the chick stage.
* indicates that the average annual sample size is small (< 25 records per year).
Breeding population trends are taken from **www.bto.org/birdtrends**.
The inclusion of each species on the Red and Amber Lists of Conservation Concern is indicated by **R** or **A**, respectively, see **www.bto.org/psob.**

FIND OUT MORE AND GET INVOLVED

The new initiatives mentioned at the start of this article have encouraged many more people to join the scheme and, with our new materials, it's never been easier. Records of all species in all habitats are essential if we're going to continue to produce the information contained in this article in years to come. Please contact us at nrs@bto.org if you'd like to help. The Quickstart Guide is available to download from www.bto.org/nrs and the Wider Countryside Report from www.bto.org/birdtrends .

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