



## FIELD GENTIAN (*Gentianella campestris*)

### Biodiversity Action Plan | CummeY YannoO BeiyN-Feie



#### Background

Field Gentian is a protected native wildflower, that has been lost from much of its former distribution on the Island.

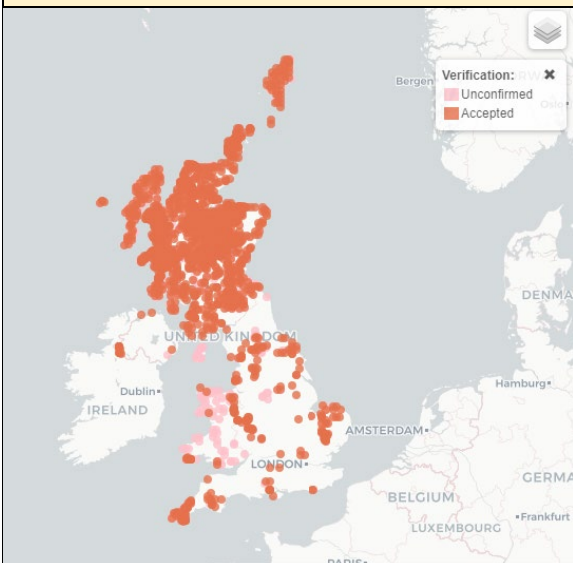
This Biodiversity Action Plan (BAP) has been reformatted from a Rare Species Action Plan produced by Wildflowers of Mann in 2016, and approved by the Department of Environment, Food and Agriculture in same year.

#### Description



Field gentian is annual/biannual native blue/purple late summer wildflower.

#### British Isles Distribution



This is predominantly a species of the northern British Isles, having become extinct over much of lowland England in the past 150 years (although it retains outlier populations in the New Forest and the Lizard). Even in its upland Scottish strongholds, it has declined very significantly.

#### Isle of Man Distribution

The species remains common on the Ayres National Nature Reserve.



It was formally recorded on Creg Malin (Peel), Whitestrand, Foxdale Mines, Louisa Mines, Mount Murray, Eairy Dam, Douglas Head and Langness. It was described as widespread on mine sites by Allen (1984).

## Habitat and Ecology

Field Gentian is annual/biannual native, blue/purple, late summer wildflower. It primarily occurs on mildly acid and neutral, well drained, infertile soils. It is also recorded from limestone grassland and calaminarian grassland. It is a lowland and upland species.

While nominally a species of mildly acid and neutral grass and heath, it is probably restricted to complicated soils, where magnesium or other base minerals are available (otherwise, it would occur in a much wider range of sites).

On calcareous soils, it is thought to be more common where acidic soils overlie limestone, or the soils are leached<sup>1</sup>. Free drainage, low fertility, and short swards (due to infertility, drought stress, trampling or grazing) are all a requirement. The success of the species on challenging soils, late in the growing season, would infer a strong mycorrhizal association. Its seed longevity is unknown, and its potential for ex-situ cultivation unknown, but this is assumed to be difficult. An open sward for seedling establishment in autumn or spring is essential for the species.

## Legal protection

Listed on Schedule 7 of the Wildlife Act 1990 and red-listed under *Plants of Conservation Concern in the Isle of Man 2022*. The Ayres National Nature Reserve population is protected by the DEFA & MNH Byelaws.

(UK: The species a UK Biodiversity Action Plan Priority Species. It is considered 'threatened' on the UK red data-book list. It is short-listed by the Species Recovery Trust. It was part of the Botanical Society of Britain and Ireland Threatened Plants Project (2008-13)).

## Threats

The loss of the species from most of its range, is likely to be a mixture of overgrazing and under-grazing. Localised development could be a contributory cause (Louisa Mines has been developed, but the species was no longer present at time of development).

The exact reasons for loss on the abundant mine sites, are very difficult to determine, as suitable habitat remains.

## Reason for BAP

Reduction in Island distribution, with the Ayres vulnerable to flooding and sea-level rise.

## Aims

To achieve a second sustainable island site for the species, preferably in the south.

## Linked BAPS

All BAPS linked to the Shaking Grass project.

<sup>1</sup> [https://bsbi.org/wp-content/uploads/dlm\\_uploads/Gentianella\\_campestris\\_species\\_account.pdf](https://bsbi.org/wp-content/uploads/dlm_uploads/Gentianella_campestris_species_account.pdf)



<b>Delivery Options</b>	<b>Active</b>	<b>Challenges</b>
When grazed, the MWT Billown Nature Reserve will provide a suitable, long-term site for introducing field gentian.	Yes	Creating suitable soils over a large enough area. Translocation by seed (unknown success).
Supporting natural spread from National Nature Reserve to surrounding areas.	No	
Reintroduction to mine sites.	No	Future management and condition of 'Snuff the Wind' mine deads.
Annual review and update of this document.	By Manx Wildlife Trust	

## **Delivery Plan**

<b>Strategy</b>	<b>Lead</b>
<p>Billown will include a mosaic of soil depth, soil structure, fertility, moisture regime, aspect and slope. This will bring a new factor, regarding elements of acidic superficial layers (50 mm). Quarried sand and organic-rich heathy podzols will be sourced for this. This should have a general diversifying benefit on the site anyhow. The mycorrhizal associations are not known but should colonise naturally (or be introduced with podzolic humous).</p> <p>The introduction of this species will be attempted using direct seed transfer of 30 ripe seed capsules, taken from 30 individual plants, from the Ayres. Even with these measures, that introduction is by no means assured. Even if achieved, its long-term survival here is unpredictable.</p> <p>The grazing management which will be geared to early summer flowering species, is a further complicating factor. The strategy will be pragmatic, and with full understanding, that success is desirable but not guaranteed nor essential.</p>	Manx Wildlife Trust.
Failure at Billown would, however, mean that a refocusing of efforts in the north should be made, potentially with an eye to translocation to the Point of Ayre and Point of Ayre Gravel Pit areas to have a second population. This should be reviewed in 2026 by which time the success or failure of the Billown gentians will be known.	Department of Environment, Food and Agriculture.

<b>Action</b>	<b>Timing</b>	<b>Responsibility</b>
Prepare MWT Billown Nature Reserve site for translocation.	2019/20	Wildflowers of Mann
Translocate 30 seed heads.	2021-2022	Wildflowers of Mann
Monitor plantings/spread.	2021 onwards	Wildflowers of Mann
Review for next management plan.	2025	Wildflowers of Mann /Department of Environment, Food and Agriculture
Review for Point of Ayre suitability.	2025 onwards	Wildflowers of Mann



Ayres survey for gentian populations.	Annually	DEFA Ayres Warden
<b>Annual Updates</b>		
<b>Year</b>		
2019-24	Translocation on hold, until MWT Billown Nature Reserve receptor site is more suitable.	

