FIFTH EUROPEAN BOTANIC GARDENS CONGRESS

Sharing information and policy on potentially invasive plants in Botanic Gardens

A European Botanic Gardens Consortium project
http://www.plantnetwork.org/aliens/

EUROPEAN BOTANIC GARDENS CONSORTIUM

Botanic Gardens hold large and diverse collections of plants, the majority of which are exotic, and many of which may be new to cultivation. Such plants may be given every encouragement to flower and adapt to their new home. It is now recognised that there is often a lengthy lag phase between when a species becomes naturalised and represents no more than an innocuous introduction, to when it may become highly invasive. To date such transitions have usually proved to be unpredictable and unexpected, but within botanic plant collections we are in a position to recognise the early signs of these changes.

It is vital that Botanic Gardens take steps to prevent future problem taxa from establishing through their collections.

Initiatives such as **DAISIE** and North European and Baltic Network on Invasive Species (**NOBANIS**) as well as National Initiatives, such as **Harmonia** - Invasive species in Belgium provide detailed databases, but these can be difficult to extract summary information from.

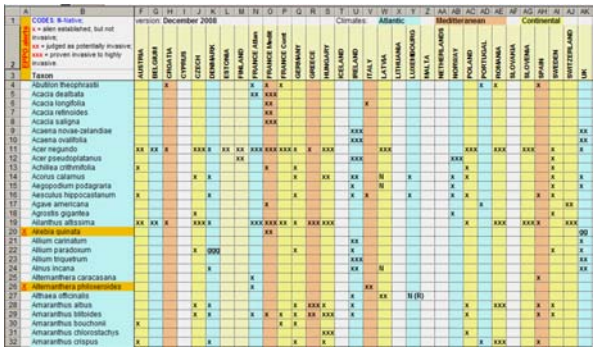
Crassula helmsii is a highly invasive aquatic from New Zealand. It is a serious pest in the UK, Belgium, the Netherlands and Ireland. It is likely to spread further, being a prevalent weed in the aquatic plant trade.

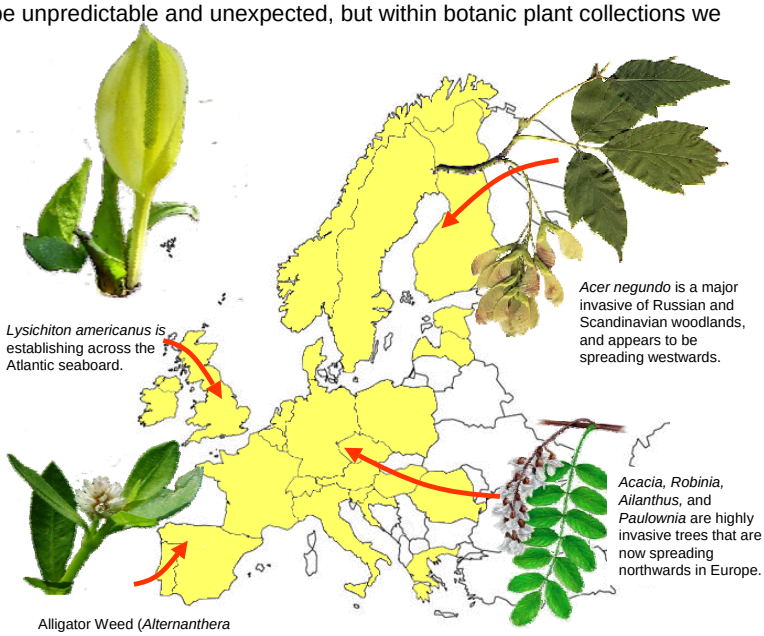
Rhus (*Toxicodendron*) *radicans* (poison Ivy) is grown in many European Botanic Gardens. The Botanical Garden of the University of Vienna removed the species in 2006 to avoid potential seed dispersal into the wild.

Hydrocotyle ranunculoides, an aquatic from Central America, has expanded at a remarkable rate across the UK.

Akebia quinata from China, has become a serious pest in North America. In Europe the vine is now self-seeding in many gardens.

To aid managers of gardens in obtaining a simple checklist of problem taxa, with an indication of their extent in Europe, a compilation of over 600 taxa has been developed, and this can be downloaded from the internet as a spreadsheet (see below) at www.plantnetwork.org/aliens/ Colour coding allows a user to review major climatic zones of Mediterranean, Continental and Atlantic types. The spreadsheet is dated and will be updated on a regular basis as new information becomes available.
Gardens throughout Europe are encouraged to submit lists of taxa, particularly those causing local problems, so that the list can become a comprehensive tool.





Lysichiton americanus is establishing across the Atlantic seaboard.

Acer negundo is a major invasive of Russian and Scandinavian woodlands, and appears to be spreading westwards.

Acacia, Robinia, Ailanthus, and *Paulownia* are highly invasive trees that are now spreading northwards in Europe.

Alligator Weed (*Alternanthera philoxeroides*), a relative newcomer from North America, is already a problem in Italy and Portugal

Those countries which have submitted lists of Invasive aliens to the Project (March 2009) are coloured in yellow.

The Scope of this initiative is to :-

- Compile lists of known or potential invasive plants from Gardens, as well as Local or Regional level, in order to highlight cultivated taxa of concern across Europe.
- Identify emerging problem taxa in the large, and diverse, botanic collections, especially in an era of Climatic Change, so as to alert collection holders to their potential risk in terms of invasiveness.
- Foster vigilance, and encourage early sharing of information, on newly problematic, or potentially problematic, taxa.
- Ensure responsible, pro-active policies in Botanic Gardens and other plant collections, and apply these in a coherent manner across Europe.
- Encourage gardens to engage with the public by informing them of the risks of introducing certain species into the wild, and how to recognise these species.

The top dozen problem species for each region, and the region as a whole:-

Atlantic	Continental	Mediterranean	Total
Fallopia japonica	Solidago canadensis	Ailanthus altissima	Elodea canadensis
Heracleum mantegazzianum	Acer negundo	Oxalis pes-caprae	Impatiens glandulifera
Elodea canadensis	Elodea canadensis	Robinia pseudoacacia	Solidago canadensis
Impatiens glandulifera	Impatiens glandulifera	Araujia sericifera	Acer negundo
Fallopia sachalinensis	Impatiens parviflora	Carpobrotus edulis	Fallopia japonica
Elodea nuttallii	Conyza canadensis	Conyza bonariensis	Robinia pseudoacacia
Epilobium ciliatum	Fallopia japonica	Azolla filiculoides	Heracleum mantegazzianum
Solidago canadensis	Robinia pseudoacacia	Conyza canadensis	Conyza canadensis
Lemna minuta	Ambrosia artemisiifolia	Elodea canadensis	Ailanthus altissima
Buddleja davidii	Heracleum mantegazzianum	Sporobolus indicus	Impatiens parviflora
Rhododendron ponticum	Ailanthus altissima	Veronica persica	Helianthus tuberosus
Robinia pseudoacacia	Helianthus tuberosus	Acer negundo	Ambrosia artemisiifolia

Please send omissions, errors or updates to:
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