

# What Plant is this?



**enviroed4all** ®  
environmental education for everyone

© Jeanie Clark, 2012

1 It grew around the edge of our dam at winter's water level.



enviroed4all®  
environmental education for everyone

© Jeanie Clark, 2012



2 It grew tall quickly  
- like a tree sapling!



enviroed4all®  
environmental education for everyone

© Jeanie Clark, 2012

### 3 It has a strong root system to hold it in the ground... erosion protection too!



One tap root

At least two  
lateral roots

Many other  
support roots



enviroed4all®  
environmental education for everyone

© Jeanie Clark, 2012



4 It has hairs all over its leaves to catch moisture – so it survives dry times.



enviroed4all®  
environmental education for everyone

© Jeanie Clark, 2012



5 It has spikes on the end of their leaves – so it protects itself.





## 7. It is a home to ladybirds in spring.



**enviroed4all**®  
environmental education for everyone

© Jeanie Clark, 2012

8 It provides a strong 'reed' for  
mud-eyes to cling to while moulting into  
.... dragon flies.



enviroed4all®  
environmental education for everyone

© Jeanie Clark, 2012



9. It has a mauvy-pink flowers to attract bees and other pollinating insects.  
(Ponies and sheep also eat them.)



enviroed4all®  
environmental education for everyone

© Jeanie Clark, 2012

10. It has spikes on its flower heads to protect seeds til they drop in autumn.



**enviroed4all**®  
environmental education for everyone

© Jeanie Clark, 2012



# 11. A declared 'noxious\* weed'



Originally from across Europe and Eastern Asia

Brought to Australia by Scottish immigrants for a garden plant from 'home'\*.

Quickly multiplies - can have 20,000 seeds per plant!

Forms a natural barbed wire fence! - a dense thicket blocking out light water and nutrients to other plants.

\* See Appendix for discussion of terms and history



enviroed4all®  
environmental education for everyone

© Jeanie Clark, 2012

# 12 It is Scotland's floral emblem.



Adopted in the 1200's by Scottish King Alexander III.

First used as a royal symbol on silver coins of 1470 by James III.

Order of the Thistle founded by James V in 1540.

Reason? C1200 Legendary saving of Scotland from a night-time Norse raiding party – who came barefoot and started across a field of Thistles. Their yells of pain quickly alerted the Scots to their presence!

Known as **Heraldic Thistle** in Scotland!

© Jeanie Clark, 2012



enviroed4all®  
environmental education for everyone



# What can Scotch Thistle teach us?

Look closely at living things for the biodiversity linked to them.

There is good in everything! - (e.g. ladybirds and dragon flies)

Know our weeds and help to safely remove them!



**enviroed4all**®  
environmental education for everyone

© Jeanie Clark, 2012

# Appendices

- Definitions — Noxious Weeds  
Which plant by Scientific name?
- Links to AusVELS  
Science  
Humanities- Geography  
History  
Sustainability
- Links to education projects — RSAV  
AYOF  
UNDB
- References





# 'noxious' and 'restricted weeds'

Scotch Thistle was one of the first five ever listed weeds in the first Victorian Weed Legislation of **1856** (Parsons & Cuthbertson)

Legislation changes over time. E.g. It was proclaimed '**noxioius**' in Maffra Shire in 1937 (Argus).

A 'noxious' weed is a plant that can "cause environmental or economic **harm** or have the potential to cause such harm" DPI (2010)

There are different levels. In the Wimmera today, it is a '**restricted**' weed. (DPI 2011)

Restricted weeds are not to be traded and are considered a serious **threat** to agriculture. (DPI 2010)

## Scientific name for Scotch Thistle

There is some confusion as to which of two very similar plant 'Scotch Thistle' refers to?

***Cirsium vulgare*** - Spear Thistle - which probably came in seed. It was a native to and abundant in Britain and especially Scotland at the time of the legend, but not across Europe.

Or ***Onopordum acanthium*** –Heraldic Thistle – brought here for gardens by Scottish graziers as a prettier alternative to the Spear Thistle. However it was not present there at the time of the legend, nor is it common in Scotland today.

There is so much confusion that Viridans reports that many botanists and web pages confuse the two. (Gullan, P. Viridans)



enviroed4all®  
environmental education for everyone

© Jeanie Clark, 2012

# Links to AusVELS Curriculum standards:

## **Science – Biological Sciences Knowledge from these levels**

- F Living things have basic needs
- 1 Living things have a variety of external features  
Living things live in different places where their needs are met
- 4 Living things have life cycles  
Living things, including plants and animals, depend on each other and the environment to survive
- 5 Living things have structural features and adaptations that help them to survive in their environment
- 6 The growth and survival of living things are affected by the physical conditions of their environment
- 9 Ecosystems consist of communities of interdependent organisms

## **Humanities – Geography knowledge and skills**

- 3 The effects of people's interaction with their environment  
Use atlas maps.

## **History – 'Local Knowledge' from these levels**

- 2 The past in the present
- 5 The Australian Colonies
- 6 Australia as a Nation

## **Cross- curriculum domain Sustainability 'Organising Ideas'**

- 1 The biosphere is a dynamic system providing conditions that sustain life on Earth
- 2 All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival.





## Links to education projects :

ResourceSmart AuSSI Vic  
5Star Sustainability Certification

Biodiversity Checklist



**State - RSAV** — Biodiversity Module Checklist: A3 – knowing weeds to be able to monitor for them, B1 – resource to increase biodiversity knowledge by recognising this weed and understanding the niche it holds, so that can be filled when removed.  
([http://www.resourcesmart.vic.gov.au/for\\_educators/5\\_star\\_certification\\_5632.html](http://www.resourcesmart.vic.gov.au/for_educators/5_star_certification_5632.html) )

**National - AYof** Farmers as environmental managers have been tackling this weed since 1856.  
(<http://www.yearofthefarmer.com.au/about/objectives.html> )

**Global - UNDB Aichi Targets** - increasing knowledge of biodiversity (1), and of domesticated plants (13) , and of threats to biodiversity by alien invaders (9). (<http://www.cbd.int/sp/targets> )



## United Nations Decade on Biodiversity



enviroed4all®  
environmental education for everyone

© Jeanie Clark, 2012

# References

## **All photographs © Jeanie Clark 2012;**

Clark, J. photos of Scotch Thistles from Warracknabeal, at the Clarks Park farm, and at the Yarriambiack Creek May to November 2012.

## **Scottish legend and floral emblem**

Visit Scotland, " *the thistle of Scotland*" last updated 2012

<http://www.visitscotland.com/about/arts-culture/uniquely-scottish/thistle> accessed on 27 November 2012

Plant Ecology "*Scotch Thistle*" no update date [http://extension.usu.edu/weedweb/ecology/Scotch\\_ec.htm](http://extension.usu.edu/weedweb/ecology/Scotch_ec.htm) accessed on 27 November 2012

Scottish History on line " *The Scottish Thistle – Emblem of Scotland*" last update 4 Apr 2009

<http://www.scotshistoryonline.co.uk/thistle/thistle.html> accessed on 27 November 2012

## **Scotch Thistle as a Weed in Australia**

Australian Weeds Committee "*Weed Identification – Australia- Scotch Thistle*" no update date <http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&state=&s=&ibra=all&card=H21> accessed on 27 November 2012

Herbiguide "*Scotch Thistle*" no update date [http://www.herbiguide.com.au/Descriptions/hg\\_Scotch\\_Thistle.htm](http://www.herbiguide.com.au/Descriptions/hg_Scotch_Thistle.htm) accessed on 27 November 2012

The Argus, '*Scotch Thistle Declared a Noxious Weed*' Tuesday, 9 November 1937, page 3 reproduced at <http://trove.nla.gov.au/ndp/del/article/11122604> accessed on 6 December 2012

DPI, 'Noxious Weed' in *Invasive Weed Classifications* last update 1 OCT 2010, <http://www.dpi.vic.gov.au/agriculture/pests-diseases-and-weeds/weeds/invasive-plants> accessed pm 6 December 2012

Parsons W. T. & Cuthbertson Eric George "Scotch Thistles" in "*Noxious Weeds of Australia*", Second Edition 2001 page 217 available at [http://books.google.com.au/books?id=sRCrNAQrpwC&pg=PA217&lpg=PA217&dq=%22Scotch+Thistle%22+%26+%221856%22&source=bl&ots=0Q5NwJ9czj&sig=RFIWgn-wLnYN9gk-ExAzVMzPG8&hl=en&sa=X&ei=Ze\\_UKHLOMahiQfLq4CIAQ&ved=0CCwQ6AEwAA#v=onepage&q=%22Scotch%20Thistle%22%20%26%20%221856%22&f=false](http://books.google.com.au/books?id=sRCrNAQrpwC&pg=PA217&lpg=PA217&dq=%22Scotch+Thistle%22+%26+%221856%22&source=bl&ots=0Q5NwJ9czj&sig=RFIWgn-wLnYN9gk-ExAzVMzPG8&hl=en&sa=X&ei=Ze_UKHLOMahiQfLq4CIAQ&ved=0CCwQ6AEwAA#v=onepage&q=%22Scotch%20Thistle%22%20%26%20%221856%22&f=false) accessed on 6 December 2012

Gullan, P. 'A common weed' in Viridans, *Introduced Plants and Animals in Victoria*, no update date, <http://www.viridans.com/INTRO/commonweed.htm> accessed on 6 December 2012.

DPI '*Invasive Plant Classifications – Wimmera*' last updated 29 March 2011, <http://www.dpi.vic.gov.au/agriculture/pests-diseases-and-weeds/weeds/?a=99733> accessed on 6 December 2012



**enviroed4all**®  
environmental education for everyone

© Jeanie Clark, 2012