Wales Chat Survey

Title
Wales Chat Survey

Description and Summary of Results
Commonly referred to as chats, Stonechat, Whinchat and Wheatear are small, predominately ground-nesting members of the thrush family typically found in undisturbed open habitats such as uplands and heaths. Together with Scotland and northern England, Wales is a stronghold of the UK populations of Whinchat and Wheatear, and also holds a significant proportion of our Stonechats. Populations of all three species have shown marked changes over the last century.

For Wales, a special targeted survey was needed to obtain more detailed information on scarcer species such as the chats and to identify the habitat features most important to them. In 2012 and 2013 a survey of Stonechat, Whinchat and Wheatear was conducted across Wales with representative sampling stratified according to six broad land-class categories. Based on two site visits to allocated 1-km squares, bird registrations and habitat were recorded at two spatial scales a) 1-km and b) within 25m of a bird registration. The standardised and defined survey procedure allowed objective habitat associations to be analysed and population estimates to be calculated, the latter albeit with broad error margins. In total, nearly 300 squares were surveyed by volunteers.

In this survey, we generated some basic associations between species and habitats or landscape characteristics. Relationships for Wales are consistent with our general knowledge of the species' natural history, but components underpin the growing consensus that land management has contributed to a squeeze on niche availability for Whinchat in particular (Calladine and Bray 2014). Conservation wise, Whinchat deserves the most urgent attention due to a rapid population decline, even in this apparent stronghold in Wales. Key characteristics of breeding habitat were consistent with the grassland and vegetation structural variation found elsewhere.

Stonechats by comparison, are short distance migrants that in Europe can thrive in drier breeding conditions than Whinchats. This has undoubtedly contributed to range expansion in Wales and the UK generally. Whinchats, by comparison, with a relatively short breeding window, rely on predictable, high-season prey abundance. As long distance migrants, they are more susceptible than Stonechats to a disruption in the timing of peak prey availability (Visser et al. 2015).

The survey also allowed population estimates to be formally estimated for Wales for the first time, and in spite of wide margins of error, population estimates are calculated using a standardised survey protocol that is defined and repeatable. Earlier estimates appear to be

based on densities or occupancy rates calculated at varying scales, so the decisions used for extrapolation are unclear, but probably involve expert judgement. This means current and past estimates are difficult to compare.

Key points from the survey:

- Final coverage was just short of 300 different 1-km squares with chats recorded in 63.4% of visited squares.
- All species were associated with extensively managed, non-intensive, unimproved, habitats, and none with linear features such as hedges.
- Both Stonechats and Whinchats forage from prominent features and were associated with scrub or bracken but Stonechats were also associated with coarser herbaceous cover and Whinchats with semi-natural grassland and damp areas.
- In many places, semi-natural grassland may only be available in areas protected from heavy grazing, such as fenced young tree plantations or boulder strewn steep slopes where rank herbaceous cover is also less likely to dominate.
- Due to land management and grazing, the natural grassland components of the habitat favoured by Whinchats especially will continue to become increasingly dispersed if protected only by topography (inaccessibility) or incidental exclusion (fenced plantations).

Methods of Data Capture
Sampling was stratified according to six broad land-class categories. Two site visits were made to allocated 1-km squares, during which bird registrations and habitat were recorded at two spatial scales a) 1-km and b) within 25m of a bird registration.

Purpose of Data Capture
The standardised and defined survey procedure allowed objective habitat associations to be analysed and population estimates to be calculated, the latter albeit with broad error margins.

Geographic Coverage
Wales only.

Temporal Coverage
The 2012 and 2013 breeding seasons.

Other Interested parties
None.

Organiser(s)
Ian Henderson

Current Staff Contact
archives@bto.org

Publications
The full paper is published in Henderson *et al*., 2017. Population estimates and habitat associations for Stonechat (*Saxicola rubicola*), Whinchat (*Saxicola rubetra*) and Wheatear (*Oenanthe oenanthe*) in Wales, 2012 and 2013. Birds in Wales.

Available from NBN?
No.

Computer data -- location
Data are currently stored in the project folder on the BTO shared drives.

Computer data -- outline contents

Computer data -- description of contents

Information held in BTO Archives
None.

Notes on Access and Use
Data may be available on request (https://www.bto.org/our-science/data/data-request-system).

Other information needed

Notes on Survey Design

Specific Issues for Analysis