Pesky Pond Plants and how they affect amphibians

Impact on ecosystem functioning and native vegetation

- Sheer level of biomass
- Nutrient uptake
- Changes in water chemistry
- Physical barrier
- Niche displacement
- Jersey high impact
- 10% increase 5% decrease in native vegetation

Some native plants affected by *Crassula helmsii*

Brown Galingale - *Cyperus fuscus*

Jersey Forget-me-not - *Myosotis secula*

Lesser Marshwort - *Helosciadium nodiflobum*

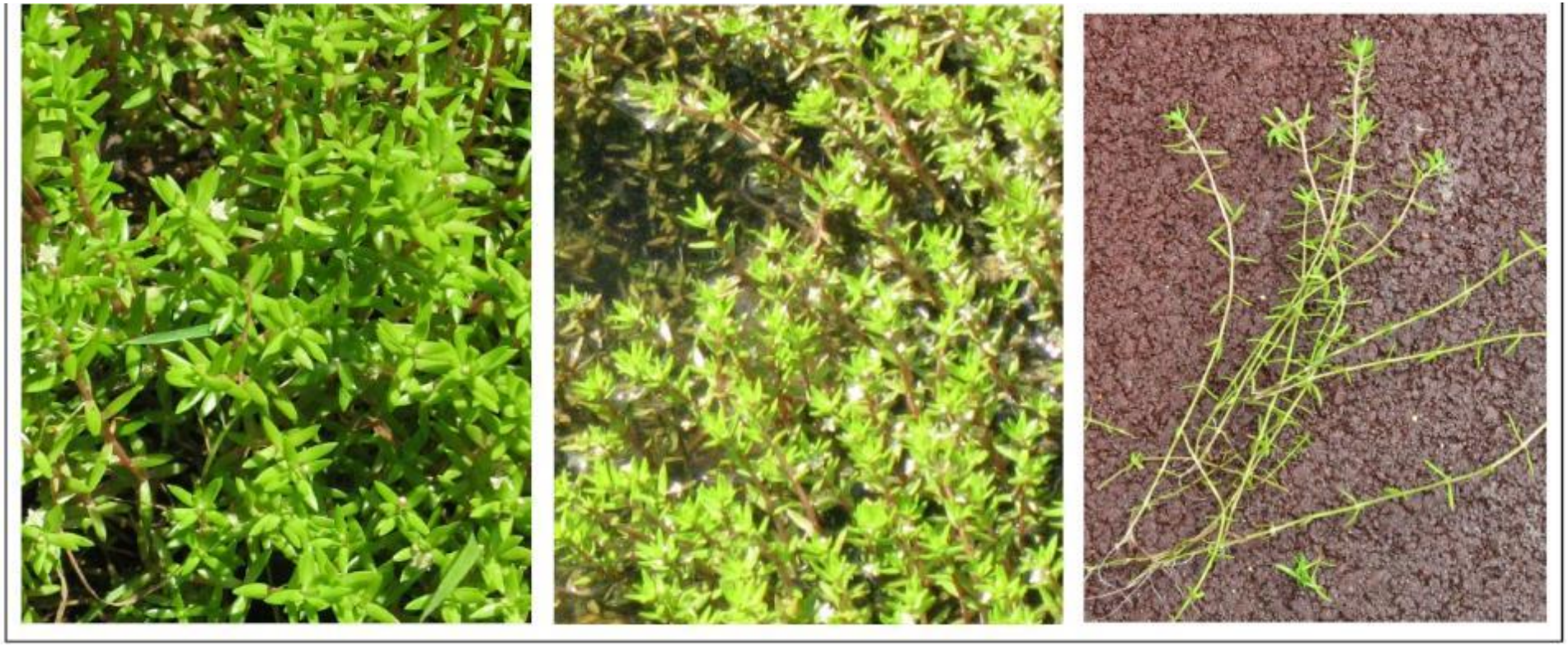
What does it mean for amphibians ?

- Spawning rate and egg survival lower compared with bare soil/preferred native plants.
- Fills up water column so competition for space known to reduce tadpole survival.
- Physical barrier to movement.
- Absorbs substantial amount of nutrient which affects productivity of larvae-preferred algae.
- Reduced larval growth due to change in water chemistry
- Reduced larval growth due to temp reduction through shading.
- Pond dries up before metamorphosis reached.

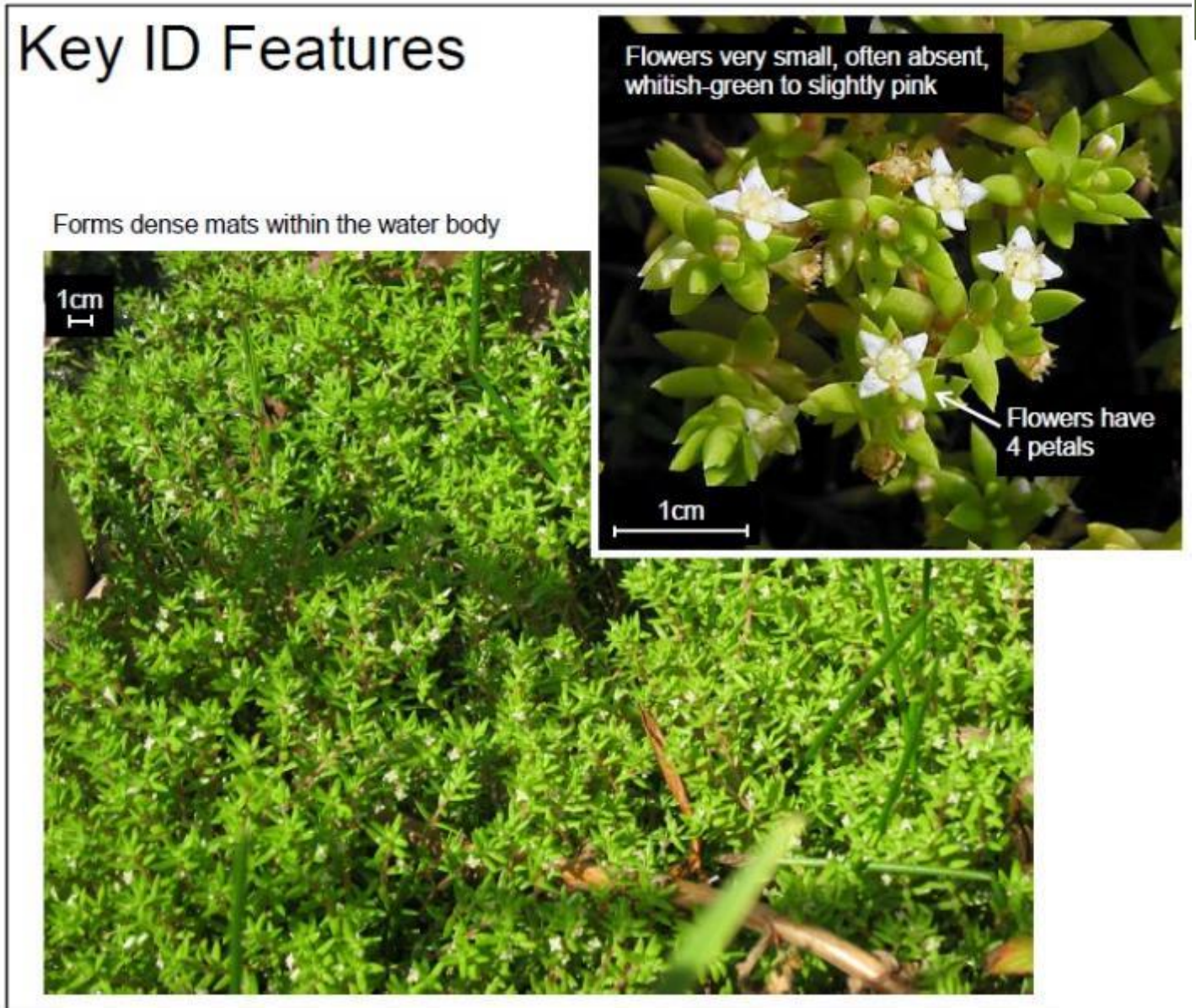
New Zealand pigmyweed (*Crassula helmsii)*

Identification of different forms

- *Terrestrial (left)*: Growing away from water's edge or left stranded as water level falls, creeping stems and aerial, fleshy leaves.
- *Emergent (middle)*: Densely packed leaves in water, intermediate between terrestrial and submerged form (occurs in water <0.6m deep.)
- *Submerged (right)*: Elongated stems with leaves sparse and flat, able to form extensive mats on bed of water body.



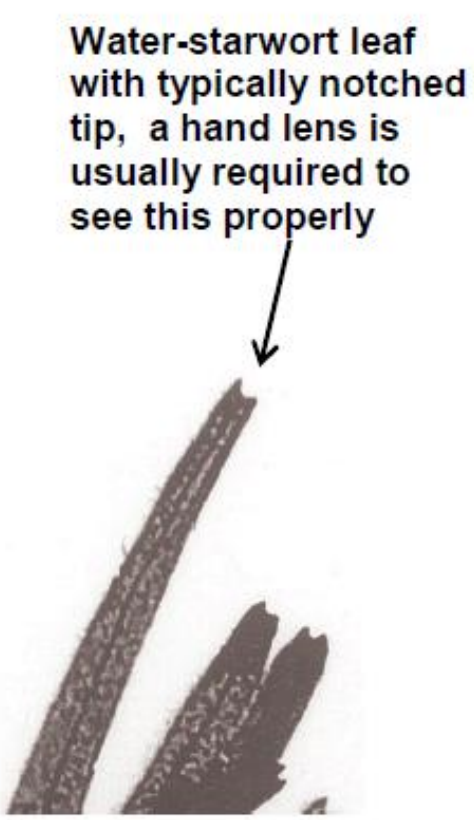
New Zealand pigmyweed (*Crassula helmsii)*



- Forms dense mats within the water body
- Flowers very small, often absent, whitish-green to slightly pink
- Flowers have 4 petals

New Zealand pigmyweed (*Crassula helmsii)* – similar species

A group of species known as water-starworts are most likely to be confused with New Zealand pigmyweed. Water-starworts are distinguished from New Zealand pigmyweed by their non-fleshy leaves, which are usually notched at the tip (hold up to light or use hand lens), and lack of collar at leaf base.



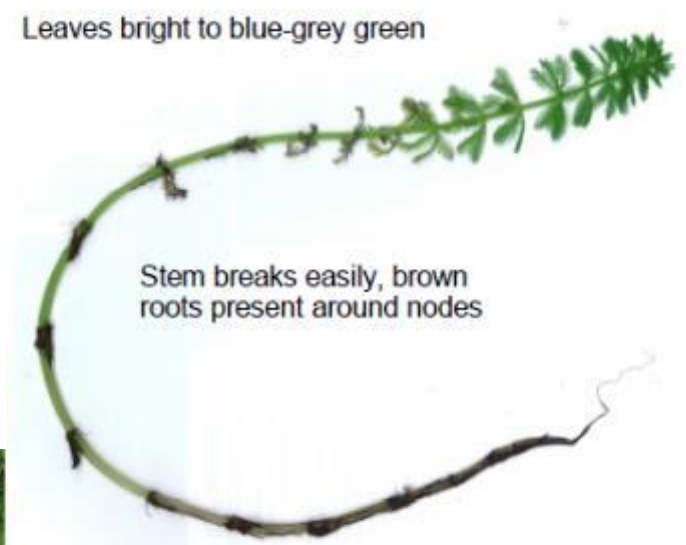
Water fern (*Azolla filiculoides*)

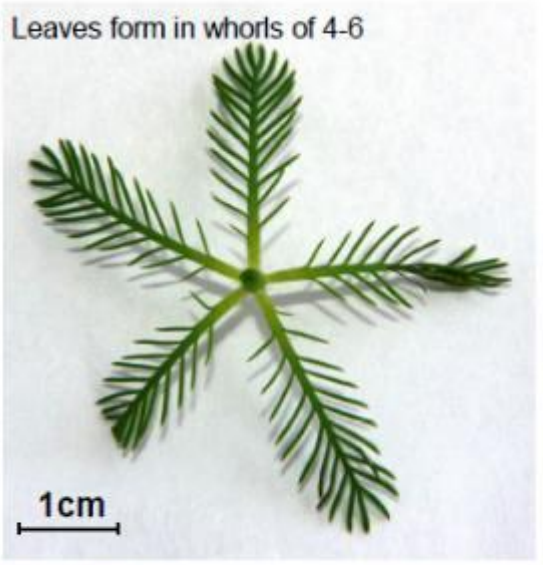
Key ID Features

Usually green but often has a reddish tinge and can be completely red when exposed to stresses

Parrot's feather (*Myriophyllum aquaticum)*

- Changes form depending on the conditions, varying between submerged to emergent foliage.
- Both forms are similar in appearance
- Emergent leaves are stiff, bright green and the most distinctive form.
- Submerged leaves are more fragile and, after death, decompose quickly.





Forms inconspicuous flowers at base of leaves between May and August. Small (2mm) and white. Can be difficult to see.

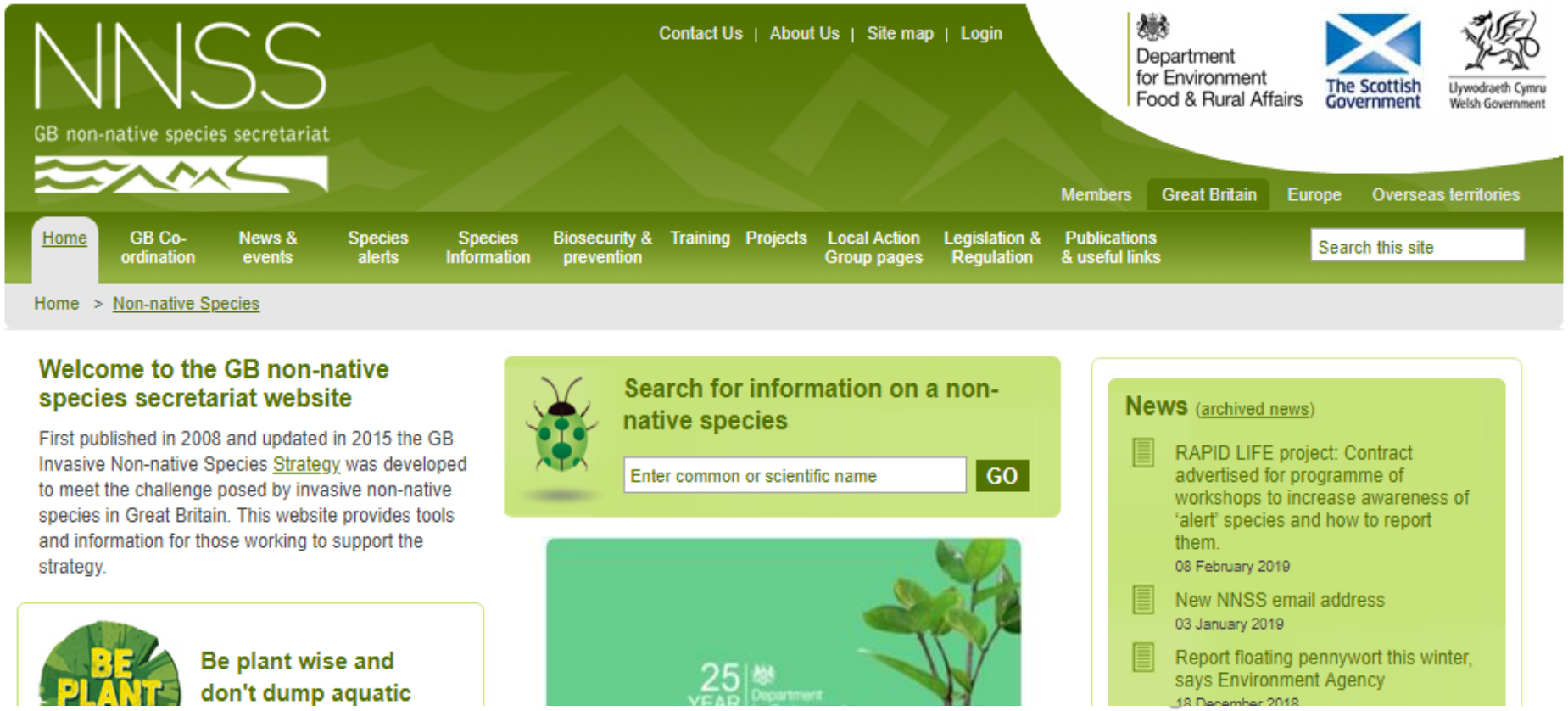
Canadian waterweed (*Elodea canadensis)*

- Flowers are small and inconspicuous and petals white or white tinged with red and borne on end of very long fine stalk.

Resources

GB non-native species secretariat (http://www.nonnativespecies.org)

Includes **Species Identification sheets** and an **E-learning** course (*Module 2b. Identification of Invasive Freshwater Plants*).



Clean your boots !

Pesky Pond Plants any questions

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THE JERSEY BIODIVERSITY CENTRE

amphibian and reptile conservation