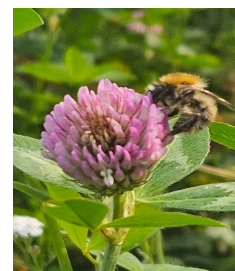


Galway Lakes Pollinator Project 2024 Summary Report

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Summary Report

Galway Lakes Pollinator Project 2024

This single-season LBAF-funded project formed part of Galway County Council's response to Objectives 1 and 2 of the 2022 4th National Biodiversity Action Plan, with a particular focus on *Bombus muscorum* (An Chaonchain / the Large Carder Bumblebee).

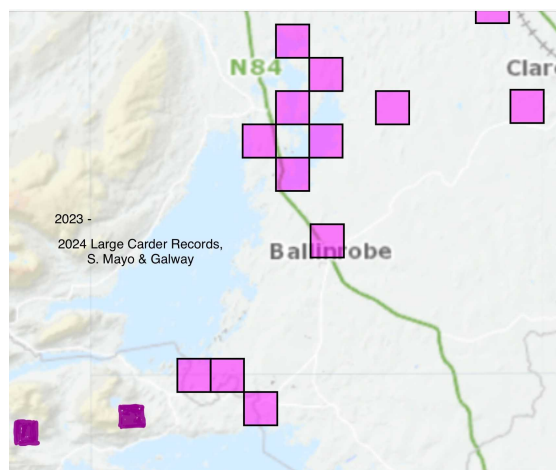
The first objective, a whole society approach to conservation, was addressed primarily with place-based activities around An Fhairche and Chorr na Mona, backed up with email and social media outreach, distribution of a range of print resources, and signage on key action sites.

The second, conservation and restoration, was addressed primarily by field observation and surveys.

Background: Distribution of *Bombus muscorum* in the Western Lakes Area

Bombus muscorum sightings around An Fhairche date from 2019 on the Clonbur Woods limestone pavement area between Ballykine and Roshill, and also a couple of miles North at Dringeen Eighter, on ungrazed limestone lakeshore [all C.F.Graebner, 2019-2022]. The species had not been logged by the comprehensive Biodiversity Blitz of Clonbur Woods in 2014. A single record for the Maam Cross area was posted in 2018 by Dr Dara Stanley of UCD. For South Mayo, two records from Partry on Lough Carra (Tomas Murray, 2005, Ralph Sheppard, 2013) and sightings at Castlebourke (Brian Nelson, 2011) predate my own observations of 2022 onwards

Against a background of established pessimism on the future of inland *Bombus muscorum* populations [1,2,3], a small NPWS-funded forage survey project which I carried out in 2023 in mid- to South Mayo [4] had confirmed a few known sites for the species, and located five previously unrecorded populations. The 2024 Galway County Council project was based on the assumption that similar under-recording was quite likely in rural Galway, and that restoration of habitat appropriate to bumblebees would benefit the target species.



***Bombus muscorum* records from the Western Lakes area, 2023-2024**

maps.biodiversityireland.ie, annotated October 2024 -

[Four sightings submitted by other observers; three of these I can confirm.]

Project Strategy

Restoration of bumblebee and general pollinator habitat has become a priority even for rural areas, with the intensification of agriculture, clearance of hedgerows, and the alternating extremes of intense grazing and abandonment.

The project sought to address this by targeting improvements in pollinator resources within and around sites for which local communities had responsibility, laying foundations for the development of wildlife-friendly environmental networks.

In a notably poor season for pollinating insects, the longest running of the An Fhairche area sites was confirmed, while two new colony sites closer to Lough Corrib were identified, and their local communities engaged with the protection agenda.

Survey Activities

There is no generally recognised metric in Ireland for evaluation of pollinator friendliness, though one has been proposed for field margins [5]. The method adopted for the 2024 Galway Lakes Project was to combine observations on habitat, including situation, soil, boundaries and shelter; current or recent land management practices; with an assessment of bumblebee forage abundance and continuity, following the BSBI's DAFOR single-visit survey system [6].

Two transects under the National Bumblebee Monitoring Scheme were set up and walked over six months. In addition, casual records of bumblebee species observed were submitted for the various survey sites visited.

Further locations close to the three communities involved were identified for future improvement as general bumblebee and pollinator habitat which will also benefit the Large Carder – a total of 18 sites, plus a core network for Maam village comprising three community sites within a 1km radius of their Large Carder colony.

Recommendations for all of these sites have been submitted to Galway County Council for follow-up in subsequent seasons.

Outreach and Awareness-Raising

A programme of formal events, informal site meetings and observation walks, spanning the five Summer months, was delivered at locations in and around the three communities Involved. Formal events were advertised via social media and emails, but the strongest response was from print flyers left at key locations in the communities

Contact was also made, print resources provided, and annual pollinator flower seeds offered to the three National Schools. Despite the unavoidable poor fit with the school year, one school succeeded in raising bumblebee forage flowers in pots.

Principal Findings and Recommendations

Although systematic surveying beyond the boundaries of the targeted communities was not within the project remit, the incidental discovery of two thriving Large Carder colonies in locations of rich grassland forage gave support to the project's initial under-recording premise.

The poor season threw up stark differences in bumblebee numbers and colony persistence between forage-dense hotspots and the open countryside.

The project has uncovered general awareness of, and willingness to support, local biodiversity, but too often hampered by lack of direct experience or training, leading to low levels of confidence. Sometimes this has been an issue with people engaged in outdoor work in the area, as well as among the general public.

Connecting with local community groups and networks has been crucial to the project's success within a tight time frame. (See Note 11 for co-operating organisations.)

The range of habitat improvements that can be demonstrated within a six-month project time-frame is strictly limited: reducing mowing frequencies to allow development of short wildflowers in the sward, adding pollinator friendly species to seasonal amenity plantings, sowing short-season green manures in any vacant urban sites, introducing phased hedge or shrub cutting to allow flowering. Both perennial native wildflower meadows and pollinator populations typically take 2 to 3 seasons to start showing clear results.

Future Habitat Conservation and Restoration

The distribution shown on p.1 above represents the largest currently recorded inland cluster of lowland / Fabaceae diet tribe *Bombus muscorum* colonies on the island of Ireland. (A cluster of comparable extent in East Galway / Offaly is associated with bogland areas, thus with the moorland / Ericaceous diet tribe - cf Goulson [10], p.201) . Recent email exchanges with national bumblebee experts [8] have confirmed the relevance of more systematic surveying for *Bombus muscorum* in the Joyce country and Western Lakes area.

To improve understanding of local Large Carder distributions, the highest priority must be the 1 km radius dispersal areas around known colonies. Habitat surveys at this scale could be undertaken by local volunteers, given supervision and some initial training.

The simplest and most effective strategy for creating pollinator dispersal networks between scattered hotspots would be to protect and rebuild existing linear habitat. Native flowering hedges and flower-rich verges would benefit other invertebrates, amphibians, small mammals and birds as well as pollinators.

While a valuable model for general pollinator support in urban and semi-urban areas has been put forward in Carlow County Council's Biodiversity Cooperation Strategy of 2023, large-scale conservation strategies for rural areas of scattered population are less well-developed. A restoration project for grassland *Bombus muscorum* populations would be closer to the wide area single-species strategies designed for Great Yellow Bumblebee [NBDC 2019] and Shrill Carder [NBDC 2024] preservation than to the single-community-focussed guidelines published for the Large Carder [NBDC 2022] [12].

Developing a Large Carder restoration strategy suited to the Western Lakes area thus requires close liaison between agencies involved in landscape restoration, regenerative farming, and wildlife protection, sustained over consecutive seasons.

Building Localised Biodiversity Literacy

As accessible and relatable keystone species in ecological networks, responsive to habitat improvements over short time spans, bumblebees – in association with their native forage plants, make an ideal focus for introducing biodiversity concepts. A single local species of note can provide a strong stimulus to community biodiversity action, as in Mayo's Belmullet Great Yellow Bumblebee or Skerries' coastal Large Carder projects.

The Galway Lakes Pollinator Project's work has confirmed the importance of tailoring approaches, not simply to the resources of the terrain around communities, but equally to the human resources of the communities themselves.

A programme for building biodiversity literacy at community level would initially assess social capital that could be mobilised – existing skills, potential key players, and networks - alongside the natural capital of spaces that might be developed as examples of good practice – fruiting hedgerows, ponds, earthen banks, pocket parks or orchards. Participation could be encouraged from faith groups, sports clubs, youth and active retirement groups, as well as neighbourhood enhancement organisations Rural Social Scheme workers and educational institutions.

Rather than top-down decontextualised training, such a scheme would focus on problem-based and experiential styles of learning to build self-reliance. This approach would imply some tapering levels of support in successive seasons, which could include a mix of print and digital resources and peer-to-peer social media. As one of the best defences against biodiversity loss, localised biodiversity literacy merits serious resourcing.

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November 2024

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References

1. Regional Red List of Irish Bees, HEA, 2006, Fitzpatrick et al.
https://www.npws.ie/sites/default/files/publications/pdf/Fitzpatrick_et_al_2006_Bee_Red_List.pdf
Accessed 10.24
2. Northern Ireland Threatened Bee Report, Buglife, 2019.
<https://cdn.buglife.org.uk/downloads/Northern-Ireland-Threatened-Bee-Report.pdf>
Accessed 10.24
3. All Ireland Bumblebee Monitoring Scheme Annual Report, 2012 -2023
<https://biodiversityireland.ie/surveys/bumblebee-monitoring-scheme/>
Accessed 10.24
4. Graebner, Celia - Mayo Large Carder Study RG-86/2023 - unpublished report for NPW, 2023
- 5.. Field margin botanical diversity, composition and quality, in Intensively-managed farming systems, Larkin et al, Journal of Irish agriculture and food research, November 2022.
<https://www.scienceopen.com/hosted-document?doi=10.15212/ijafr-2022-0102>
Accessed 10.24
6. Recording plant status and regeneration during single visits - Walker et al, British and Irish Botany 1(4) 2019.
7. Local communities: Actions to help pollinators, NBDC, 2024 (revised version).
<https://pollinators.ie/wp-content/uploads/2024/02/AIPP-A5-Community-guidelines-2023-WEB.pdf>
8. Dr Una Fitzpatrick, personal communication, August 2024, Dr Dara Stanley, personal communication, September 2024.
9. Carlow Town Biodiversity Strategy and Action Plan 2021 – 2025.
<https://consult.carlow.ie/en/system/files/materials/974/Draft%20Carlow%20Biodiversity%20Action%20Plan%20%28September%202022%29.pdf>
10. Goulson, Dave - Bumblebees: Behaviour, Ecology and Conservation, 2010 (2nd edition).
11. Organisations engaged with the GLPP project and principal contacts

Coiste Forbatha Chorr na Mona – Aisling Walsh, Mary Burke
Clonbur Pride of Place – Noreen Duffy, Geraldine Morrin
Maam Community Council – Gerry Keane
Maam Green Group – Lisa Smyth
CE Supervisors- John Gibbons
Roshill Graveyard Group- Aine Bhreathnach,
Joyce Country Men's Shed – Tom Whelan, John Walsh
Joyce Country Wildflower Co-op – Denise Hogan
Chalet na mBan – Barbara Conroy
Clonbur Collective – Ruby Staunton
CDS Teo – Michael Heanu
JCWL Geopark – Ben Thibaudet
Foram Conamara – Adam DeLapp
Petersburg Outdoor Centre – Trish Walsh
Coillte – Frank Flanagan. Clonbur Woods

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12 .

Protecting Rare Poillinators: Shrill Carder Bee. All -Ireland Pollinator Plan, How-to Guide 15, NBDC Series No. 36, April 2024 .

Protecting Rare Poillinators: Great Yellow Bumblebee. All -Ireland Pollinator Plan, How-to Guide 6, NBDC Series No. 19, July 2019.

Protecting Rare Poillinators: Helping the Large Carder Bee in Your Community. All -Ireland Pollinator Plan, How-to Guide 9, NBDC Series No. 28, August 2022.