

The Rainforest Biome ecosystem at Eden

The decomposers, including microscopic **bacteria** and **fungi** and the detritivores such as the **earthworms** and **woodlice**, **springtails**, **cockroaches** and **millipedes** all feed on the organic matter which comes from all of the living things (**leaf litter**, **twigs**, **poo**, **dead plants and animals**).

The **millipedes** however are devoured by the carnivorous **centipede** which is in turn eaten by the **roulroul**. The **roulroul** is a ground dwelling partridge from Malaysia. They also eat the **worms and woodlice**, **trap-jaw ants** and **springtails** that they hunt for on the forest floor.

The **trap-jaw ants** have extremely strong jaws and prey on the **springtails** which have an impressive method for jumping and avoiding predators. We have put a small population of **geckos** into the Biome. The **geckos** do a reasonable job of eating up the **cockroaches** and they also help to control the numbers of **aphids** which are one of the major pest species we have in the biome. Using the natural predators or parasites of the pests to control their numbers in this way is known as 'biocontrol'.

The **aphids**, **mealybugs and scale insects** are significant pests in the biome and can really damage the health of the plants such as the **cocoa trees** because they suck the sugary sap out of the leaves. We put **ladybirds** and **lacewing larvae** into the biome as a 'biocontrol' to eat the **aphids** for us. These are natural predators of **aphids**. The small Indonesian **Sulawesi white-eye birds** fly around in the canopy and also help to eat the **aphids**, but, unfortunately they will also eat **ladybirds** and **lacewing larvae**!

The troublesome **aphids** also leave honeydew (a sweet sticky liquid) on the leaves of the plants. **Sooty mould** (a type of fungi), feeds on this honeydew and grows on the leaves. This is eaten by **snails** which then become food for the **White's tree frogs**.

The **white-footed ants** protect and 'farm' the **aphids, mealy bugs and scale insects** so that they can eat the sweet honeydew that they secrete. The **white-footed ants** also become food for the **Sulawesi white eyes**.

We also put a **parasitic wasp** into the biome as a biocontrol to help control the numbers of **aphids, mealybugs and scale insects**. The wasp first injects an egg into the pest's body. The egg hatches and the larva feeds on it from the inside, killing it. The larva continues to develop into a wasp which then emerges!

