

# Mayfly



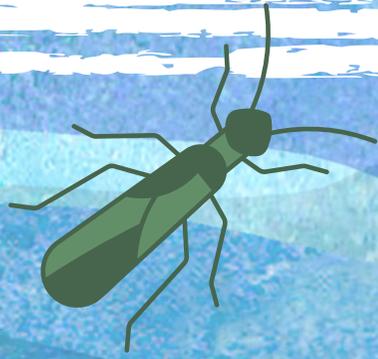
Kia tangi ai te tini parirau to hear the sound of many wings



Photo credit: Emily Roberts



New Zealand mayflies are only found in flowing water. They live underwater for 1-2 years, then emerge from the water to mate and lay eggs. The adults are unable to eat and usually live for only 1-2 days. Often, many mayflies emerge from the water as adults at the same time. This gives them the best chance of finding a mate, and avoiding predators such as birds and fish.



# Stonefly



KIDS  
GREENING  
TAUPO

Kia tangi ai te tini parirau to hear the sound of many wings



Photo credit: Emily Roberts



Many stonefly species spend most of their life (up to two years) as larvae in freshwater streams. They climb out of the water and moult one last time to develop into winged adults and fly to find a mate. Both larvae and adults have two 'tails' called cerci. Stoneflies are probably the longest-lived of our adult aquatic insects. Some species can live for over two-months.



# Caddisfly

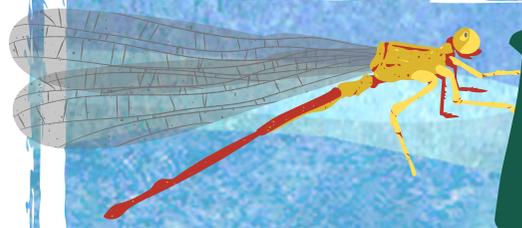


Kia tangi at te tini parirau to hear the sound of many wings



Photo credit: Emily Roberts

Some caddisfly larvae make protective cases to live in. They build them with stones, sand, or sticks stuck together with silk. Adult caddisflies are small, moth-like insects. On summer evenings they can be seen flying over fast-flowing streams. They are an important food for fish and birds



# Damselfly



KIDS  
GREENING  
TAUPO

Kia tangi ai te tini parirau to hear the sound of many wings



Photo credit: Emily Roberts

Damselfly larvae live in water and eat other invertebrates. They can survive for months between meals. The larvae can take up to three years to metamorphose (become an adult). Adult damselflies hunt other flying insects and catch them while they are flying.



# Dragonfly



Photo credit: Robbie Graham



Photo credit: Dr. Frank Hartmann



Photo credit: Bill Heritage

Dragonfly larvae live underwater for up to three years, before they metamorphose into a flying adult. Adults only live for a few days to a few weeks. The larvae and adults are great hunters with excellent eye sight. The larvae breathe through gills in their backside. They can suck water into these and then blast it out again to speed through the water!



# Dobsonfly



Photo credit: Reino Grundling



Photo credit: Emily Roberts

Dobsonfly larvae are the largest larvae of any New Zealand aquatic insect. They are commonly known as 'toe biters'. They are a predator of other aquatic invertebrates, which they ambush and catch using large jaws. The adult dobsonfly only lives for 6-10 days. It flies to find a mate. Females lay eggs on plants hanging over the water. The larvae drop into the water when they hatch.



# Freshwater Macroinvertebrates



Here are some of the most common New Zealand freshwater invertebrates that metamorphose into flying insects. There are many species of each one, so they can vary in colour, shape and size from those pictured here. It's amazing to think that these beautiful winged creatures spend most of their life hiding in our streams, rivers, and ponds.



Mayfly



Dobsonfly



Damselfly



Stonefly



Dragonfly



Caddisfly



Photo credit: Emily Roberts