

Shannon paragalaxias (native fish)

The Shannon Paragalaxias (*Paragalaxias dissimilis*) is a small, native fish only found in *yingina* / Great Lake, Shannon Lagoon and Penstock Lagoon.

They are usually dark grey (or black) and have bands or blotches down their sides. Their underbelly is lighter. This colouring helps them to camouflage with the rocks and the plants in the shallow waters of *yingina* / Great Lake.

They have a dorsal fin on their back and two pelvic fins. Their fins do not have any markings.

They complete their lifecycle in fresh water.

Females lay their eggs in late spring or early summer. The adult fish stays with the eggs until they hatch. They use their fins and tail (by moving them side to side) to fan the eggs. This keeps the eggs clean and oxygenated (so they don't suffocate).



Adaptations of the Shannon paragalaxias (native fish)

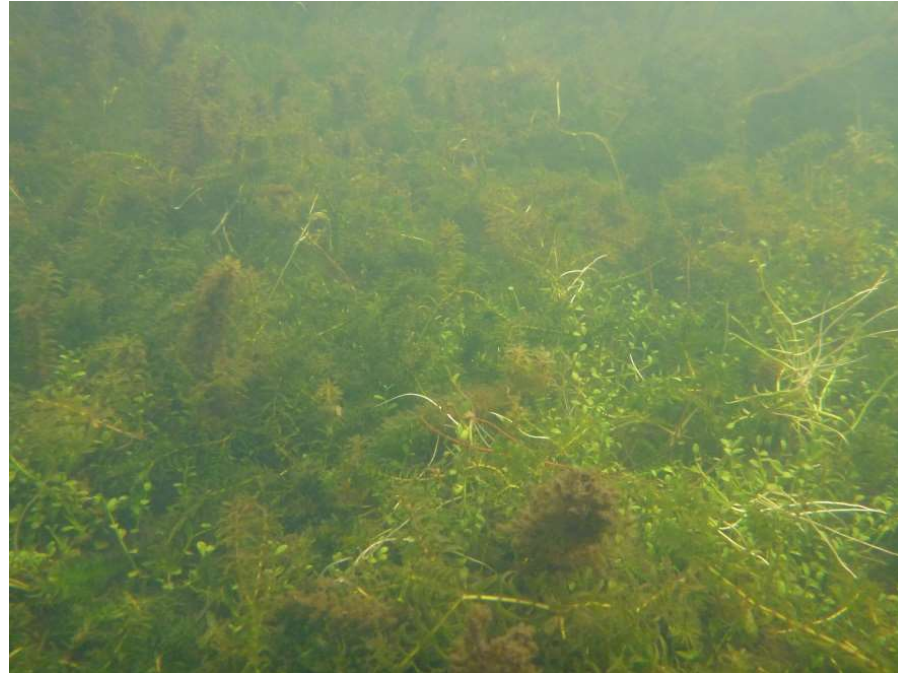
Behavioural adaptations	Physiological adaptations	Structural adaptations
Behavioural adaptations may be learned or instinctive actions that organisms do to survive in their natural habitat.	Physiological adaptations are internal systematic responses to the environment.	Structural adaptations are the physical features of an organism that help it survive in its natural habitat.

Wetland Plants - overview

The plants surrounding our waterways (creeks, rivers and lakes) can be grouped into three main categories.

Terrestrial

Terrestrial plants live on the ground in dry conditions above the water level. These plants do not tolerate being flooded for long.



Amphibious

These plants live at the edge of the waterway. They can survive in both wet or dry conditions. Some amphibious plants respond to wet or dry conditions by changing shape, these are called responders. Other plants stay the same shape in both conditions and are known as tolerators.

Submerged

These plants live in the water. They cannot survive in dry conditions.

Water milfoil (*Myriophyllum species*)



Water milfoil is an amphibious wetland plant that is found in many Tasmanian waterways including Arthurs Lake (pictured), *yingina* / Great Lake and Lagoon of Islands.

Water milfoil (*Myriophyllum species*)

Water milfoil changes shape in different conditions. Changing shape helps it capture sunlight. This allows it to grow, survive and reproduce in the environment.

In dry conditions water milfoil grows along the ground (prostrate). Each single node (the part of the stem where the leaves are attached) has roots and leaves. Growing along the ground maximises its area and therefore helps it capture the most sunlight.

In wet conditions (or underwater) the plant grows upright and has long internodes (the part of the stem between each node) to help it grow tall. This helps it to reach the surface (or near to the surface) where the light is clearer and stronger. The leaves divide and spread out underwater.

Depending on the conditions water milfoil can reproduce asexually (by itself) or sexually (with a partner). Asexual reproduction can be advantageous when there are no other plants in the area or only plants of the same sex are close by.

Sexual reproduction increases the genetic diversity of the plant population. Some plants may cope with stresses (i.e. drought conditions) better than others and can pass these characteristics onto their offspring. Over a long time, without sexual reproduction the plants may still survive through asexual reproduction but they may become more susceptible to stress (and may be more likely to die).

Water milfoil (*Myriophyllum species*)

1. Create a table of the behavioural, physiological and structural adaptations of the water milfoil outlined from the text.

Extension

1. In wet conditions the water milfoil leaves divide and spread out.
Why would this be beneficial?
2. Research why sunlight is important to plants?