Early Invader Weeds Update

Weeds at the Early Stage of Invasion (WESI) Project newsletter

June 2021, Issue #23

Welcome to the Winter issue of the Early Invader Weeds Update newsletter.

Be a weed hygiene legend!

With the cooler wetter weather setting in, it's a good time to notice weeds popping up around the place.

Some may be going through their usual cycles and others could be emerging in a location for the first time.

Perhaps you've noticed them before, but the rain has given them an extra boost and their numbers have increased.

As you observe these changes with the seasons, it's worthwhile noting them down. You may like to investigate further, follow up with treatment or continue monitoring. The templates in the Early Invader Manual may be useful to help you record such information. It can be found here: https://www.environment.vic.gov.au/invasive-plants-and-animals/early-invaders

The rain means lakes, rivers and other waterways are rising; dams are filling and may be overflowing; our gardens are getting a lovely soak and the colours of the bush are enhanced; and it can also mean for wet and muddy conditions.

This is a time to take extra care in your weed management activities to keep safe and be a weed hygiene legend!

Mud sticking to tyres, machinery tracks and soles of footwear can unintentionally provide a mode of transport for weeds to get from one location to a another.

There are some things you can do to help minimise the spread of weeds. These include:

- "Arrive clean, leave clean" by cleaning vehicles, machinery, and footwear between sites. Paying particular attention to tyres, tracks, tread, mudguards, wheel arches and the undercarriage of vehicles.

Figure 1: Rain on Sweet Pittosporum (*Pittosporum undulatum*).

Credit: Bianca Gold (DELWP).

- Keep on the lookout for things that appear new or out of place, they might be early invader weeds.
- Be informed of what weeds are in the area and the way in which they can spread.
- Try to avoid working in weedy areas, especially if the weeds are producing seed or can be spread vegetatively.
- Make sure soil, gravel, mulch or other organic materials being introduced for maintenance or refill are clean.
- Where possible, limit the number of sites visited at a time and/or visit weedy sites last.
- Try to avoid driving vehicles and machinery off formed tracks.

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For more information on weed hygiene see these documents:

"DELWP Output delivery standards – for the delivery of environmental activities" https://www.water.vic.gov.au/__data/assets/pdf_file/0016/52414/DELWP-OutputDeliveryStandard-web1.pdf

"Arrive clean, leave clean - Guidelines to help prevent the spread of invasive plant diseases and weeds threatening our native plants, animals and ecosystems" https://www.environment.gov.au/system/files/resources/773abcad-39a8-469f-8d97-23e359576db6/files/arrive-clean-leave-clean.pdf

New weed discoveries in Victoria

The WESI team values the various connections we have to plant experts across the State of Victoria and beyond.

One such connection is with the experts that make up the National Herbarium Victoria, at the Royal Botanic Gardens of Victoria (RBG).

Figure 2: National Herbarium of Victoria specimen sheet.

Credit: Amelia Stanwix (The Design Files).

An RBG, Senior Conservation Botanist, Neville Walsh recently contacted the WESI team with three new species for Victoria, identified as Petite Liquorice (*Plecostachys serpyllifolia*), Toothed Spurge (*Euphorbia davidii*) and South American Mexican Clover (*Richardia humistrata*).

Read on to find out more about the occurrence of these species in Victoria.

For a good introduction to what goes on at the National Herbarium of Victoria have a look at this article and short video from a 2018 Gardening Australia episode https://www.abc.net.au/gardening/factsheets/national-herbarium-victoria/9581606

Petite Liquorice (*Plecostachys serpyllifolia*)

Petite Liquorice (*Plecostachys serpyllifolia*) may sound like a delicious treat (to some) but it's a newly discovered weed growing in eastern Victoria.

Originating from South Africa, this scrambling low growing shrub has been recorded for the first time in Victoria, growing in coastal vegetation at Lake Bunga (near Lakes Entrance) in Gippsland.

Figure 3: Petite Liquorice in native sedgeland eastern Victoria.

Credit: Bertbohosouth (VICFLORA website).

At first glance, the silvery grey leaves, may not look out of place and could be mistaken for an indigenous species.

The small broad leaves are smooth grey above and densely woolly white below, matching the white hairy appearance of the stems. Clusters of very small, white daisy type flowers form in Spring.

It is known to behave as an invasive species in California (USA), where "growers voluntarily discontinued producing this plant because of its

tendency to seed and escape gardens" (https://plantright.org/watch/plecostachys-serpyllifolia/)

Attempts at eradication have been made at the Victorian location.

Figure 4: Petite Liquorice with old flower heads.

Credit: Bertbohosouth (VICFLORA website).

Toothed Spurge (*Euphorbia davidii*)

Toothed Spurge (*Euphorbia davidii*) is an annual herb that has recently been recorded between Wallan and Broadford, at the only known site in Victoria.

It is native to southwestern North America and Mexico, and has been recorded in New South Wales and Queensland., where it is known to invade roadsides and areas of cultivation.

Figure 5: Toothed Spurge modified flower (cyathia), NSW.

Credit: Michael Sim (ALA - Canberra Nature Map)

As the name suggests, leaves are coarsely toothed. They are long to 8cm, mostly positioned opposite on finely bristled stems.

Clusters of unusual modified flowers (cyathia) appear at the ends of branches from late Summer into Autumn.

Figure 6: Toothed Spurge close up, Victoria.

Credit: Neville Walsh (RBG).

South American Mexican Clover (*Richardia humistrata*)

South American Mexican Clover (*Richardia humistrata*), is not actually a clover and appears to get the name based on its low growing, ground covering habit and white flowers.

This perennial herb is recorded at a single site on a roadside near Whitfield in north-east Victoria, and numerous near-coastal sites of central to southern NSW.

It has the ability to from dense mats and take root at the nodes (the part of stem where leaves form). Care should be taken to minimise regrowth by removing all plant parts and disposing of safely.

Figure 7: South American Mexican Clover spreading habit.

Credit: Neville Walsh (RBG).

The oval shaped leaves taper to a point, they are rough with stiff, bristly hairs on both sides. Also covered in white hairs, stems can turn reddish brown.

Tiny white flowers, with four petals each are tubular and occur in clusters of ten to twenty, in late Summer.

Figure 8: South American Mexican Clover.

Credit: Neville Walsh (RBG).

South American Mexican Clover produces four very small, smooth, brown seeds per case.

Understanding weed history helps control future spread

The WESI team is very pleased to have a two page article in the newly published Winter Issue #81 of the Victorian Landcare and Catchment Management Magazine.

The theme for this issue is “Invasive plants and animals” and contains articles about weeds, deer, foxes, rabbits and people working together to achieve great things!

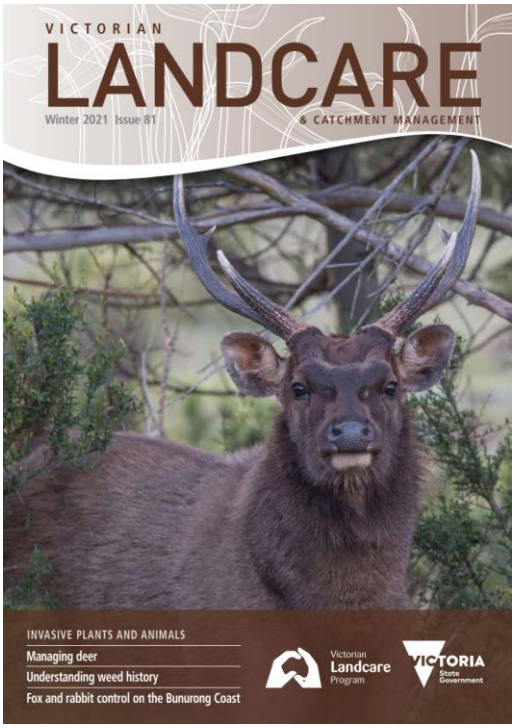

Figure 9: Victorian Landcare and Catchment Magazine cover.

Credit: https://www.landcarevic.org.au/landcare-magazine/

When faced with an early invader weed at a new location, it’s interesting to consider that every weed has a history.

How did the weed arrive at this location? Was it dumped in garden waste or were the seeds carried by a bird from a nearby garden? What garden did it come from and what is the history of its horticultural origins, popularity, cultivation and use as a garden plant? All weeds must come from somewhere. Every weed has a history.

You can read the full WESI article here: https://www.landcarevic.org.au/landcare-magazine/winter-2021/understanding-weed-history-helps-control-future-spread/

Figure 10: Invasive garden plant, African Daisy (*Osteospermum* species) on a roadside in the Wimmera. How did it get here?

Credit: Kate Blood (DELWP).

The magazine is a seasonal publication to share information about Landcare and natural resource management, aimed at Victorian farmers, landholders and community.

You can view the full magazine, see previous issues, subscribe for future copies or contribute stories here: https://www.landcarevic.org.au/landcare-magazine/

Mother of Millions (*Bryophyllum delagoense*)

Often weeds start out as garden ornamentals, Mother of Millions (*Bryophyllum delagoense* and *Bryophyllum* x *houghtonii*) is just one example.

Known to occur in only two recorded sites in Victoria, both in the east of the state, it is a high risk, highly invasive, succulent plant.

Named for its ability to reproduce vegetatively via “plantlets” from the tips of the leaves, it can easily form dense stands.

Mother of Millions distinctive fleshy leaves are greyish in colour with mottled darker blotches. They have notches at the tips where the plantlets form.

The stems are smooth grey or pinkish in colour and the plant can grow to 1.5m tall.

Figure 11: Plantlets forming on leaf tips of Mother of Millions.

Credit: Arthur Chapman (Atlas of Living Australia)

In winter to spring, it produces drooping orangey-red to pink, bell-shaped flowers.

Both species are listed in the Advisory list of environmental weeds in Victoria and are considered significant environmental weeds in Queensland and New South Wales. Being a succulent, it is well adapted to dry conditions and can survive in a number of different environments including grasslands, open woodlands, roadsides and disturbed areas.

It reproduces both by seed and vegetatively, where it can grow from plantlets and leaves that detach from the main plant.

Figure 12: Flowers of Mother of Millions.

Credit: c/o Atlas of Living Australia (supplied by maltsy via iNaturalist)

Be on the lookout for Amazon Frogbit

Will next summer be the tipping point for the floating aquatic weed Amazon Frogbit (*Limnobium laevigatum*) to spread rapidly within some Victorian water systems?

After recent heavy rains and flooding in parts of Victoria it's important to keep up our vigilance for Amazon Frogbit which may have been washed away in floodwaters to new sites.

There are five recorded locations in Victoria, three around Melbourne, one at Gembrook and one at Bairnsdale in Gippsland. Four are in ponds and one in a wetland.

Figure 13: Floating aquatic weed Amazon Frogbit.

Credit: Brian Dowley (DELWP).

It doesn't take much for plants in an over-flowing pond to be carried into a creek and then a river system that may lead to a lake system.

As temperatures rise in spring and summer, plants can grow rapidly forming floating mats. Plants can set seed and grow from separated plant rosettes. The fruit can contain up to 100 small seeds that can float on water and be easily spread in water flow. You can read more about Amazon Frogbit in Issue #15.

If you think you have found Amazon Frogbit in Victoria, please contact the WESI Team.

Weed layer in eMap

We are super excited and waiting in anticipation of having a new person in the WESI team. The Bushfire Biodiversity Response and Recovery (BBRR) Program has provided funding for 2021/2022 to develop a weed distribution layer in eMap and an associated risk register.

Figure 14: Screen grab of eMap header.

Credit: DELWP.

eMap is an interactive mapping tool for fire and emergency management available for DELWP staff or registered users.

Our new team member will pull weed distribution data together from many sources and create a spatial layer for use in eMap. It will allow people working on fire response and planned burns to turn on the weed layer to help in planning and response. The availability of weed spatial information will help to, for example, avoid sending fire-fighting machinery through weed infestations that could be spread further on equipment.

Advisory list update

We are looking forward to working with DELWP's Arthur Rylah Institute in 2021/2022 to update the "Advisory list of environmental weeds in Victoria."

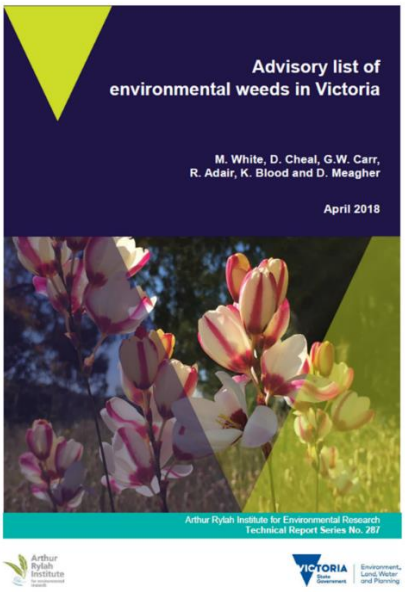

Figure 15: Cover of the 2018 edition of the advisory list of environmental weeds in Victoria.

Credit: DELWP.

Early Invader Weeds Update

Since the advisory list was last updated in 2018, there have been new species recorded in Victoria and there is growing need for current and additional related material.

The updates include additional species and reviewed risk ratings, taxonomy updates, some minor formatting improvements and excitedly, addition of fire response information from the “Post-fire weeds triage manual” published in 2012.

If you use the advisory list, it would be great to hear from you about any updates and improvements you would like to see.

White, M., Cheal, D., Carr, G. W., Adair, R., Blood, K. and Meagher, D. (2018) Advisory list of environmental weeds in Victoria. Arthur Rylah Institute for Environmental Research Technical Report Series No. 287. Department of Environment, Land, Water and Planning, Heidelberg, Victoria. ISBN 978-1-76077-001-3 (pdf/online).

Zimmer, H., Cheal, D., and Cross, E. (2012) Post-fire weeds triage manual: Black Saturday Victoria 2009 – Natural values fire recovery program. Department of Sustainability and Environment, Heidelberg, Victoria. ISBN 978-1-74287-422-7 (online).

‘til next time!

Follow us on social media: https://www.facebook.com/groups/earlyinvaderweeds.vic

Visit our webpage: https://www.environment.vic.gov.au/invasive-plants-and-animals/early-invaders

Your friendly WESI Project Team, Kate and Bianca (aka Goldie)

The “Early invader weeds update” is the newsletter of the Weeds at the Early Stage of Invasion (WESI) Project. It is about managing early invader environmental weeds in Victoria.

The Weeds at the Early Stage of Invasion (WESI) Project is supported by the Victorian Government’s Weeds and Pests on Public Land Program and the Bushfire Biodiversity Response and Recovery Program.

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How to cite this issue: Gold, B. and Blood, K. (2021) Early invader weeds update. Issue #23, JUNE 2021. Department of Environment, Land, Water and Planning, Victoria. ISSN 2652-8304 - Online (pdf / word) format.

ISSN 2652-8304 – online (pdf/word) format

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