



An Chomhairle Oidhreachta
The Heritage Council



Swift Conservation Project 2014

*Final Report to
The Heritage Council*



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Table of Contents

- Introduction.....2
- Objectives.....3
- Methods.....4
 - Survey Design & Data Capture.....4
 - Survey Questions:4
 - Additional Data Sources:5
 - GIS analyses.....5
 - Training.....5
 - Swift Training Workshops.....5
- Publicity & Promotion.....7
 - BirdWatch Ireland electronic newsletter - *E-Wings*7
 - BirdWatch Ireland’s membership magazine - *Wings*.....7
 - Radio7
 - Papers.....7
 - Websites & Social Media.....7
- Results.....8
 - Coverage.....8
 - Distribution& abundance8
 - Low-flying birds.....9
 - High-flying birds.....100
 - Nests.....100
- Discussion.....122
- Acknowledgements133
- References.....133
- Appendices.....14
 - Appendix 1: BirdWatch Ireland Swift Webpages.....144
 - Appendix 2: National Swift Survey Form.....15

Introduction

Perhaps the most iconic and intriguing of our urban bird species, the Common Swift *Apus apus*, is a summer migrant that breeds throughout Europe and much of Asia and winters in southern Africa. However, in recent decades there has been much concern for Swifts as their numbers have been in decline throughout many parts of their range. In Ireland the recent Bird Atlas 2007-11 shows there has been a 26% loss in range in Ireland since 1970 and a severe decline in abundance since 1990 (Balmer *et al.* 2013), while the latest Countryside Bird Survey data show an alarming 39% decline between 2008 and 2013 (Crowe *et al.* 2014). As a result of these population declines, Swift is now of conservation concern in Ireland, and is Amber-listed (Colhoun *et al.* 2013).

The Swift naturally breeds in holes in caves and hollows in trees, however nowadays, throughout most of its breeding range, it nests in cavities in walls or under eaves of houses and old buildings, so they are commonly known around urban centres, particularly cities and large towns (Fig. 1). Reasons for the decline in Swift are not fully understood, but it is thought the loss of available nest sites due to renovations of old buildings and modern building techniques restricting the availability of nesting cavities in new buildings is a significant factor (Concern for Swifts 2013)

It has been shown that Swifts will nest in artificial nest boxes, so home owners and building developers can facilitate the maintenance of urban Swift populations. Swifts are long-lived and faithful to their nest sites from year to year, and it is known that individual pairs will not readily move from a former site to a newly provided nest site. Rather, newly available sites are more likely to be occupied by new pairs if they are attracted to the area by other birds. Therefore, it is essential that any provision and placement of alternative nest sites must be guided by information on where Swifts are currently nesting.

Latest research findings and surveys are indicating that climate change may well be another factor impacting on Swift populations. Recent reports such as (Huntley *et al.* 2007), have predicted largely northward shifts in the distribution of many species of birds, especially breeding migrants. Such distributional changes have now started to become apparent, indeed the latest Bird Atlas 2007-11 provides strong evidence of this predicted northwest shift in long distance migrants breeding in Ireland, including Swift. Other studies have shown that breeding success of Swifts may be related to summer weather (Thomson *et al.* 1996; Rajchard *et al.* 2006) and as long distance migrants wintering south of the equator, Swifts are susceptible to changes they encounter in conditions on migration and in their wintering areas.

The Swift Conservation Project engaged and trained volunteers and local communities in the conservation of this iconic urban species. The data collected through the National Swift Survey 2014 is on the back of initial Swift survey work that took place in Dublin during 2013 in partnership with Dublin City Council. The national survey data collected and the management advice and conservation guidelines compiled, will allow relevant authorities and decision makers to make more informed decisions on planning and construction matters and implement tried and tested management practices for the species. This project data will also compliment ongoing Swift Survey work taking place in Dublin City.

The main aims of the project are to carry out a volunteer led survey of breeding Swifts to locate and record buildings and structures containing Swift colonies in villages, towns and cities across Ireland. The project will also disseminate management advice and conservation guidelines for the future protection of the species.



Photo: R. Coombes

Figure 1: Party of screaming Swifts at a large breeding colony in Belfast.

Objectives

- Launch a citizen science led National Swift Survey in 2014 to collect Swift sightings and nesting locations.
- Deliver a series of training workshops across Ireland to recruit volunteers, provide training in survey techniques and provide management and conservation advice.
- Provide specific information and advice on management and conservation, particularly in relation to next box provision.
- Compile, analyse and disseminate survey data to relevant authorities and decision makers to allow for more informed decisions on planning and construction matters and implement management for the species.

Methods

Survey Design & Data Capture

An online survey was designed to capture records from the general public of Swift sightings and Swift nest site locations across Ireland. Titled the 'National Swift Survey 2014'

(<https://www.surveymonkey.com/r/?sm=RctASzexvqpZ1%2f7MQfeh6P9mMGVy04ISjxRzKD19fQw%3d>), the survey was designed using the online survey development cloud based system, Survey Monkey. Also see Appendix 2. The survey was accessed through the Swift Conservation webpage on the BirdWatch Ireland website

<http://www.birdwatchireland.ie/OurWork/ResearchSurveys/SwiftConservationProject/tabid/1389/Default.aspx> . Also see Appendix 1

Survey Questions:

- 1) **Name & e-mail address:** This information was important so that participants could be contacted regarding validation queries on their sightings.
- 2) **Report a Swift sighting or absence:** Participants were given the option to submit a sighting/nest location of a Swift or alternatively record and absence of swifts from an area.
- 3) **Sighting date**
- 4) **Location of sighting**
 - County
 - Locality (City/Town/Village/Townland)
 - Precise Location (e.g. going into roof of Tourist Office, Main St. Banagher)
 - Grid Reference (e.g. N00792 15595): A link was provided to <http://www.gridreference.ie/> which assists in providing a grid reference.
- 5) **Number of Swifts seen:** approximate number was required.
- 6) **Were they flying at roof height:** Low-flying swifts can be an indicator of birds breeding in the area. Survey participants were asked to if birds seen were flying at roof height to separate 'low-flying Swifts' (indicating breeding birds nearby) from 'high-flying Swifts' (most likely Swifts feeding or migrating, so not providing any indication of breeding birds nearby)
- 7) **Did you hear them:** 'Screaming Swifts' (or 'screamers') often indicate that birds are breeding in the area. A link was provided to the following website for participants to listen to the call of Swifts - <http://www.xeno-canto.org/27236> (Patrik Åberg, XC27236).
- 8) **Did you see any Swifts disappear into a nesting hole:** Responses to this question will help ascertain the locations of breeding colonies.
- 9) **If you answered 'Yes' to Q 8, approximately how many nest sites are present:**
- 10) **Does it appear that purpose-built nest boxes have been provided for swifts at this location:** Important information to establish the number of successful nest box schemes across Ireland.

Additional Data Sources:

In addition to the Swift data collected through the National Swift Survey 2014, data for this project was also extracted from the following sources:

- **BirdTrack** www.birdtrack.net : Records were extracted BirdTrack; an online bird recording facility that aims to compile migration movements and distributions of birds throughout Britain and Ireland. Swift records for 2014 in Ireland was extracted for analysis.
- **Dublin City Swift Survey 2014:** As part of the Dublin City Urban Birds Project 2014, a joint project by Dublin City Council Parks Services and BirdWatch Ireland, a survey of breeding Swifts was undertaken in the city. Volunteers were recruited to report sightings of breeding Swifts in Dublin city, with particular emphasis on locating and recording nest sites.

GIS analyses

These bird data were integrated into a Geographical Information System (ArcGIS Desktop 10.1) and for each Swift sighting and nest location dataset available, the records were selected out and new excel spreadsheets created. These datasets were then imported into ArcMap and converted into shapefiles to allow the data to be analysed spatially.

Training

Swift Training Workshops

Swift workshops were organised and delivered for Mayo, Cork and Kildare (Figure 2 & 3). A talk was also given to the Laois Branch of BirdWatch Ireland. A copy of the presentation delivered is available on the Swift webpages on the BirdWatch Ireland website.

<http://www.birdwatchireland.ie/OurWork/ResearchSurveys/SwiftConservationProject/tabid/1389/Default.aspx>

The workshops comprised of a one hour talk, followed by a walk to provide in the field tips on Swift identification and guidance on survey techniques. Attendance figures were as follows: Mayo 12; Kildare 23; Cork 25; Laois 19.



Figure 2: Swift Workshop – Castlebar, Co. Mayo 11th June 2014



Photo: R. Coombes

Figure 3: Swift volunteers participating in the workshop in Celbridge, Co. Kildare 19th June

Publicity & Promotion

Publicity and promotion work undertaken to recruit volunteers and promote the project:

BirdWatch Ireland electronic newsletter - *E-Wings*

- May: <http://www.birdwatchireland.ie/Publications/eWings/eWingsIssue56May2014/tabid/1394/Default.aspx>
- June: <http://www.birdwatchireland.ie/Publications/eWings/eWingsIssue57June2014/tabid/1398/Default.aspx>

BirdWatch Ireland's membership magazine - *Wings*

- Summer 2014 edition (see Appendix 1)

Radio

- Mooney Show - June 6th
<http://www.rte.ie/radio1/mooney/programmes/2014/0606/621981-mooney-friday-june-6th-2014/?clipid=1594293>
- Mooney Show - June 13th
<http://www.rte.ie/radio1/mooney/programmes/2014/0613/623575-mooney-friday-june-13th-2014/?clipid=1600629>
- Shannonside Radio – June 5th

Newspapers

- May 15th Inishowen News
<http://www.inishowennews.com/014SwiftSurvey159.htm>

Websites & Social Media

- RTE Mooney Show – Website:
<http://www.rte.ie/radio1/mooney/programmes/2014/0606/621981-mooney-friday-june-6th-2014/?clipid=1594293>
- Heritage Council website
http://www.heritagecouncil.ie/wildlife/publications/select_category/44,45/article/landscape-conference-report-available-for-comment-people-and-place/?L=uxwqpqeroskazrcl&tx_ttnews%5BbackPid%5D=944&cHash=cf667f66cc
- Irish Wildlife Trust – Cork Branch, Facebook:
https://www.facebook.com/pages/Irish-Wildlife-Trust-Cork-Branch/163064997062562?sk=photos_albums
- Ireland's Wildlife – Twitter: @WildIreland
<https://twitter.com/WildIreland>
- Swift Conservation Ireland Blog
<http://swiftconservationireland.blogspot.ie/>
- BirdWatch Ireland Mayo Branch website
<http://www.birdwatchmayo.org/>
- BirdWatch Ireland Kildare Branch Facebook
<https://www.facebook.com/bwikildare>
- BirdWatch Ireland Cork Branch Website
<http://www.birdwatchcork.com/>

Results

Coverage

Records were received from a total of 201 survey participants for the National Swift Survey 2014. In addition, data from 49 participants of the Dublin City Swift Survey 2014 and from 38 BirdTrack users were also used. Given the greater abundance of observers in Dublin and the specific survey completed in the city during 2014, coverage was biased towards this part of the country.

Distribution & abundance

A total of 661 records of Swift individuals, flocks or nests were submitted, in 31 counties across Ireland (Fig. 4). Although the project achieved a good geographical spread of sightings across the country, as can be expected from a citizen science led project such as this, the concentration of sightings is focused around the larger urban centres such as Dublin, Belfast, Cork and Galway. Many of the Leinster counties also have a higher number of sightings compared to counties in the other provinces.

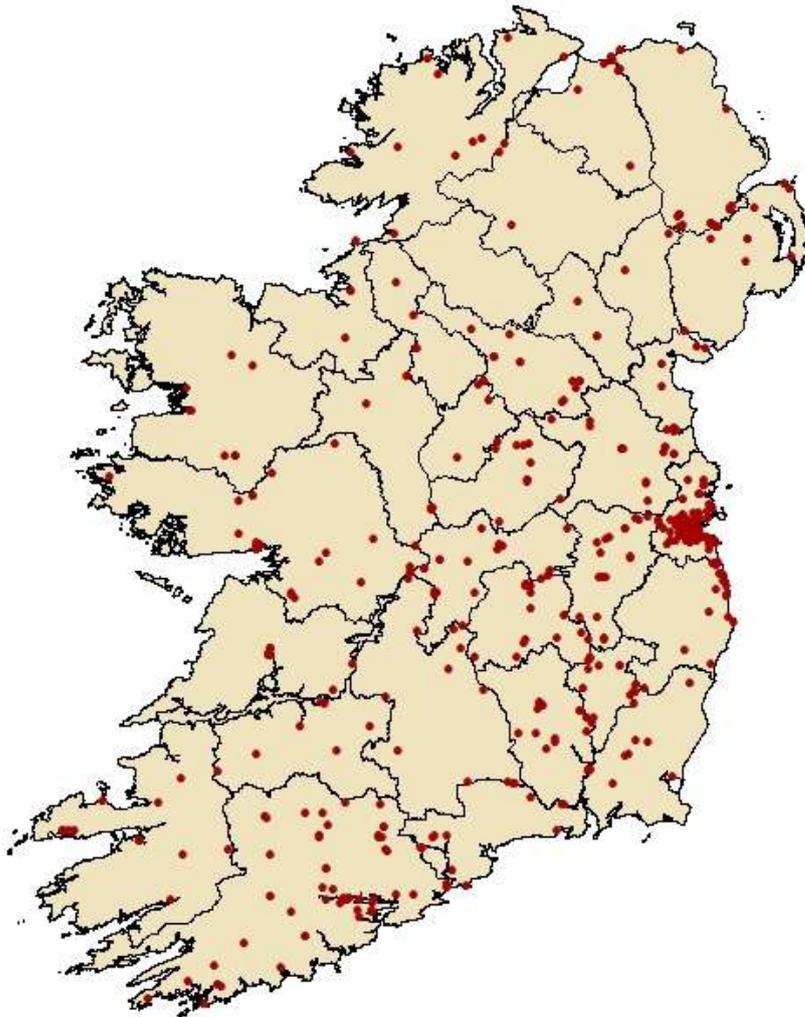


Figure 4: Locations of all Swift records received during 2014.

Low-flying birds

Low-flying Swifts were recorded at a total of 358 sites across Ireland (Fig. 5). Screaming Swifts were recorded at 268 sites and non-screaming Swifts were recorded at 81. The largest flock of screaming birds was recorded in Co. Kildare, totalling 60 birds. The largest flock of non-screaming birds, also totalling 60 birds was recorded in Co. Louth.

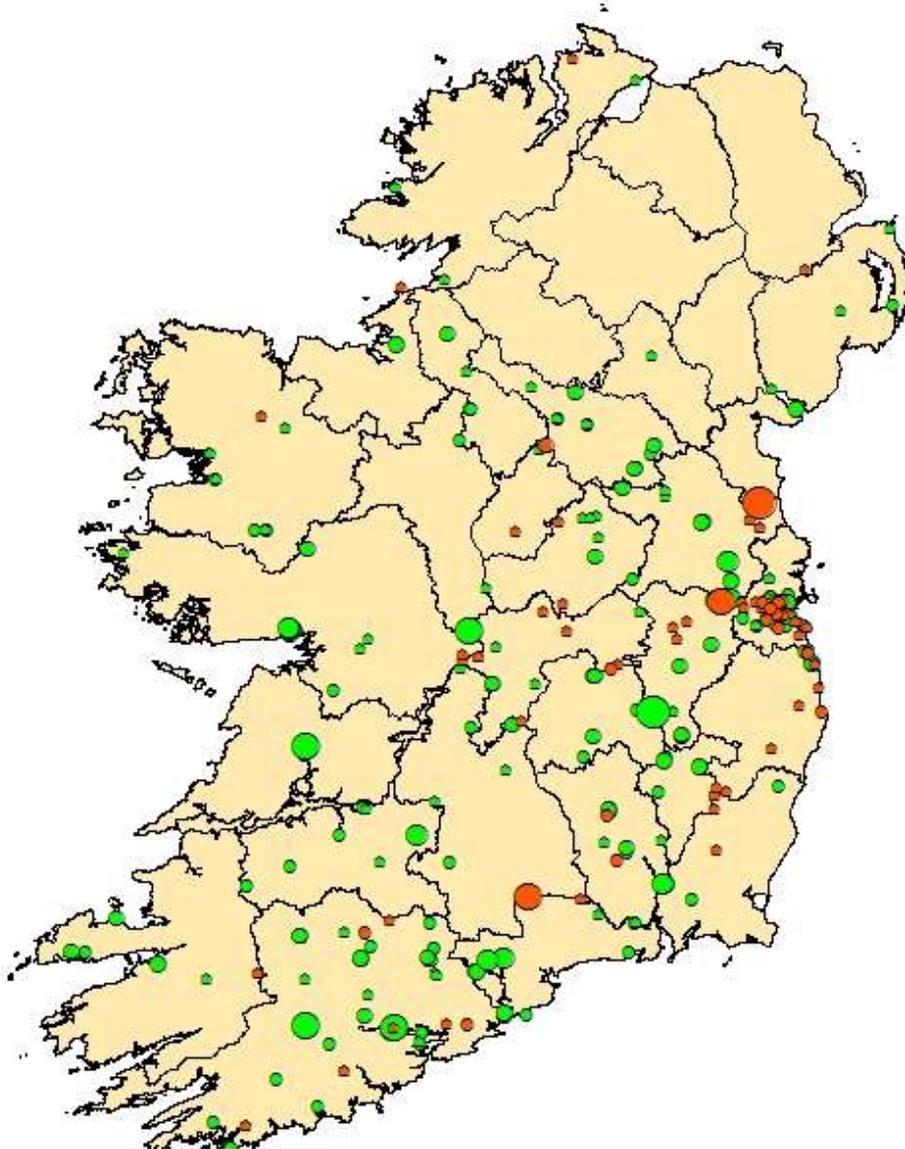


Figure 5: Records of all low-flying Swifts, illustrating screamers (green) and non-screamers (orange). Symbol size reflects number of Swifts and ranges between 1 and 60.

At each of the locations where screamers were present, the number of birds ranged between 1 and 60 and averaged 10.33 per site. The number of screamers for the majority of sites (114) was between one and ten, while one site had numbers between 51-60 birds. It should be noted that it can be extremely difficult to assess exactly how many birds in a given flock are actually calling in larger flocks.

Non-screamer numbers ranged between one and 60 birds, averaging at 5.41 per flock. Of the 78 sites where low-flying non-screamers were recorded, the flock size at the vast majority of sites (62) was between one and five birds. One site had a flock of 51-60 birds (Fig. 6).

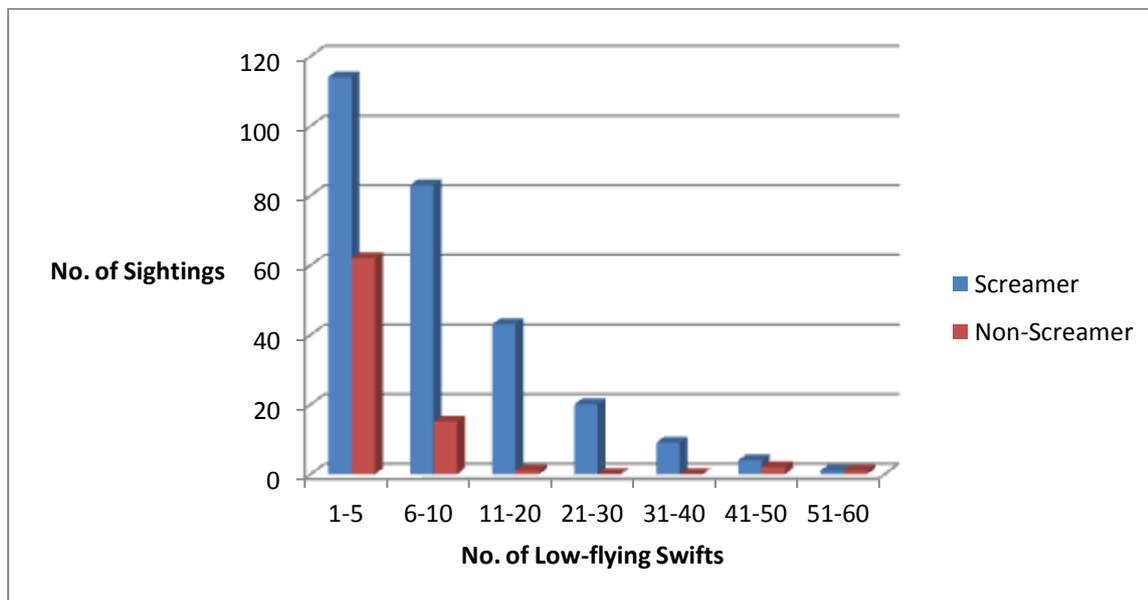


Figure: 6 Number of Low-flying Swifts per individual sighting.

High-flying birds

High-flying Swifts were reported at 109 sites across Ireland. The number of high-flying birds at each site ranged between one and 85. Most of these sites (81) recorded between one and ten birds, while 11 sites recorded 20 or more.

Nests

Overall, 341 nest sites were identified at a total of 131 locations across Ireland (Fig.7). The highest number of nest site records originated from Co. Dublin, with 53 nest site records submitted. This was followed by Cork (18), Galway (11), Cavan (10) and Offaly (9). Most records (91) were of single nests, with just four records of more than 10 nests at a single site. The locations of all nests recorded are presented in Appendix 2.

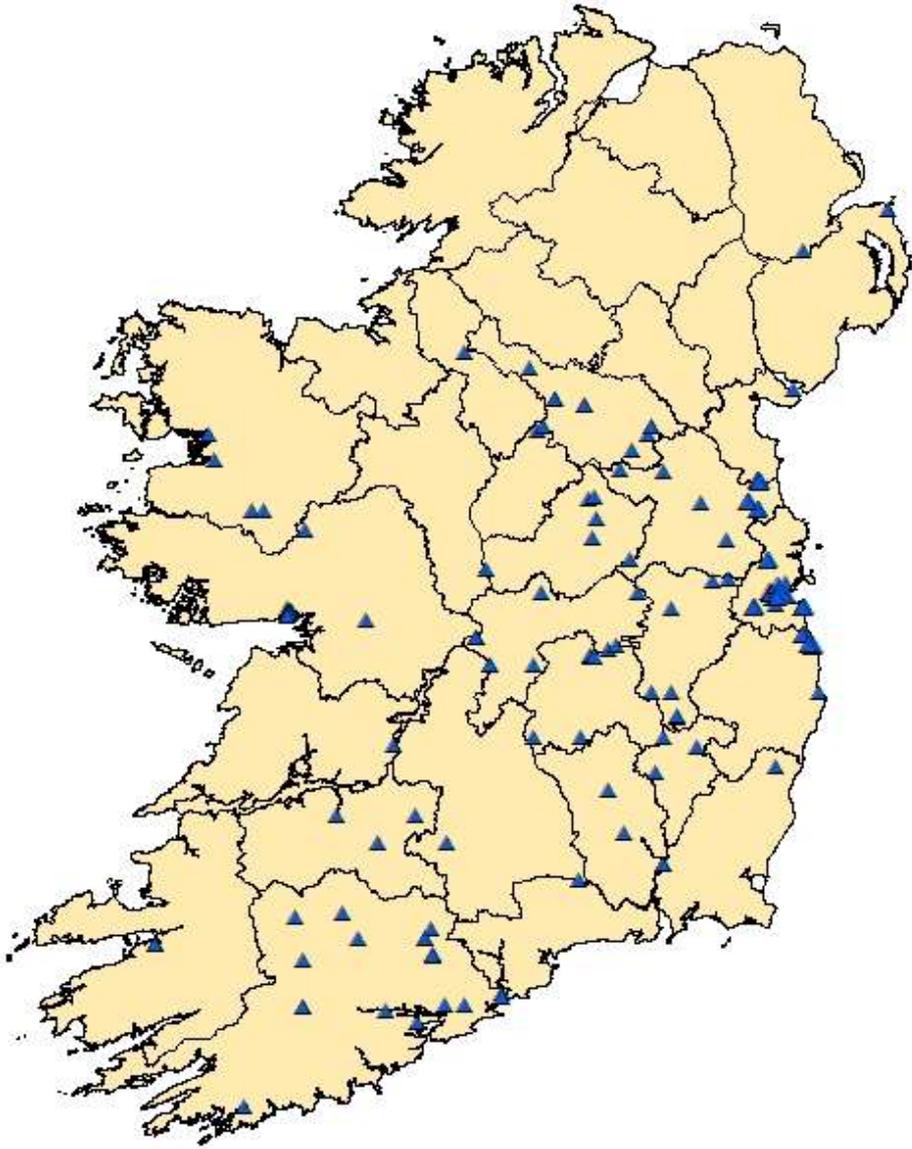


Figure 7. Locations of nest sites, 2014.

Discussion

The Swift Conservation Project 2014 proved highly successful in recruiting a network of volunteers across Ireland to record Swift sightings and nest locations to the National Swift Survey. Among the 661 individual Swift sightings collected, an impressive 341 nests were reported at 131 locations. The data were collected and reported at a sufficiently fine scale (6 and 10 figure grid reference) to facilitate detailed mapping of the records. The detailed GIS maps and associated data files provide a first stage in establishing a national inventory of Swift nest site locations across Ireland, an essential requirement in conserving any species.

However, it is important to point out that the data and maps produced from these survey records are by no means a comprehensive picture of the distribution of Swift in Ireland. It is merely a first step in cataloguing sightings, and particularly nest site locations, to build upon in future years. As Swifts are long-lived birds and faithful to their nest sites from year to year, this inventory of their nest sites can become an important tool for consultants, planners, councils and others to use in making planning decisions to ensure the protection of existing Swift colonies and to help direct new Swift conservation projects (e.g. erection of Swift boxes or bricks).

The results have also highlighted the importance of older and historic buildings in Ireland as ideal breeding sites for Swifts, with many records originating from castles, churches, convents and other historic structures. By raising awareness of the important links between urban biodiversity and historic buildings, it is hoped that the profile of these structures and their importance will increase.

BirdWatch Ireland hopes to build on the momentum that has been generated across Ireland in engaging volunteers in recording Swifts. Future work will focus on building the team of volunteers and gathering further records of the location of extant colonies. A second phase would involve volunteers gathering more detailed observations at nest sites to enable an assessment of nesting success from year to year.

Acknowledgements

We thank The Heritage Council for their support in funding this project. Thanks for BirdWatch Ireland Kildare, Cork, Mayo and Laois Branches for helping organise talks and training workshops during the summer. Thanks also to the other BirdWatch Ireland Branches who helped promote the survey and encourage members to take part. Particular thanks to Lynda Huxley (GMIT) and Mícheál Casey for helping organise the Mayo workshop and for their assistance on the evening. Special thanks to all observers who participated in this survey across Ireland this summer.

References

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Appendices

Appendix 1: BirdWatch Ireland Swift Webpages

Species Focus: Swift



National Swift Survey 2014

Enter your Swift sightings [here](#)

Funded by the Heritage Council



Dublin City Swift Survey 2014

Take part in the Dublin City Swift Survey 2014 [click here](#)

Download survey instructions and forms for the 1-km survey [here](#)

Dublin City 1-km Swift Survey Map



Swift Conservation Project

Perhaps the most iconic and intriguing of our urban bird species, the Swift *Apus apus*, is a summer migrant that breeds throughout Europe and much of Asia and winters in southern Africa. However, in recent decades there has been much concern for Swifts as their numbers have been in decline throughout many parts of their range. The recent [Bird Atlas 2007-11](#) shows there has been a substantial loss in range in Ireland since 1970, while the latest [Countrywide Bird Survey](#) data shows an alarming 39% decline between 1998 and 2013. Reasons for their decline remain unknown, but it is thought that the loss of available nest sites due to the renovations of old buildings and the impacts of climate change could be significant factors.

BirdWatch Ireland is appealing for volunteers to take part in a National Swift Survey to help identify breeding sites across Ireland. In Dublin, volunteers are also needed to take part in a Swift Survey of the city to help identify and map breeding sites there. Information collected through these surveys will help our knowledge of Swifts so that more nest sites can be provided and protected.

To learn more about Swifts or for further details on taking part in Swift survey work, why not come along to one of our Swift Events this summer, click on the county in the table below for more information. Alternatively you can contact Brian Caffrey or Dick Coombes at swifts@birdwatchireland.ie

Swift Events 2014

Dublin	26 May; 6:30pm	Pearse St. Library
Mayo	11 June; 6:30pm	GMIT Mayo Campus, Castlebar

Swift Calls

Listen [here](#) (Patrik Aberg, XC27236)

GMIT Nest Camera

Swifts arrive back at GMIT, Mayo Campus, Castlebar! Click below to watch live.



Swift Network

Find your local Swift contact & project



Swift Nest Boxes & Management

Swift Conservation and the Northern Ireland Swift Group provide excellent advice on

Appendix 2: National Swift Survey Form

National Swift Survey



Swift sighting information

3. When did you see them?

DD MM YYYY

Date of sighting / /

4. Location of your sighting?

County:

Locality (City/Town/Village/Townland)

Precise Location (e.g. going into roof of Tourist Office, Main St. Banagher)

Grid Reference (e.g. N00792 15595) [\(click here for assistance generating a grid reference\)](#)

5. Approximately how many Swifts did you see at this location?

6. Were they flying around at roof height?

Yes

No

7. Did you hear them? [Listen here](#) (Patrik Åberg, XC27236)

Yes

No