

**THE
NATURE YEAR**



SEPTEMBER

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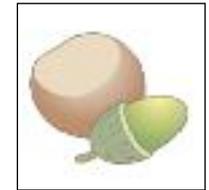
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THE WORLD IN SEPTEMBER

A S SUMMER DRAWS to a close, animals in the northern hemisphere prepare for the winter by storing nuts or feasting on late summer fruit. In the southern hemisphere, the start of spring sees many animals mating or giving birth.

A bounty of fruit in Europe provides a feast for resident animals, as they seek to put on weight before the winter. It also attracts the first winter visitors, such as geese and swans, from Iceland and the Arctic. At the same time, some conifers produce their seed cones, which are an important source of food for birds over the winter.



A jay gathers nuts, which it will hide in the ground and retrieve in winter, when food is in short supply. Meanwhile, blackberries are ripening on thorny branches and a spider is spinning its web to catch the last of the year's flying insects. September is also the start of the spiders' mating season.

In northern regions, some animals start to grow their winter coats. The snowshoe hare, for example, has grey-brown fur in summer. This starts to turn white and grow thicker in the autumn. Its winter coat helps provide camouflage in a snowy landscape.



In the southern hemisphere, spring is beginning, and animals are courting before the summer breeding season.

On the volcanic island of Bartolomé in the Galapagos Islands, the local penguins groom each other. They also take part in “bill duelling”, shaking their heads from side to side and knocking the tips of their beaks together.





EUROPE

IN A COPSE OF TREES, a badger spends time repairing its sett, an underground network of tunnels and nesting chambers. It patches up old tunnels, hollows out chambers ready for its new cubs and lays new bedding: dried grass and leaves. There is less time for these chores in the winter, when badgers sleep for long periods to save energy.

The badgers' sett is dug into the side of a slope. There are dozens of entrances, often concealed behind bushes and trees. Outside, there is a toilet area and a "scratching tree", which badgers use to keep their claws in good condition.



EUROPE

A CROSS EUROPE, it is the start of the red deer “rut”, when males compete for the attention of females. Stags walk side by side to compare each other’s size and let out loud roars to attract females and intimidate rivals. These displays mean that males can size each other up without necessarily needing to fight. However, if two stags refuse to step down, the pair will

lock horns and try to
throw each other
off balance.



Roaring, also called belling, can be heard several kilometres away.



ON A COOL, crisp morning, a flock of swans glide past, calling loudly to one another. They are whooper swans, completing their 1300-kilometre migration from Iceland to the estuaries of northern Britain. The birds cruise at very high altitudes: up to 9000 metres high. The swans flock together in their thousands to spend the winter feeding on wetland grasses. Very few swans remain in Iceland over the winter.



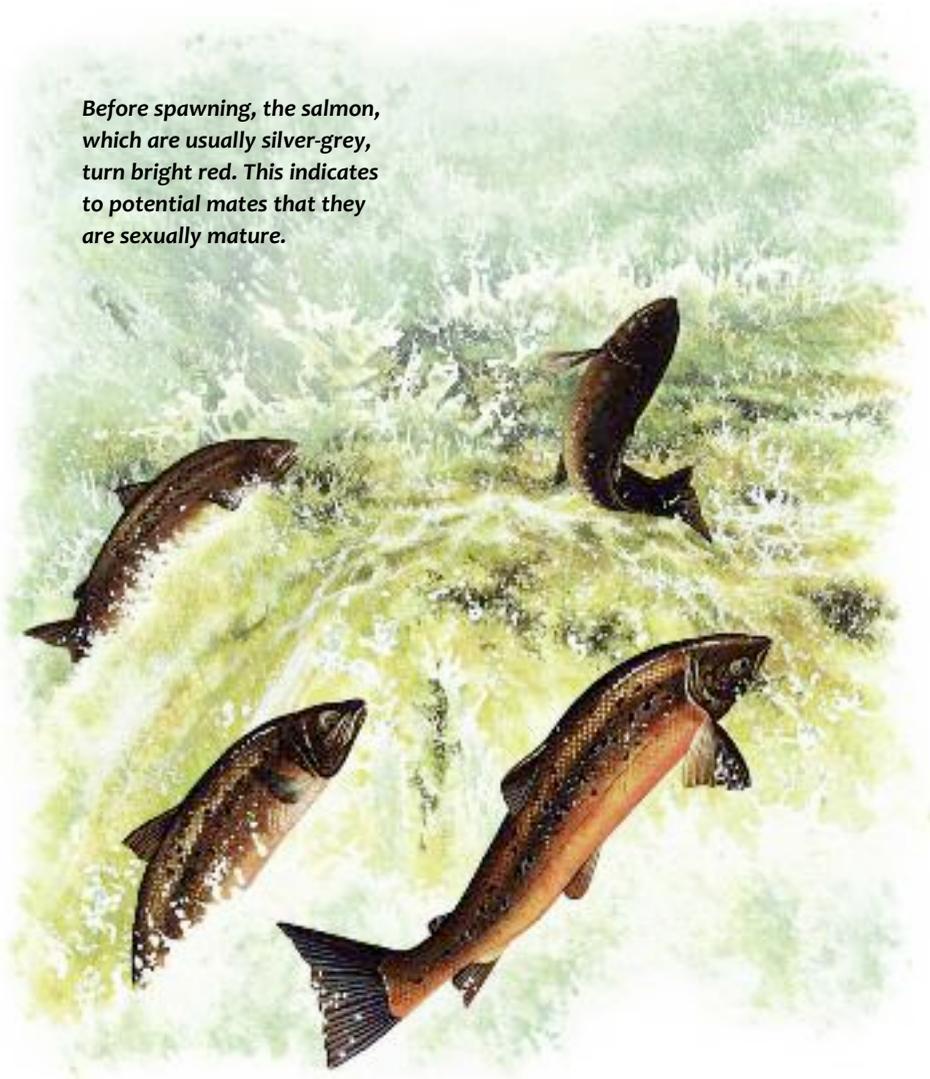
NORTH AMERICA

IN SEPTEMBER, southern populations of bald eagles begin courtship. Bald eagles have the most acrobatic of all courtship dances. In a breath-taking display, they tumble and dive through the air, sometimes locking talons as they whirl and somersault high above the ground.



Couples plummet headlong towards the ground, often pulling out of the fall with only seconds to spare. Bald eagles mate for life and will repeat this display each breeding season.

Before spawning, the salmon, which are usually silver-grey, turn bright red. This indicates to potential mates that they are sexually mature.



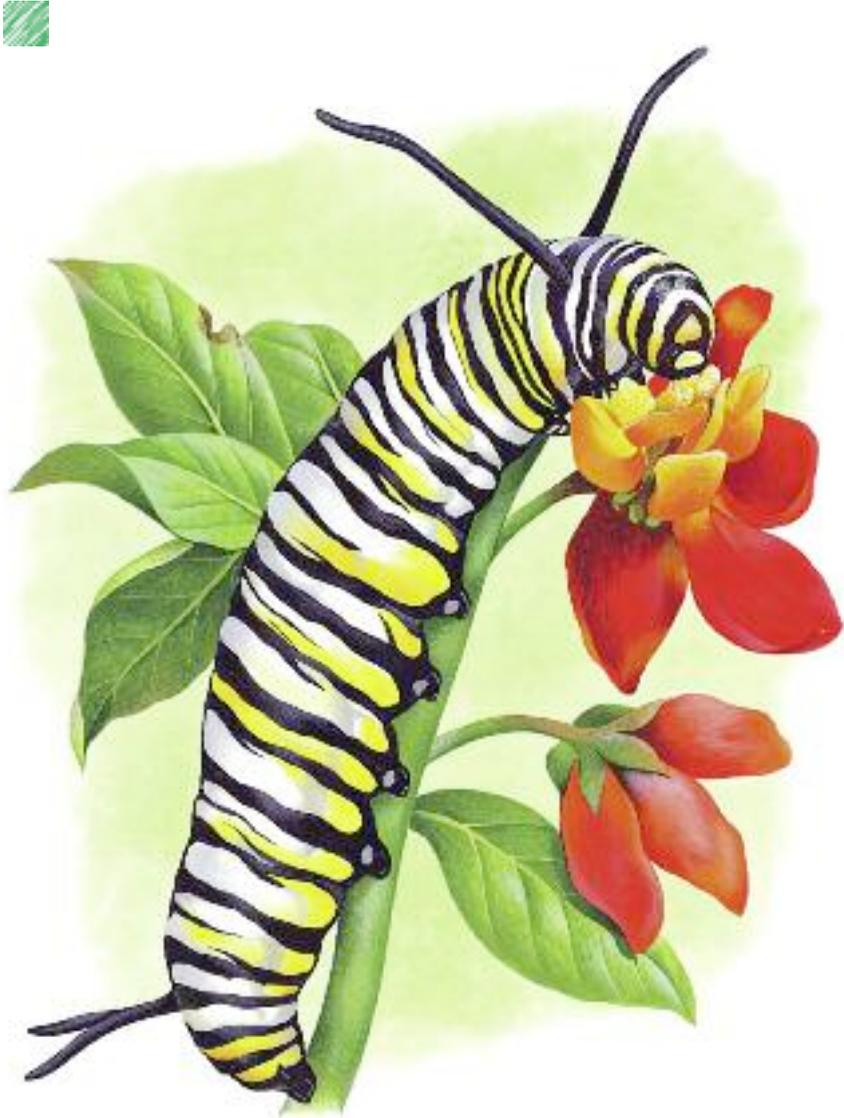
Each female uses her tail to scoop a basin, called a redd, in the gravelly river bed. As she lays her eggs, the male fertilizes them. Both fish then cover over the eggs with gravel.



NORTH AMERICA

IN LATE SUMMER, sockeye salmon complete their long journey upstream from their former home in the Pacific Ocean.

Now that they have reached the headstreams where they themselves hatched out, the salmon pair off and lay their eggs. The female watches over the eggs until she dies. The male, too, will die soon after spawning.



NORTH AMERICA

AS AUTUMN DRAWS CLOSER, the monarch butterflies' final young of the year hatch out. Most monarch butterflies live for less than two months, but this generation may live much longer. This is because they need to migrate south in the autumn, sleep through the winter, and fly north again to lay their eggs in the spring.

After hatching, the caterpillars start to munch on the milkweed plants their eggs were laid on, devouring the stalk, leaves and flowers. It is this diet that makes them poisonous. The caterpillar's bright black and yellow stripes warn other animals that it is bad to eat.

Each caterpillar moults (sheds its skin) five times as it grows. When it is big enough, the caterpillar spins a silk cocoon around its body, and changes into a butterfly.

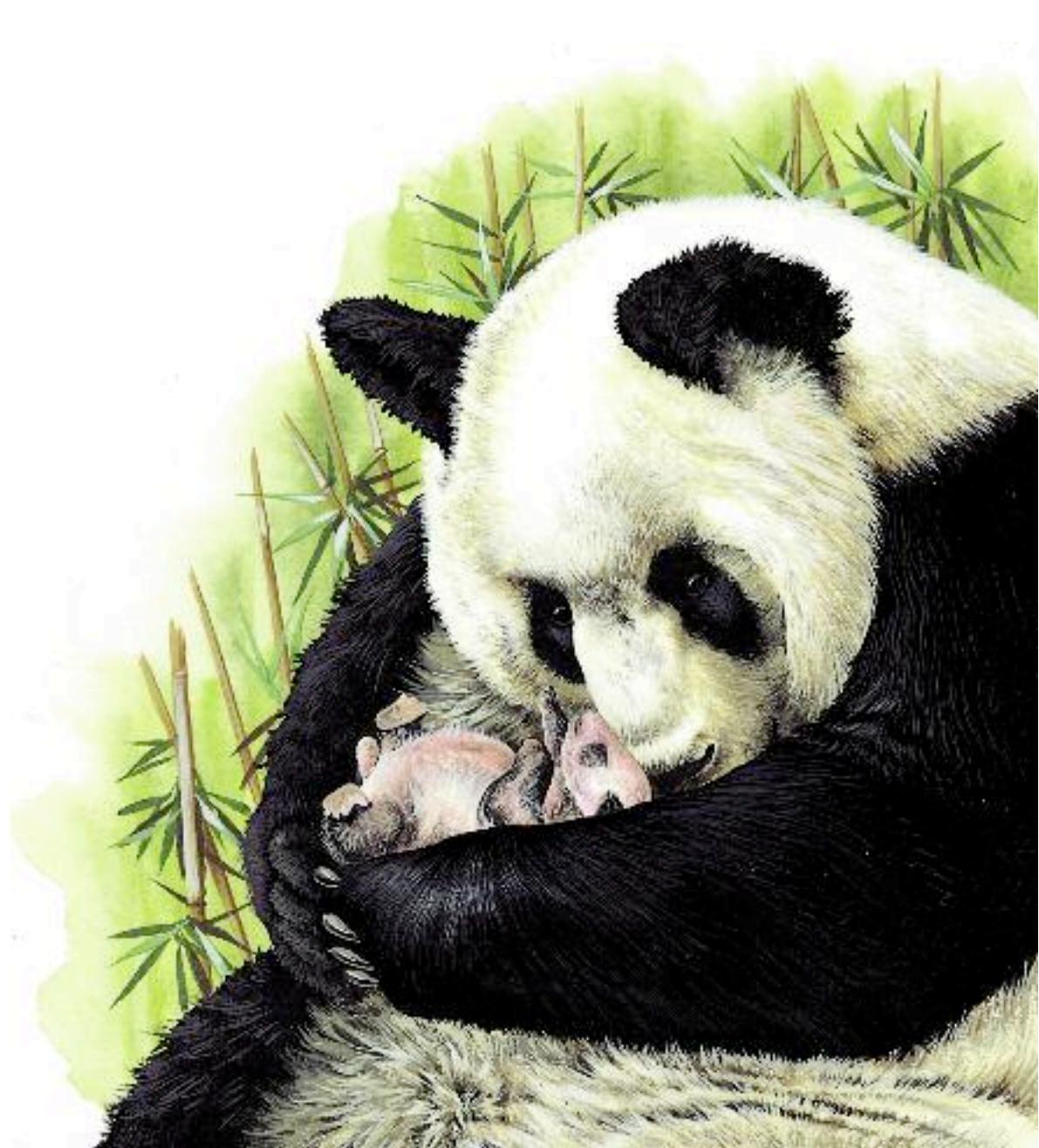
CHINA

IN THE BAMBOO FORESTS of China, a pregnant panda is about to give birth. She looks for a sheltered spot, such as a cave or tree hollow.

If she fails to find one, she builds a rough nest out of bamboo. Here, she gives birth to two tiny cubs.

The newborn cubs are naked, blind and completely helpless. They require constant attention for months, so the mother can only care for one of them. She picks the stronger of the two and abandons the other, which will die shortly afterwards.

The surviving cub is carried about in its mother's mouth or cradled in her arms. Although tiny and fragile, it can make a surprisingly loud, high-pitched squeal. Two weeks after birth, its skin starts to darken in the places where its fur will grow black. The cub will not start to walk until it is about three months old.

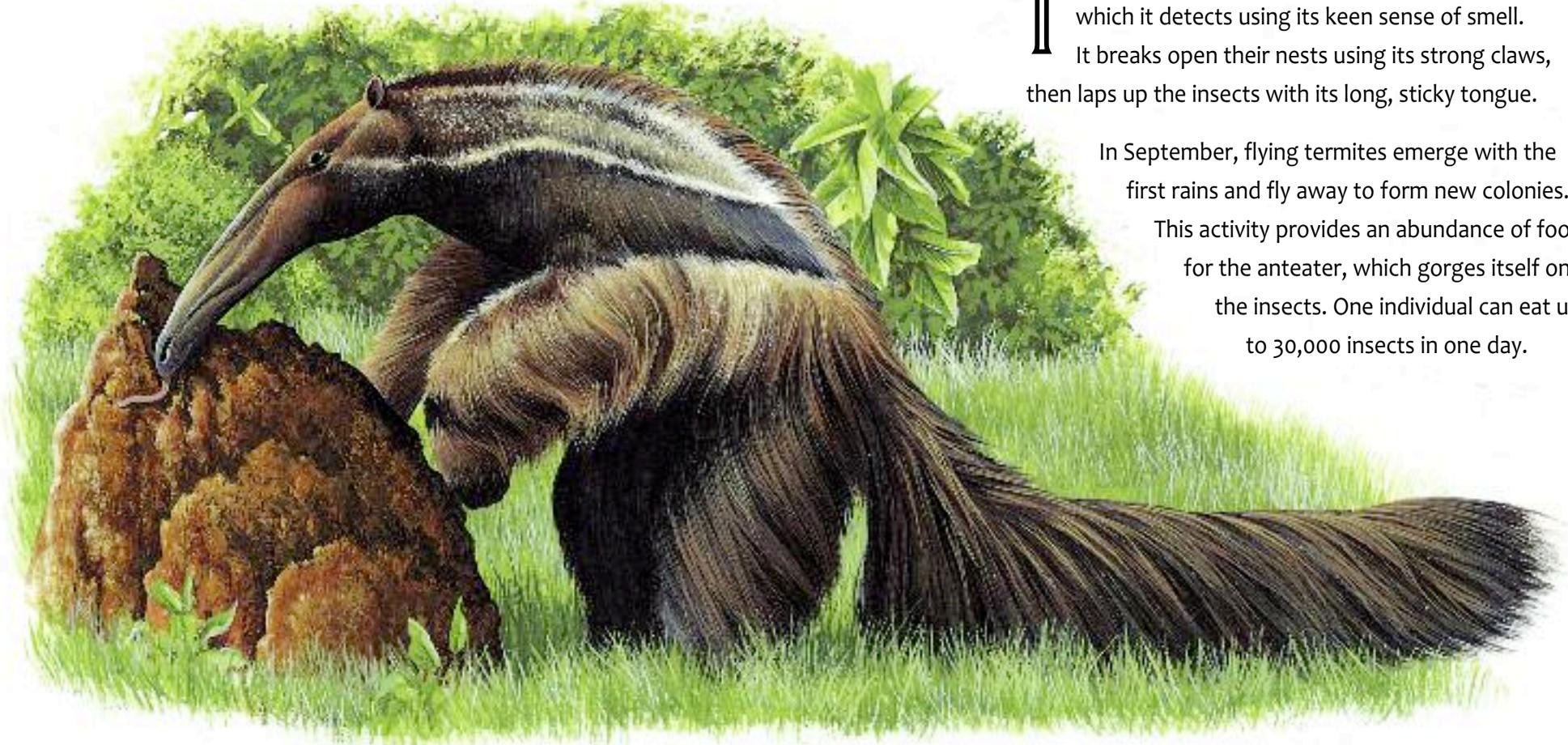


SOUTH AMERICA

THE GIANT ANTEATER feeds on ants and termites, which it detects using its keen sense of smell. It breaks open their nests using its strong claws, then laps up the insects with its long, sticky tongue.

In September, flying termites emerge with the first rains and fly away to form new colonies.

This activity provides an abundance of food for the anteater, which gorges itself on the insects. One individual can eat up to 30,000 insects in one day.

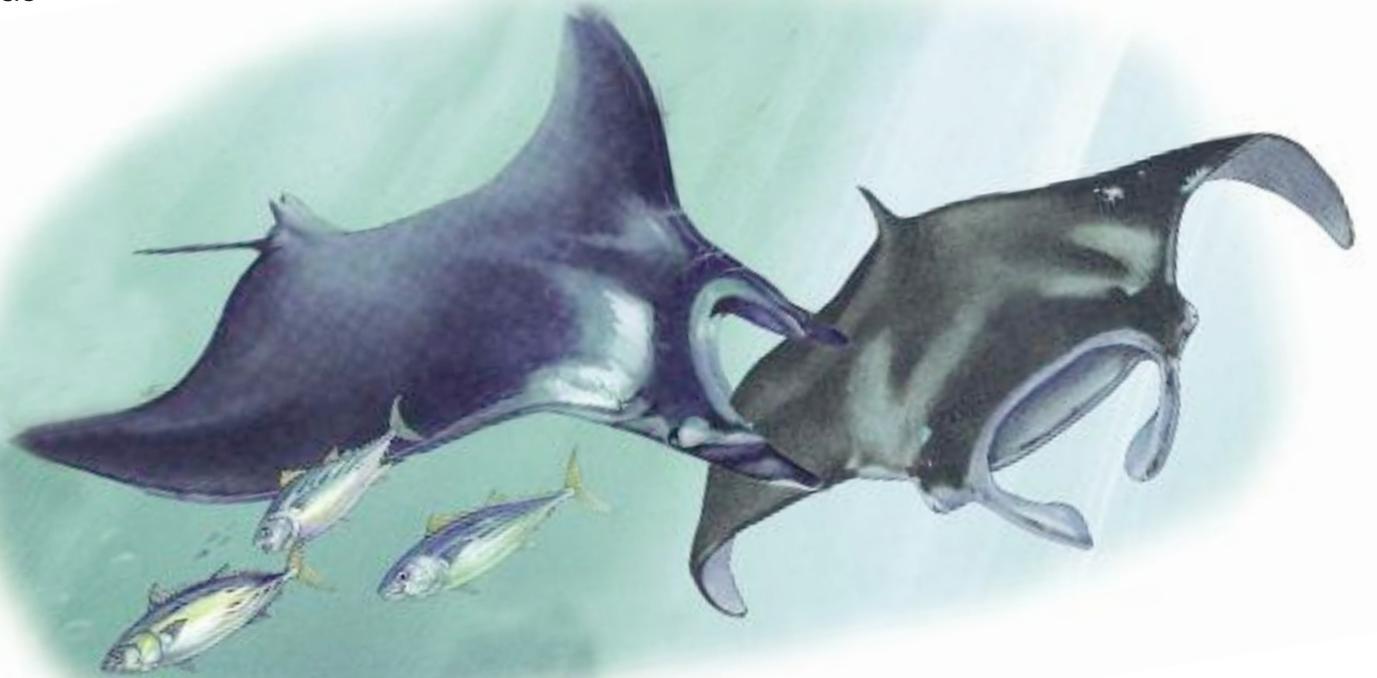


INDIAN OCEAN

THE GIANT MANTA RAY is one of the largest fish in the oceans, with a wingspan of over seven metres. Each year, hundreds of rays migrate from the east coast of Africa to the waters around the Maldive Islands, where they breed. Their journey is about 1000 km.

Females are pursued through the water by groups of males. The males copy every move the female makes as part of an elaborate courtship dance. Only the most persistent and attentive male will win her favour. Several months later, the females give birth to one or two pups. When the pups are born, their wings are rolled up and can take several hours to flatten out completely.

The manta ray is named after the Spanish word for cloak or mantle, which it closely resembles.



EAST AFRICA

WILDEBEEST spend the year trekking across East Africa. They follow the rains in order to feed on the lushest grasses. By September, their journey has taken them north into Kenya. But when the rains move south again, the wildebeest must follow them. The direct route takes them straight across the Mara River.

The animals slide down the river bank and into the water. Some are swept away by the strong waters and drown. Others are pulled under by crocodiles, lurking just beneath the water's surface. Most, however, reach the other side to continue their journey.





While in the air, springboks stiffen their legs and arch their spines to display the white hairs that run down their backs.

SOUTHERN AFRICA

IN THE SPRING, male springboks leap high into the air to impress females. They may jump more than 3.5 metres off the ground. This is called “pronking”, Afrikaans for “showing off”. Males display throughout September hoping to attract a group, or “harem”, of females. They will then mate in the coming rainy season.

Meanwhile, a pair of red hornbills are nesting. The female lays her eggs inside a tree hollow with its entrance sealed by mud and clay. The male then passes her food through a narrow slit in the tree. When the chicks are three weeks old, the female breaks out of the hollow. The chicks reseal the entrance with a mixture of wood chips and their own droppings.



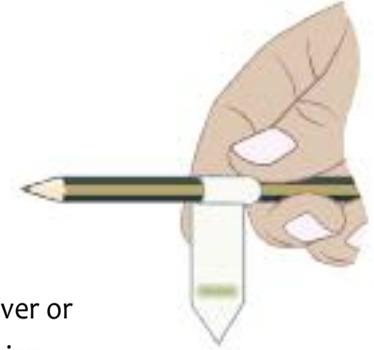
THINGS TO DO: SEPARATE COLOURS IN A LEAF

Leaves contain a green pigment, called chlorophyll, which they use to make energy out of sunlight. But they also contain pigments of other colours. Chlorophyll usually hides these pigments, but in autumn, the chlorophyll starts to break down, revealing the other colours. This activity shows all the colour pigments in a leaf.



- 1 Collect leaves from several trees.
- 2 Cut a piece of blotting paper into a strip with a point at one end.
- 3 Place a leaf on top of the paper. Roll a coin firmly over the leaf, squeezing juice on to the paper. This should leave a green smear.

- 4 Roll the end of the paper strip around a pencil so that the pointed end hangs down. Tape the paper in place.



- 5 Pour a little nail varnish remover or white wine vinegar into a glass jar.

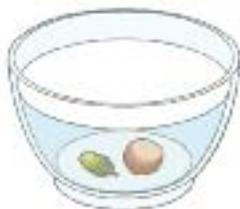
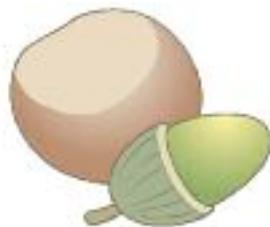
- 6 Balance the pencil on the rim of the jar, so that the paper just touches the liquid. The green smear should not be touching the liquid.



- 7 Watch as the liquid slowly seeps up the paper, carrying the pigments with it. You will be able to see different stripes of colour—yellow, orange, red and green—depending on the type of leaf.

THINGS TO DO: GROW A NUT

In your local park, or on a country walk, pick up a handful of fallen acorns and conkers.



1 Choose two nuts that have not been cracked or squashed.

2 Place them in a bowl of water and leave to soak overnight.

3 The next day, place each nut in a pot with some soil and water them.



4 Keep an eye on the plant pots and make sure the soil never gets too dry.

5 If you are lucky, a tiny oak or chestnut tree will start to grow in the spring.

NATURE WATCH



Acorns or conkers

10



Leaves changing colour on trees

20



Animal droppings

30



A squirrel with a nut

40



Deer rutting at dusk or dawn

50

See how many of these things that typically happen in September you can spot. Award yourself the points on the right!

