

Impatiens glandulifera



Taxon	Family / Order / Phylum
<i>Impatiens glandulifera</i> Royle	Balsaminaceae / Ericales / Plantae

COMMON NAMES (English only)

Himalayan balsam

SYNONYMS

Impatiens roylei Walpers

Impatiens glandulifera Lindley

SHORT DESCRIPTION

A green vascular annual plant up to 2.5m tall with large pink to purple flowers and green fruits around 5 cm long. Usually grows in riparian habitats and in other disturbed places with good water and nutrient supply.

BIOLOGY/ECOLOGY

Dispersal mechanisms

The seeds are ejected from the fruits via ballochory – a mechanism typical for the whole family *Balsaminaceae*. Although not being able to float for a long time, when the seeds sink they do not lose the ability to germinate and are therefore effectively transported with other material.

Reproduction

The plant is pollinated by insects. The fruits germinate in spring, but somewhat later than the other vegetation, so the frost sensitive seedlings are protected by the milder microclimate created by other plants. Since seeds are the only persistent particles, their production and transport is crucial for spread of the plant.

Known predators/herbivores

Cattle and sheep are known to graze on *I. glandulifera*, as well as various insects, e.g. *Aphididae*, *Curculionidae*, *Agromyzidae*, *Sphingidae*.

Resistant stages (seeds, spores etc.)

Most of the seeds last just one winter and germinate at the beginning of the next spring. However, a small number of the seeds can remain fertile over another winter and successfully germinate the next spring; therefore, a short-term persistent seed bank can be created in the soil.

HABITAT

Native (EUNIS code)

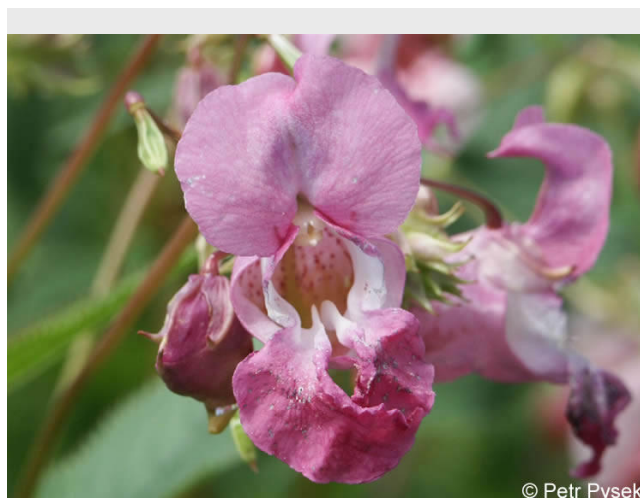
Wet, open places in forests, shrubs and hedges, 1800 – 3200 m elevation. F9: Riverine and fen scrubs, FA: Hedgerows, Lines of trees, small anthropogenic woodlands, recently felled woodland, early-stage woodland and coppice.

Habitat occupied in invaded range (EUNIS code)

Riparian vegetation, wet disturbed places, forest edges, wet roadsides. F9: Riverine and fen scrubs, J4: Transport networks and other constructed hard-surfaced areas, J5: Highly artificial man-made waters and associated structures.

Habitat requirements

Grows on nutrient and water rich places, particularly frequently disturbed habitats. The plants are shade tolerant and the seedlings are frost sensitive.



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Impatiens glandulifera has showy flowers attracting many pollinators

Photo: Petr Pysek

DISTRIBUTION

Native Range

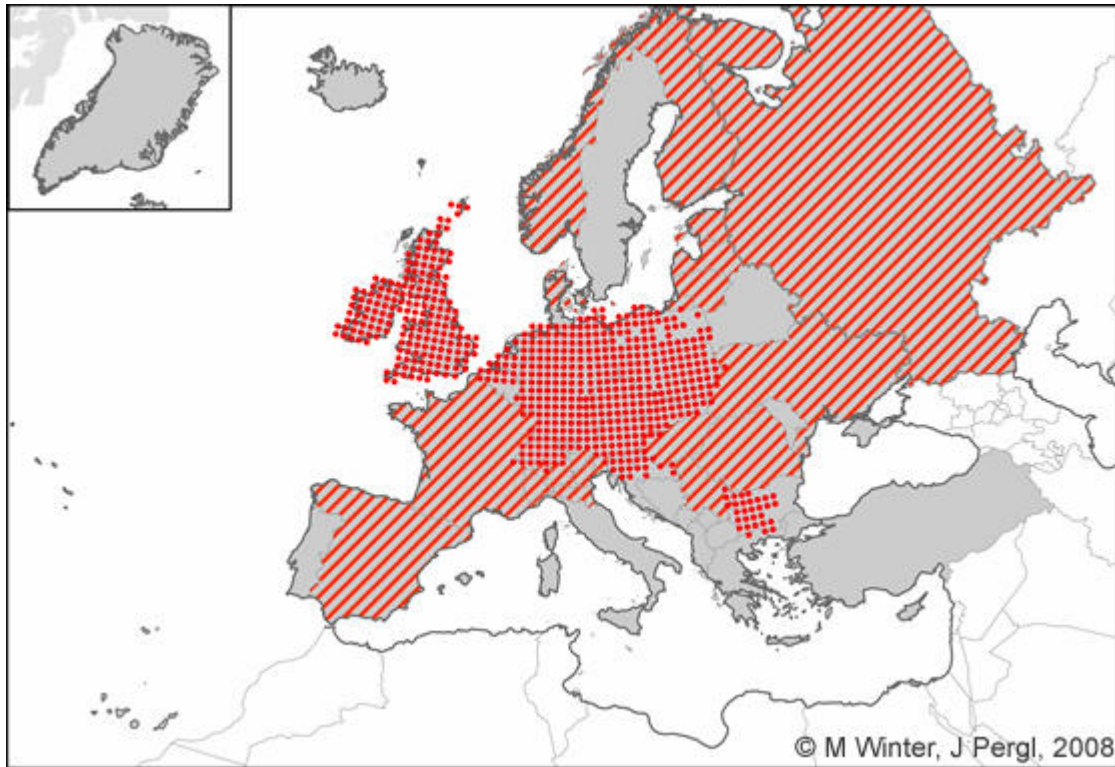
Central Asia, Himalayas

Known Introduced Range




Invasive to almost all temperate European countries, invading in the W and NE states in the USA

Trend

Due to climatic changes, *I. glandulifera* is expected to move its boundaries northwards and to higher elevations as well. MAP (European distribution)



Legend

	Known in country		Known in CGRS square		Known in sea
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INTRODUCTION PATHWAY

As a tall impressive species with large colourful flowers, it used to be planted for ornamental purposes. Besides this, it used to be favoured by beekeepers because of its high nectar production.

IMPACT

Ecosystem Impact

Studies published so far suggest that although *I. glandulifera* reduces the diversity of invaded communities, this reduction concerns mostly widespread weed and even other non-native species. It is also expected to successfully compete for pollinators, e.g. with *Stachys palustris*.

Health and Social Impact

The species is capable of changing the appearance of riverbanks completely, especially when in bloom.

Economic Impact

There is some speculation that when *I. glandulifera* usurps the dominance in riparian vegetation it can promote erosion due to its modest root system, especially compared to the clonal native dominants of these communities, such as *Urtica dioica*.

MANAGEMENT

Prevention

Reducing its use as an ornamental, especially in wet areas.

Mechanical

Mechanical eradication efforts sometimes take place, especially in areas of high conservation interest. Due to the modest root system, the whole plant can be removed easily. However, the effect of such attempts is rather

questionable due to the effective transportation of seeds through the river corridor, which usually results in a quick reinvasion.

Chemical

Juvenile plants respond to spraying by herbicides, however, when the flowering plants are sprayed, they are still able to produce viable seeds.

Biological

Unknown.

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Author: Martin Hejda

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