

State of the World's Plants 2017

Invasive Species

Research effort into invasive plant species control methods

Our systematic review (in preparation) builds on the studies by Kettenring and Adams (2011) and Thomas and Reid (2007) and was based on a literature search using the following queries in Web Of Science, CABI and Scopus:

Web Of Science

A search of Oxford WOS was run on 4 February 2016 which retrieved 17,653 records. The search was updated on 12 January 2017 when 989 records were retrieved for the year 2016.

Search string:

invasi* OR exotic OR alien OR introduced NEAR/5 species OR escape* OR non-native OR "non native" OR non-native

AND

plant* OR seed* OR herb* OR flora* OR veget* OR botan* OR tree* OR shrub* OR weed*

AND

control OR manage* OR interven* OR eradicat* OR eliminat* OR remov* OR restor*

Restrict to:

TIMESPAN: 2007 – 2016

LANGUAGES: English

RESEARCH AREAS: environmental sciences OR ecology OR plant sciences OR biodiversity conservation

CABI

A search of Oxford CABI was run on 9 February 2016 which retrieved 5,419 records. The search was updated on 12 January 2017 when 472 records were retrieved for the year 2016.

Search string:

(invasive or invasion or exotic or alien or “introduced species” or escape* or non-native or “non native”).mp

AND

(plant or plants or herb* or flora or floras or veget* or botan* or tree* or shrub* or weed*).mp

AND

control.sh or HH*.cc or ((management or managed or intervention or eradicat* or eliminat* or remov* or restor*).mp)

AND

FF500.cc

Restricted to 2009-2016 year of publication AND Published in English

mp – searches abstract, title, broad terms, heading words, identifiers and cabicodes.

sh – searches heading words.

cc – searches cabicodes; FF500 = weeds and noxious plants; HH* = pathogen, pest, parasite and weed management.

* Wild character which matches a zero or any character(s). For example, eradicat* will return eradicate, eradicated, eradicates and eradication.

“introduced species” – double quotes ensures that only records that exactly match the text within the double quotes are returned.

Scopus

A search of Oxford Scopus was run on 4 February 2016 which retrieved 10,756 records. The search was updated on 12 January 2017 when 1,635 records were retrieved for the year 2016.

Search string:

TITLE-ABS-KEY ((invasi* OR exotic OR escap* OR alien OR nonnative OR non-native OR "non native" OR (introduced near/5 species)) AND (restor* OR control OR remov* OR eradicat* OR manag* OR interven*) AND (plant* OR seed* OR herb* OR flora* OR veget* OR botan* OR tree OR shrub OR weed)) AND ORIG-LOAD-DATE AFT 20160204 AND (LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012) OR LIMIT-TO (PUBYEAR , 2011) OR LIMIT-TO (PUBYEAR , 2010) OR LIMIT-TO (PUBYEAR , 2009) OR LIMIT-TO (PUBYEAR , 2008) OR LIMIT-TO (PUBYEAR , 2007)) AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "re") OR LIMIT-TO (DOCTYPE , "bk")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (SUBJAREA , "AGRI") OR LIMIT-TO (SUBJAREA , "ENVI"))

Analysis of life forms of invasive plant species

Life form data were derived from Kew's published and unpublished taxonomic data sources:

The World Checklist of Selected Plant Families: <http://apps.kew.org/wcsp/>

Life form terminology was based on the Raunkiaer system with some modifications (Govaerts et al. 2000). Please see the life form terminology section on the WCSP for more information

(<http://apps.kew.org/wcsp/about.do#lifeforms>).

The six major life form categories were:

- hemicryptophytes (hemicryptophytes and hydrohemicryptophytes)
- therophytes (therophytes, hydrotherophytes and hemitherophytes)
- cryptophytes (geophytes, hydrogeophytes and helophytes)
- chamaephytes (chamaephytes, hydrochamaephytes and semichamaephytes)
- nanophaneropytes (nanophanerophytes and seminanophaneropytes)
- phanerophytes

For supplementary information for this chapter please contact sotwp@kew.org