B6

Montbretia

Scientific name:
Crocosmia × crocosmifolia
Perennial plant (herb)
in the Iris family (Iridaceae)

B6.1 What is Montbretia?

- Long-lived (perennial), polycarpic (flowers many times) competitive dominant.
- Growth from a below ground corms (bulbs) and rhizomes (roots) early in the growing season – long slender leaves form a dense, compact canopy which restricts native plant species access to light.
- Decomposing leaves form a thick mulch that limits germination of native plant species.

B6.2 Where does Montbretia come from?

- Several Montbretia cultivars are present in the UK and Ireland, all being introduced from South Africa.
- Of these, the French hybrid currently appears to be the most invasive.

Common name	Scientific name	Origin	Brought to UK	Found growing in the wild
Montbretia	*Crocosmia × crocosmifolia*	Hybrid formed in France, parent plants originating from South Africa	1880	1911

B6.3 What impacts does Montbretia have?

Competitive growth of Montbretia causes negative ecological impacts, including:

- **Reduced habitat availability and quality** – reduction of native plant diversity, altered soil conditions (water and nutrients) and reduced ecosystem services.
- **Limited soil binding capacity –** Montbretia rhizomes (roots) do not bind soil as effectively as the root systems of native flora, increasing erosion of riverbanks.

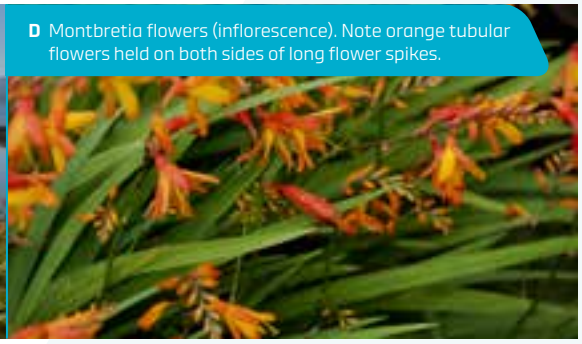
B6.4 What do Montbretia look like?

Montbretia

A Early season Montbretia growth.

B Montbretia leaf detail. Leaves are up to 0.6m long with at least one raised leaf veins which can be seen on the top and underside of the leaf.

C Mature Montbretia growth. Height up to 0.6m.



D Montbretia flowers (inflorescence). Note orange tubular flowers held on both sides of long flower spikes.

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How does Montbretia spread?

Montbretia spreads by direct rhizome (root) expansion and continuous corm (bulb) production; vegetative (asexual, clonal) dispersal of fragments of plant material created by human activities (e.g. disposal of garden waste) and natural disturbance processes (e.g. flooding).

Seed are formed in the UK and Ireland, though the seed is not viable.

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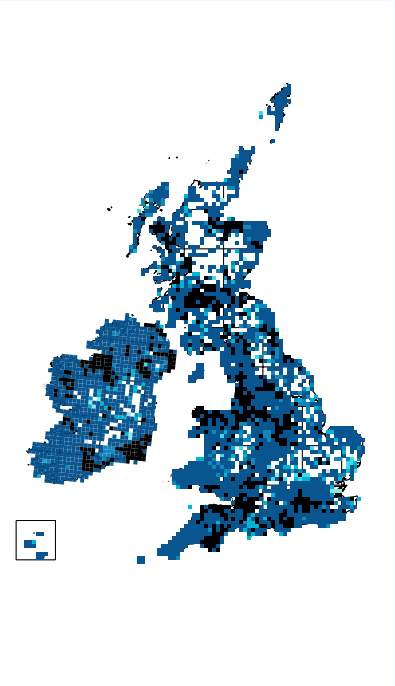

Where does Montbretia grow?

Montbretia can grow in many different habitats in the introduced (non-native) range, though these plants do show some preference for wet/damp habitats. Common habitats where Montbretia is found include:

- **Garden plantings**
- **Roadsides**
- **Railway embankments and cuttings**
- **Waste ground and spoil-tips**
- **Rivers and other watercourses (riparian habitats)**
- **Woodlands**

The map shows where Montbretia is found in the UK and Ireland.

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Control and management

When we talk about effective control and management of established, mature stands of Montbretia with herbicides, what we are describing is 'knocking out' points where leaves emerge from the below ground network of corms (bulbs) attached to rhizomes (roots), year after year. As time goes on, fewer and fewer of these corms produce new leaves in the following spring. Effective management of the below ground rhizome bud bank involves effective herbicide (glyphosate) application at specific timings in the growing season.

Timing of Montbretia growth stages and treatment application

Timings of Montbretia growth stages are shown below along with recommended treatment timings.

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Growth stages: approximate – weather and altitude dependent	Emergence			■	■								
	Leaf growth			■	■	■	■	■	■	■			
	Flowering						■	■	■	■			
	Die back									■	■		
	Dormancy	■	■									■	■
Treatment application – glyphosate-based herbicide	Biannual foliar spray					1st Spray		2nd Spray					
	Annual foliar spray					■	■	■	■	■			

Full treatment specifications

Two glyphosate-based treatments are recommended for the for the sustainable control and management of Montbretia (see full treatment specifications below). Twice yearly (biannual) foliar spray (2 applications at half of the product label application rate in spring and summer) and annual foliar spray application. Successful control of large stands exceeding 100m^2 frequently may take 3-5 years (or more) to achieve.

Treatment 1	Biannual foliar spray application
Frequency	Twice per year, all years of treatment
Herbicide	Glyphosate
Method	Foliar spray using hand-held, knapsack or large volume sprayers.
Rate	Half of maximum permitted application rate (see product label), twice per year.
Timing	Apply twice between May and September. Preferably undertake the first application between May and June and the second application between July and September. Pragmatically, the second application window may be extended to October if weather conditions permit (i.e., more than 50% green leaves remain green).
Treatment notes	Likely to be significantly faster at controlling above ground Montbretia growth than a single foliar glyphosate application.
	Labour requirement is doubled, relative to a single foliar application.

Treatment 2	Annual foliar spray application
Frequency	Once per year, all years of treatment
Herbicide	Glyphosate
Method	Foliar spray using hand-held, knapsack or large volume sprayers.
Rate	Maximum permitted (see product label), once per year.
Timing	Apply once from May to September; pragmatically, this may be extended to October if weather conditions permit (i.e., more than 50% leaves still green).
Treatment notes	Highly effective at controlling above ground Montbretia growth.
	The least labour intensive of the recommended herbicide treatments.

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Acknowledgements

Image acknowledgements

Map courtesy of the Botanical Society of Britain and Ireland (© BSBI 2021)

References

1. **Booy et al.** *Bloomsbury* (2015)
2. **CABI** *Datasheet: Montbretia* (2021)
3. **Stace** *C&M Floristics* (2019)