

the wide range of this dictionary. The included terms are connected by see references.

Clearly this is a useful book and would suit students of pharmacy. It may also be of use to practicing pharmacists as they keep up with changes in their industry. However, it seems rather expensive compared to some other paperback dictionaries I have reviewed.

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Reference

Carey, N. (2015), *Junk DNA: A Journey through the Dark Matter of the DNA*, Icon Books, London.

RR 2017/227

Invasive Plant Species of the World: A Reference Guide to Environmental Weeds (2nd edition)

Ewald Weber

CABI

Wallingford and Boston, MA

2017

xiii + 581 pp.

ISBN 978 1 7806 4386 1 (print); ISBN 9781 7863 9057 8

(ePub)

£195 \$320

Keywords Guides and handbooks, Plants, Botany

Review DOI [10.1108/RR-06-2017-0133](https://doi.org/10.1108/RR-06-2017-0133)

Since the first edition in 2003, 50 plants have been added to the list and 19 have been judged not to be harmful. So the book now has about 500 entries. To be included in this book a plant has to be both alien and invasive. The plants are mainly flowering plants but there are some coniferous trees and two ferns. There are some surprises. *Utricularia gibba* is a carnivorous plant, and these are usually considered at risk. This one is widely distributed but is an invasive alien in New Zealand where it threatens the native carnivorous plants. Another is *Ravenala madagascariensis* which is endemic in Madagascar, and so would be assumed to be at risk, but it is invasive in Mauritius. Because only alien invaders are included it does not mean that there is no information on non-alien invasive plants. The blackberry, *Rubus fruticosus*, is alien in the southern hemisphere, including New Zealand where the joke is that there are only two blackberry bushes in New Zealand – one on North Island and one on South Island. I have seen two gardens (neither in my care) that had been completely overrun by blackberry.

My first target in the book was Japanese Knotweed, *Reynutria japonica*. We have this in a local park where it is under control and on a railway embankment that is in a redevelopment zone and so likely to be disturbed and dispersed. The book describes the regimes of cutting and herbicide use, which is what happened in our park. Breaking news from The Centre for Agriculture and Biosciences International, another part of CABI, the publishers of this book, opens the possibility of biological control. Hopefully this will be a success and will be recommended in the next edition.

Each entry has Mercator's World Map coloured to the level of reporting (that is down to the US states and the like). The colouring uses green to indicate where a plant is native or where the status is unclear and, in two shades of red, where it is naturalised and where it is invasive. The maps are easy to use for widely spread species but, for example, with *Ravenalia*, it was not until I had read the text that I spotted the little red dot of Mauritius. At the other end, a couple of species of *Melilotus* are shown as invasive all over Greenland where plants only grow on the southern seacoasts.

For each species there is detail of the family, life form (evergreen tree, perennial herb, etc.), synonyms, uses and common names in English. There is a statement of the ecosystems it invades. Then there is a description of the plant followed by a description of the plant's ecology and impact. The entry ends with details of control measures.

The book is arranged by scientific name, so if you know that it is easy to find the plant. There is a list of synonyms mapped to the preferred name and list of common names which also map to the preferred name. Both these lists are in alphabetical order of approved name, which makes it difficult to use. I would suggest future editions put the synonyms and the common names in alphabetical order. Once you have the approved name you know where it is in the book.

A list of websites used to identify plants to include in the book is provided. There is also a list of field guides and weed books that cover invasive species. The full citations of the references in the text are given in a bibliography. This runs to 58 pages, which is around 1,700 items.

Invasive Plant Species of the World provides plenty of information and will be a useful reference source for those involved in any way with alien invasive plants. As I have suggested with the blackberry, the information can also be of use for non-alien invasive plants. I found it interesting to review this book and I have learnt quite a lot from it.

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