

Devon invasive Species Initiative (DISI) FACT SHEET

Common Name: Himalayan balsam / Indian balsam

Scientific Name: *Impatiens glandulifera*



Identifying Characteristics:

A tall annual plant with erect reddish stems up to 3m tall, forming dense stands. Large (2.5-4cm) showy pink-purple (occasionally white) flowers, with bilateral symmetry, resembling a 'policeman's helmet' produced June – October. Leaves opposite and the upper ones often in whorls of 3 around stem, 6-15cm long with red-tipped teeth. Reddish roots from stem at lower nodes (often with antiseptic smell). Green seed pods from mid-July 2-3cm long, that explode open when ripe. Roots are shallow with adventitious growth.

Habitat Characteristics (diet, behaviour, niche etc):

Usually found where soils are moist; banks along waterways, rivers, canals, lakes, ponds, wet woodland, ditches and damp meadows. Also waste ground. It establishes well in disturbed riparian habitats and can form dense monocultures where present.

Transport – How is it spread etc:

Spreads solely by seed – each plant can produce up to 2500 seeds which are spread up to 7m away when the seed capsule explodes open. The seeds are able to spread over longer distances along waterways both by floating and being carried along with sediment.

Impacts:

Shades and crowds out native species. Produces high volumes of nectar attractive to pollinators therefore may out-compete pollination of native species and alter the invertebrate community. Dense stands die back in winter to leave vulnerable bare earth on river banks which is exposed to winter flows and high levels of erosion. Dead plants entering the watercourse can also impede water flow, possibly contributing to flooding. Some research suggests the plant may excrete toxins that negatively affect nearby plants (allelopathy), increasing its competitive advantage.

Legislation - if Schedule 9 species or EU species of concern etc.

Himalayan balsam is listed on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended), this means it is an offence to let it grow in the wild (or extend beyond your land).

Control Methods and Actions:

Uprooting the plants and snapping the stem at the lowest node before they set seed (shallow roots make pulling easy) is an effective method of control. 'Balsam bashing' events are often organised by conservation organisations. The plant debris should be hung away from the ground to prevent re-rooting, or carefully composted, ensuring no seed is allowed to set. Chemical control using weed killers can be undertaken away from water, but is undesirable near streams/ivers; Environment Agency guidelines for working near watercourses must be followed. Mechanical control using a mower can be highly effective on drier, flat land. Hand-held trimmers also work well as long as stem cutting is done at ground level; Biological control methods are currently being trialled, with the release of the rust fungus *Puccinia komarovii* at 25 sites in England and Wales in 2015. The rust infects Himalayan balsam and can kill seedlings and reduce the vigour and seed production of adult plants. Field trials have extended into 2017.

Devon Based Projects:

The Tale Valley Trust have undertaken Himalayan balsam pulling on the river Tale (a tributary of the River Otter) for around 10 years. They work through the valley with volunteers 2/3 times each year to get the best pulling results through the season.

The River Otter Invasives Project ran from 2012 to 2014, led by FWAG SW in partnership with a wide range of organisations. The objectives were to produce a strategic action plan to control Himalayan balsam in the Otter catchment, survey the extent of balsam and deliver practical removal of balsam with community groups.

Rothamstead Research are seeking to effect a long-term control strategy around their offices in North Wyke, and the Westcountry Rivers Trust undertook an extensive survey in 2015 covering 35km of the Upper Taw funded by BBSRC. Costings and strategic advice for long-term removal of the balsam was provided.

Clinton Devon Estates work in partnership with a broad range of community groups to control Himalayan balsam on the lower River Otter and its tributaries..

CABI (the Centre for Agriculture and Biosciences International) is leading the field trials of rust fungus release. Although there are no field sites in Devon, six sites within Cornwall were selected for release in 2015 and in 2017. Results are currently being analysed but indicate that there is limited spread of the rust and spore pustule size is smaller in comparison to plants in the Himalayan native range. As these factors vary between trial sites, research is continuing into the role of climatic and site specific variation on balsam infection. CABI hope to introduce the rust widely across the UK over the next few years.

Key Contacts and Other Useful Links:

CABI UK, Bakeham Lane, Egham, Surrey, TW20 9TY www.cabi.org

'Guidance for the control of invasive plants near watercourses', available from the Environment Agency

GB non-native species secretariat: www.nonnativespecies.org

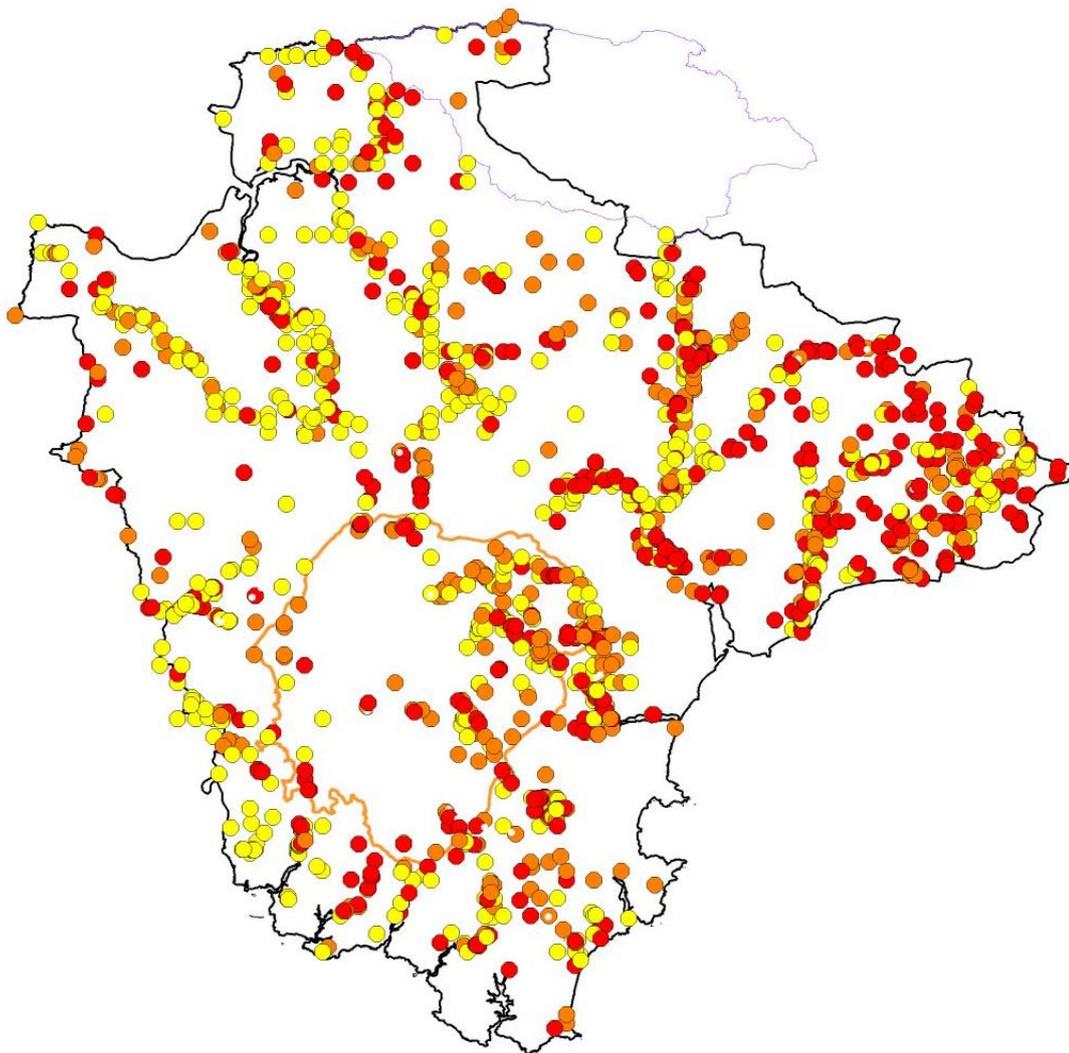
Tale Valley Trust: www.talevalley.com

**Distribution of Himalayan Balsam
(*Impatiens glandulifera*) June 2017)**



Data Sources:

- Botanical Society of Britain & Ireland (BSBI)
- Devon Biodiversity Records Centre (DBRC)
- Dr Stevens' database (Plymouth)
- England Non Native Species (via NBN Atlas website)
- Environment Agency Non Native Species (via NBN Atlas website)
- National Trust (via NBN Atlas website)
- PlantTracker (via NBN Atlas website)
- River Macrophytes Database (via NBN Atlas website)



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Map Prepared by Devon Biodiversity Records Centre 2017

-  Exmoor National Park
-  Dartmoor National Park
-  2010-2017 records
-  2000-2009 records
-  Pre-2000 records