Your Australian Tropical Herbarium

The Australian Tropical Herbarium (ATH) at James Cook University in Cairns was built in 2008 to bring together over 160,000 herbarium specimens, including many weed specimens, from the CSIRO Atherton Herbarium, Queensland Herbarium specimens previously housed in Mareeba and part of the James Cook University Herbarium collection. It is a joint venture of the CSIRO, Australian and Queensland Governments and James Cook University and has state of the art facilities and infrastructure for specimen processing, curation, photography, pest and climate control, field, herbarium and laboratory research. Specimen records from the ATH are available to be viewed online via Australia’s Virtual Herbarium.

Regional Coordinator News

Many thanks to Lindsay Boyd for giving her time to be our Gladstone regional coordinator in 2014/15. We wish her well in her new role and welcome Josh Dyke from Gladstone Regional Council to the position.

Upcoming weed spotter training

Sunshine Coast: Wednesday 18 Nov 2015, 10am–12pm.
Brisbane: Thursday 19 Nov 2015, 10am–12pm.
Emerald: postponed until 2016.

Please email Melinda.Laidlaw@dsiti.qld.gov.au or phone (07) 3896 9323 if you would like to attend.
Class 1 declared plant: *Ulex europaeus* (gorse)

Gorse is a dense shrub growing to 4 m tall with spiny, dark green narrow leaves that are 1–3 cm long and 1.5 mm wide (fig. 1). Its stems are hairy and are covered in spines up to 5 cm long and it has an extensive, deep root system. The flowers are pea-like, bright yellow, fragrant and 2–2.5 cm long (fig. 2). These mature into dark brown, grey or black egg-shaped pods 10–25 mm long and 6–8 mm wide. The small seeds (3 mm) are shiny and smooth, green to brown and are able to remain viable in the seed bank for up to 30 years.

Seeds can be spread by animals, the movement of soil, mud and machinery, via water or by the dumping of garden waste. Seeds germinate in autumn or from spring to mid-summer and germination can be aided by burning or disturbance. Gorse have not been recorded in Queensland for more than 50 years. Read more about gorse in the October 2013 bulletin.

Class 1 and 2 declared plants: *Eichhornia crassipes/E. azurea* (water hyacinth and anchored water hyacinth)

Water hyacinth (*Eichhornia crassipes* – Class 2) is widely naturalised in eastern and northern Queensland. It floats on the water’s surface and can reach 65 cm in height. Long, black to purple feathery roots can extend to 1 m below the water. The leaves are bright to dark green and round with a diameter of 5–10 cm. When young, leaf stalks are swollen, spongy and bulbous (fig. 3). This trait is lost as plants mature to have elongated leaf stalks. Dense flower spikes appear in October and continue into summer. They are light purple with a darker blue/purple and yellow centre (4–6 cm long x 3.5–5 cm wide) (fig. 4). Each flower remains open for a day or two before withering. Capsules (10–15 mm long) are produced at the base of each flower and contain around 300 egg-shaped seeds (0.5–1.5 mm long). The flower stalk bends into the water, releasing the seeds which sink to the substrate, where they can persist for at least 15 years.

A closely related species, anchored water hyacinth (*Eichhornia azurea*) (photo page 5), is a Class 1 declared pest plant not yet recorded in Queensland. It can be distinguished from water hyacinth (*Eichhornia crassipes*) by its slightly larger leaves (5–16 cm diameter) and its habit of rooting (anchoring) into the substrate. Read more about water hyacinth in the October 2014 bulletin.

If you think you have seen gorse or water hyacinth growing in your region, please contact the Queensland Herbarium on (07) 3896 9323, email a photo to: Queensland.Herbarium@qld.gov.au or contact Biosecurity Queensland on 13 25 23.
Class 1 declared plant: **Sesbania punicea** (red Sesbania)

Red Sesbania is a Class 1 declared pest plant native to Brazil, Argentina, Paraguay and Uruguay. It is an invasive weed in the southern United States and in several African countries; however there are no known records of red Sesbania from Queensland.

Red Sesbania is usually found along rivers and creek banks, on gravel bars and on instream islands. It can invade dams, ponds, canals and wetlands, forming dense thickets which block water flow and access to waterways. Native flora along vast lengths of waterways can be displaced by red Sesbania infestations. In addition, all parts of the plant are poisonous to birds, reptiles and mammals.

Red Sesbania a small deciduous shrub, growing up to 4 m in height (fig. 1). Leaves are alternately arranged, 100–200 mm wide and compound, made up of 5–20 pairs of leaflets with a pointed tip (fig 2). It is a member of the pea family (Fabaceae) and has bright red to orange/red pea flowers (2–3 cm) which hang in drooping clusters (fig. 2). These appear in the late spring but can persist right through summer and into autumn.

Red Sesbania seed pods are divided into 4 compartments giving it a winged appearance (fig. 3). The pods are initially green but turn brown when mature. They are 60–80 mm long x 10 mm wide with a pointed tip. Each pod contains 4–10 seeds and each plant can produce 100–300 seed pods per year. Seed pods rattle when shaken, giving them their other common name, ‘Brazilian rattlebox’.

The seeds have a tough coat and are able to float long distances downstream. The seeds can also germinate directly below the parent plant, as red Sesbania is relatively shade tolerant. The seeds are thought to have a viability in the soil of 2–3 years, however it is capable of a very fast life cycle, maturing in as little as 3 months to flower and set seed.

If you think you have seen red Sesbania growing in your region, please contact the Queensland Herbarium on (07) 3896 9323, email a photo to: Queensland.Herbarium@qld.gov.au or contact Biosecurity Queensland on 13 25 23.
Keep an eye out for these weeds in October…

<table>
<thead>
<tr>
<th>Species</th>
<th>Common name</th>
<th>Watch for in this region</th>
<th>Field attributes to look for</th>
</tr>
</thead>
<tbody>
<tr>
<td>#Acaciella glauca (July 2014 bulletin)</td>
<td>redwood</td>
<td>South East Queensland, Burnett/Mary, Cape York, Fitzroy Basin, Mackay Whitsunday, Torres Strait, Dry Tropics</td>
<td>white ball-shaped flowers, creek lines and dry tropics</td>
</tr>
<tr>
<td>#Chromolaena odorata/ C. squalida (May 2013 bulletin)</td>
<td>Siam weed</td>
<td>South East Queensland, Burnett/Mary, Cape York, Fitzroy Basin, Northern Gulf, Mackay Whitsunday, Torres Strait, Wet Tropics, Dry Tropics</td>
<td>pale lilac/white flowers, triangular leaves with 3 prominent veins</td>
</tr>
<tr>
<td>#Cylindropuntia prolifera (August 2014 bulletin)</td>
<td>jumping or coastal cholla</td>
<td>Fitzroy Basin, Desert Channels, Southern Gulf, Dry Tropics, South West Queensland</td>
<td>spines to 2 cm long</td>
</tr>
<tr>
<td>#Cylindropuntia tunicata/ C. rosea (July 2013 bulletin)</td>
<td>chain-link cactus/ Hudsons pear</td>
<td>Fitzroy Basin, Desert Channels, Southern Gulf, Dry Tropics, South West Queensland</td>
<td>long spreading spines</td>
</tr>
<tr>
<td>#Eichhornia azurea/ E. crassipes (October 2014 bulletin)</td>
<td>water hyacinth</td>
<td>Desert Channels, Queensland Murray Darling Region, Condamine, South West Queensland</td>
<td>water bodies, floating, purple flowers</td>
</tr>
<tr>
<td>Elephantopus mollis (March 2015 bulletin)</td>
<td>tobacco weed</td>
<td>South East Queensland, Burnett/Mary</td>
<td>daisy to 1 m tall, flowers white or pink</td>
</tr>
<tr>
<td>#Equisetum spp. (July 2013 bulletin)</td>
<td>horsetails</td>
<td>South East Queensland</td>
<td>primitive plant, no flowers, leaves reduced</td>
</tr>
<tr>
<td>Heterotheca grandiflora (September 2014 bulletin)</td>
<td>telegraph weed</td>
<td>South East Queensland</td>
<td>daisy to 2 m, flowers yellow</td>
</tr>
<tr>
<td>Hymenachne amplexicaulis (June 2013 bulletin)</td>
<td>hymenachne</td>
<td>Desert Channels, Queensland Murray Darling Region, Condamine, South West Queensland</td>
<td>robust grass to 2.5 m, water bodies &amp; drains</td>
</tr>
<tr>
<td>#Limnocharis flava (October 2013 bulletin)</td>
<td>yellow burrhead</td>
<td>South East Queensland, Burnett/Mary, Cape York, Mackay Whitsunday, Torres Strait, Wet Tropics, Dry Tropics</td>
<td>water bodies &amp; margins, yellow flowers &amp; triangular stems</td>
</tr>
<tr>
<td>#Mikania micrantha (November 2013 bulletin)</td>
<td>mikania vine</td>
<td>South East Queensland, Burnett/Mary, Cape York, Mackay Whitsunday, Torres Strait, Wet Tropics, Dry Tropics</td>
<td>heart shaped leaf &amp; smothering habit</td>
</tr>
<tr>
<td>#Mimosa pigra (August 2013 bulletin)</td>
<td>giant sensitive tree</td>
<td>South East Queensland, Burnett/Mary, Cape York, Southern Gulf, Northern Gulf, Mackay Whitsunday, Torres Strait, Wet Tropics, Dry Tropics</td>
<td>ferny leaves, rose-like thorns, pink ball-shaped flowers</td>
</tr>
<tr>
<td>Species (cont.)</td>
<td>Common name</td>
<td>Watch for in this region</td>
<td>Field attributes to look for</td>
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<tr>
<td><em>Pistia stratiotes</em> (November 2014 bulletin)</td>
<td>water lettuce</td>
<td>Desert Channels, Queensland Murray Darling Region, Condamine, South West Queensland</td>
<td>water bodies, resembles a small open lettuce</td>
</tr>
<tr>
<td><em>Pueraria montana var. lobata</em> (February 2015 bulletin)</td>
<td>kudzu</td>
<td>South East Queensland, Burnett/Mary</td>
<td>vine with fragrant purple-pink flowers</td>
</tr>
<tr>
<td><em>Salvinia molesta</em> (November 2013 bulletin)</td>
<td>salvinia</td>
<td>Desert Channels, Queensland Murray Darling Region, Condamine, South West Queensland</td>
<td>water bodies, leaves with water repellent hairs</td>
</tr>
<tr>
<td><em>Senecio madagascariensis</em> (August 2014 bulletin)</td>
<td>fireweed</td>
<td>Wet Tropics</td>
<td>daisy to 60 cm, flowers yellow</td>
</tr>
<tr>
<td># <em>Senegalia insuavis</em> (April 2014 bulletin)</td>
<td>pennata wattle or cha-om</td>
<td>Cape York, Mackay Whitsunday, Torres Strait, Wet Tropics, South East Queensland, Burnett/Mary</td>
<td>pink ball-shaped flowers, prickles along stems</td>
</tr>
<tr>
<td># <em>Senegalia rugata</em> (April 2015 bulletin)</td>
<td>soap pod</td>
<td>Cape York, Mackay Whitsunday, Torres Strait, Wet Tropics</td>
<td>pink ball-shaped flowers, prickles along stems</td>
</tr>
<tr>
<td><em>Solanum viarum</em> (April 2013 bulletin)</td>
<td>tropical soda apple</td>
<td>Burnett/Mary, Fitzroy Basin, Northern Gulf, Mackay Whitsunday, Dry Tropics</td>
<td>variegated cherry tomato, thorny leaves, look in sale yards, abattoirs</td>
</tr>
<tr>
<td># <em>Ulex europaeus</em> (October 2013 bulletin)</td>
<td>gorse</td>
<td>Queensland Murray Darling Region, Condamine</td>
<td>fragrant yellow flowers, thorny leaves</td>
</tr>
<tr>
<td># <em>Vachellia karroo</em> (May 2013 bulletin)</td>
<td>karroo thorn</td>
<td>South East Queensland, Fitzroy Basin, Desert Channels, Queensland Murray Darling Region, Condamine, South West Queensland</td>
<td>long, white, paired thorns</td>
</tr>
<tr>
<td># <em>Vachellia xanthophloea</em> (September 2013 bulletin)</td>
<td>yellow fever tree</td>
<td>South East Queensland, Fitzroy Basin, Desert Channels, Southern Gulf, Northern Gulf</td>
<td>long, white, paired thorns</td>
</tr>
</tbody>
</table>

# Class 1 declared plant

anchored water hyacinth (*Eichhornia azurea*) – Class 1

Photo: DAF
Notifications – September 2015

Finding and reporting emerging weeds which could cause serious environmental, social and economic impacts across Queensland is a critical role of our network. Putting them on the map also means we can track their spread and the effectiveness of control measures across the landscape and through time.

If you see a plant in your region which raises your suspicions, please collect it and bring it to the attention of your regional coordinator and/or the Queensland Herbarium. You can find a full list of the declared plants of Queensland on the Biosecurity Queensland website. (WONS=Weed of National Significance)

1. **Class 2/WONS Andropogon gayanus** Kunth (gamba grass) from Cooktown. Darryn Higgins, Cook Shire Council.

2. **Class 2 weed Thunbergia grandiflora** Roxb. (blue trumpet vine) from Tingalpa. Lisa Hume, Brisbane City Council.

Class 1 declared plants: *Limnocharis flava* (Limnocharis)

![Fig. 1. Photo: B. Waterhouse](image1)

Limnocharis is a Class 1 declared pest plant known from north Queensland. Known infested sites are currently under long-term management by Biosecurity Queensland. Limnocharis grows in clumps to 1 m tall and is anchored in the substrate (fig. 1). The stems are triangular in cross-section (fig. 2) and can grow to 85 cm long. Leaves vary according to the age of the plant but are narrow when young and become more oval with age. The leaves are pale green and velvety up to 28 cm long and 20 cm wide with 11–15 parallel veins.

Yellow, cup-shaped flowers are borne in groups of 2–15 on triangular stalks (fig. 3). Flowers produce spherical capsules which split open like an orange into 12–18 crescent-shaped segments, or follicles. When mature, the flower stalk bends down to the water’s surface and releases the follicles into the water. These follicles then float upside down, split open and release up to 115 small, brown seeds into the water. The remaining empty capsule can then develop into a vegetative plantlet which either begins growing beside the adult plant, or floats downstream to establish. Seeds can also be spread via mud stuck to vehicles, machinery, footwear or animals. Plants of Limnocharis should never be deliberately cultivated. Read more about Limnocharis in the **October 2013 bulletin**.

![Fig. 2. Photo: DAF](image2)

If you think you have seen Limnocharis growing in your region, please contact the Queensland Herbarium on (07) 3896 9323, email a photo to: [Queensland.Herbarium@qld.gov.au](mailto:Queensland.Herbarium@qld.gov.au) or contact Biosecurity Queensland on 13 25 23.
Your regional coordinators
Regional coordinators are your local weed experts and are able to answer your questions about training, specimen preparation and weed identification in your area. Give them a call!

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Weed Spotters’ Network Queensland is a joint project between the Queensland Herbarium, the Department of Agriculture and Fisheries and local governments with funding support from the Land Protection Fund.