



How plants defend themselves

If living things are to survive, they must have lots of ways of protecting themselves.

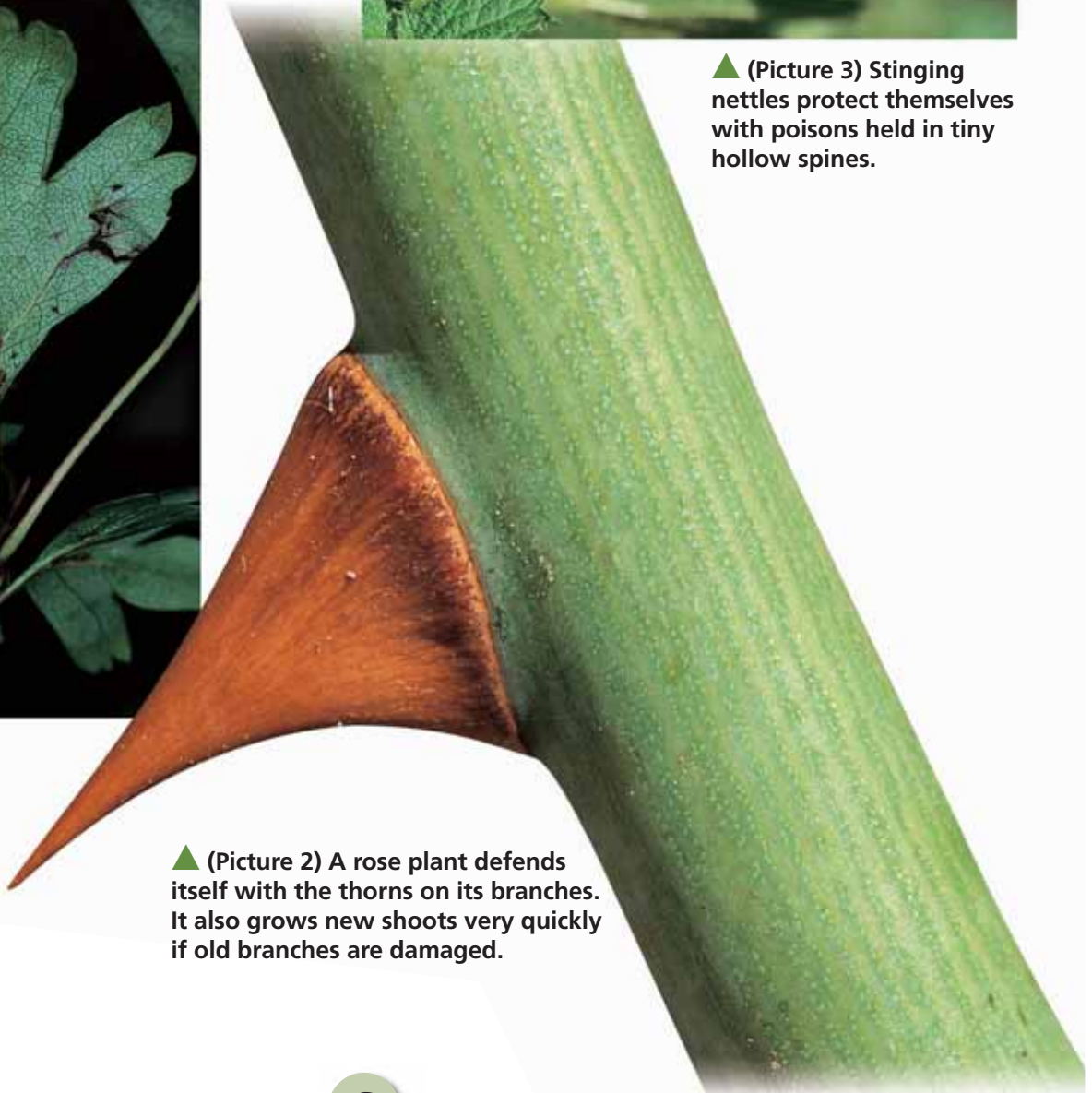
Plants are food for animals. This means that plants are always being eaten (Picture 1). Sometimes plants are also affected by fire or damaged by storms or drought. But the world is still full of plants. So how do they survive?



▲ (Picture 1) A hungry caterpillar will munch its way through many leaves. But some leaves contain poisons to protect themselves.



▲ (Picture 3) Stinging nettles protect themselves with poisons held in tiny hollow spines.



▲ (Picture 2) A rose plant defends itself with the thorns on its branches. It also grows new shoots very quickly if old branches are damaged.

How plants protect themselves

Plants have many ways of protecting themselves from attack. Some plants have poisons in their leaves so that hungry animals will avoid them. Others surround themselves with sharp spines or thorns (Picture 2). Still others have poisons held in tiny needles (Picture 3).

If all this fails, and the leaves still get eaten or the branches destroyed by wind or fire, then plants will grow new shoots from just below the damaged area.

The need to regrow is so important to a plant that you can even cut some trees

down to the ground and shoots will soon appear from the stumps.

Bracken is a good example of a plant that uses all sorts of tricks to survive (Picture 4). This has made it one of the world's most successful plants.

Summary

- Plants are food for animals and so are often damaged.
- All plants need ways of regrowing.
- Some plants survive by keeping most animals away.

▼ (Picture 4) Bracken and some of its many defences.

Produces tiny lightweight spores ('seeds') that are carried around the world by the wind. The spores can stay in the ground for long periods without needing to sprout, so can wait for suitable conditions to occur before growing.

Using its large fronds to gather light, bracken can grow under trees as well as in the open.

Fronds are tough and hard for plant-eating animals to digest.

Sap contains natural insect repellents.

Very long-lived and can outlast many trees.

Poisonous to eat for many animals. Its poisons include cyanide.

Grows fast and rises above many other plants. The large fronds shade the ground and stop other plants growing.

Bracken is home to disease-carrying ticks.

The bracken plant and its spores can even survive fires.

Can survive the cold of winter or a drought by dying back.

Survives in dry places as well as moist sites.

Has underground stems from which new plants grow. These protect it from many animals. Only the leaves rise above the ground.

Secretes juice that attracts ants. The ants then help to fend off other insects.