

Buddleia, *Buddleja davidii*

Overview

Short description of *Buddleja davidii*, *Buddleia*

A medium to large perennial shrub with long arching branches. The lilac/purple (sometimes white) flowers occur in dense pyramidal shaped panicles, which produce large quantities of nectar. The opposite leaves are lance shaped, deep green above and white-tomentose below.

Description of *Buddleja davidii*, *Buddleia* status in GB

An increasing, naturalised garden escape, that is especially prevalent on urban and disturbed sites.

Impacts summary: *Buddleja davidii*, *Buddleia*

Rapidly forms large dense thickets becoming the dominant vegetation on sites. These out-compete native vegetation reducing the biodiversity of sites.

Habitat summary: *Buddleja davidii*, *Buddleia*

In its native distribution a species of riverside thickets. Across both its native and non-native distribution it rapidly colonises natural and disturbed habitats. It can tolerate a wide range of soil types and conditions, but prefers dry open sites and is frost tolerant.

Overview table

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| Environment: | Terrestrial |
| Species status: | Non-Native |
| Native range: | China |
| Invasion pathway: | Ornamental |
| Functional type: | Land plant |
| Status in GB: | Established |
| Status in England: | Established |
| Status in Scotland: | Established |
| Status in Wales: | Established |
| Location of first record: | Merionethshire (Harlech) |
| Date of first record: | 1922 |

Invasion history: *Buddleja davidii*, *Buddleia*

Origin

Native to temperate central and south-western China.

First Record

Introduced in to cultivation in 1896 and first recorded wild in 1922 in Merioneth.

Pathway and Method

Introduced as an ornamental plant. This very popular garden plant has since escaped cultivation on multiple occasions as a consequence of its highly dispersable seed.

Species Status

Over the past few decades it has rapidly spread throughout lowland Britain and is still increasing its range and frequency. It is a naturalised invasive alien species in Europe, Australasia and North America. Although naturalised in many US states it is not considered invasive in all of these states.

Ecology & Habitat: *Buddleja davidii*, *Buddleia*

Dispersal Mechanisms

Seed is adapted for wind dispersal and to a lesser extent dispersal by water. Seed can be distributed over long distances using wind currents. Additional dispersal can be facilitated by the air currents generated by cars and trains. Stem cuttings can also regenerate new plants and these can be dispersed via waterways.

Reproduction

Flowers are insect pollinated by butterflies, bees and other insects. A standard plant can produce up to 3 million seeds per year. Has the ability to reproduce asexually via stem and root cuttings.

Known Predators/Herbivores

Has few pests but certain caterpillars, weevils, moths, spider mites, fungal leaf spot and die back will attack it. Goats will also eat the vegetation but not sufficiently to control the plant.

Resistant Stages

Seeds show lengthy dormancy, remaining in the seed bank for several years.

Habitat Occupied in GB

Often associated with habitation, this species can be found on waste ground, walls, railway banks, quarries and areas of scrub.

Distribution: *Buddleja davidii*, *Buddleia*

Common throughout southern England decreasing northwards to northern Scotland, especially associated with towns and cities.

Impacts: *Buddleja davidii*, *Buddleia*

Environmental Impact

Out-competes native floras producing dense monotypic thickets. Provides a valuable source of food to a variety of insects which in turn attract birds and bats. The dense thickets also provide cover for mammals such as foxes and badgers.

Health and Social Impact

A popular garden plant that is commonly planted for its decorative flowers and as a nectar source for butterflies.

Economic Impact

Can cause structural damage when plants get a foothold in walls, pavements, chimneys etc. Listed and historic buildings are particularly under threat. Estimates to the cost of damage to properties, both historical and private, currently in the UK is £960,000. Also causes significant problems to the management of the rail network.

References & Links: *Buddleja davidii*, *Buddleia*

Identification

Clement, E.J., & Foster, M.C. (1994) *Alien plants of the British Isles*. London: Botanical Society of the British Isles.

Stace, C. (2010) *New Flora of the British Isles*. Third edition. Cambridge.

Biology, ecology, spread, vectors

Preston, C.D., Pearman, D.A. & Dines, T.D. (2002) *New Atlas of the British and Irish Flora*. Oxford University Press.

Management and impact

Williams, F., Eschen, R., Harris, A., Djeddour, D., Pratt, C., Shaw, R.S., Varia, S., Lamontagne-Godwin, J., Thomas, S.E., Murphy, S.T. (2010) *The economic cost of invasive non-native species in Great Britain*. CABI report. <https://secure.fera.defra.gov.uk/nonnativesp/>
<https://secure.fera.defra.gov.uk/nonnativespecies/home/index.cfm>

ISSG database

<http://www.issg.org/database/species/ecology.asp?si=650&fr=1&sts=&lang=EN>

Northland regional council weed and pest control on-line resource available at

<http://www.nrc.govt.nz/Environment/Weed-and-pest-control/Pest-plants/Buddleia/>

General

Tallent - Halsell, N. G., and Watt, M.S. (2009) The invasive *Buddleja davidii*. *The Botanical Review*, 75, 292-325.

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Starr, F., Starr, K. and Loope, L. (2003) *Buddleia davidii*. US Forest Service, Pacific Island Ecosystems at Risk (PIER). On-line resource at

http://www.hear.org/Pier/pdf/pohreports/buddleia_davidii.pdf

Online Atlas of the British and Irish Flora - online resource available at

<http://www.brc.ac.uk/plantatlas/index.php?q=plant/unmatched-species-name-392>

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