

**THE
NATURE YEAR**



FEBRUARY

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THE WORLD IN FEBRUARY

THE WEATHER IN THE northern hemisphere is still cold, but as the month wears on, the snows melt and flowers start to grow. The southern hemisphere is still enjoying warm weather, with many animals mating or raising their young.

Across the north, new life starts to appear: a few green shoots poke their heads above the earth; the first of the winter's hibernators emerge and birds start to stake out their spring nesting territories, using song to ward off rivals.



The first blooms of the year are small flowers that grow from bulbs. They include the delicate snowdrop and the colourful crocus (above). These typically grow in clusters around the base of trees.

Conditions are not the same across all of the northern hemisphere. In India, for example, it is warm in the south, while northern regions are still in the depths of winter. Southern langur monkey populations have already started giving birth, while langurs in the north will not give birth until the weather warms in March or April.



A southern langur monkey

In the southern hemisphere, young animals born in the height of summer are getting bigger.

It is important that they gain weight and strength as quickly as possible, while food is plentiful, before the long, cold winter sets in.



A king penguin chick, carried on its parent's feet to keep it off the ice.

EUROPE

ON A MILD FEBRUARY EVENING, a female frog crawls out from under a log. She has spent the winter sheltered beneath it, protected from predators and the cold weather. It is time for her to find a mate. Her body is bulging with eggs. She now needs to find a male to fertilize the eggs before she lays them.

She sets out alone on a journey to the pond where she herself hatched out. She is so determined to reach it that she does not even stop to feed. The breeding pond quickly fills with other frogs.

Males swim about looking for females. Once she has mated, the female lays her eggs and leaves the pond to search for food.



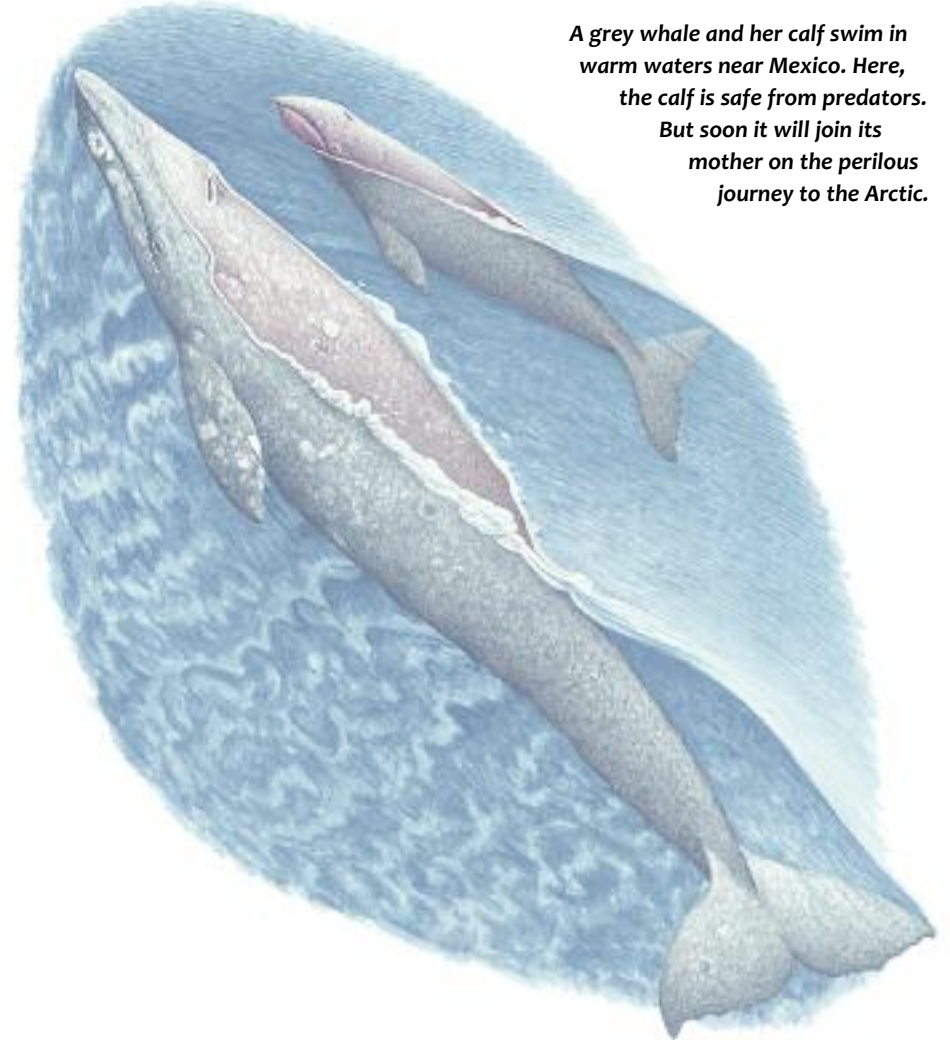
DEEP UNDERGROUND, a badger has given birth to two cubs. The cubs are kept warm both by the heat from their mother's body and by a thick bedding of bracken. They will stay in the burrow for at least eight weeks, by which time they will be strong enough to leave it.

NORTH AMERICA

GREY WHALES spend the winter in the warm, shallow waters of the Gulf of California, off Mexico. Here, they court, mate and rear their young. At the end of February, the first whales start to head north to their summer feeding grounds in the Arctic. Whales with young are the last to leave. They must wait until their calves are strong enough to make the journey.

Meanwhile, not so far away in the highlands of Mexico, monarch butterflies are seeing out the winter clustered together on the trees in their millions. They have hardly moved for months. Now, on the first warm days of

spring, the butterflies start to stir, sometimes flying short distances in search of water and nectar.



A grey whale and her calf swim in warm waters near Mexico. Here, the calf is safe from predators. But soon it will join its mother on the perilous journey to the Arctic.

NORTHEAST ASIA

JAPANESE MACAQUES live further north than any other monkey or ape. Winters in the mountains of northern Japan can be harsh, with snow on the ground for several months. Even with their thick fur, the macaques struggle to stay warm.

Some macaques leave the mountains altogether and head to sheltered valleys where the weather is milder. But in Jigokudani, or “Hell’s valley”, in the Nagano region, the monkeys have found an ideal solution: they bathe in natural springs, warmed by heat from deep inside the Earth.



A pair of macaques bathe in a hot spring



AT THE SAME TIME, a pair of red-crowned cranes are courting in southern Japan. The couple dance, spinning, bowing and jumping into the air, a ritual that will bind them together for years. Elsewhere, young cranes, not yet old enough to breed, practise their dancing.

NORTHEAST ASIA

EACH WINTER, Steller's sea eagles leave their breeding grounds in Russia and head south towards Japan. The rivers and estuaries where they usually hunt have frozen over, forcing the eagles to fish offshore in open waters.

As the sun rises, the eagles gather and head out to sea. Some perch on ice floes as they search the water for fish, while others patrol from the air. When an eagle spots a fish, it swoops down with its wings raised high and its razor-sharp talons reaching forwards. It snatches the fish from the water's surface, then settles back on the ice to enjoy its meal.



SOUTH ASIA

THE MALE PEA FOWL, called a peacock, has beautiful blue-green plumage. During mating season, he spreads out his long tail fan to reveal hundreds of red and gold “eye” markings. He then gently shakes the feathers, to make a soft rattling noise that attracts passing females.

Soon, a plain, brown female, called a peahen, approaches. The peacock backs towards her, shaking his tail, before spinning round to reveal the eyes on the front of his feathers. Females choose their mates according to the size and colour of their tail feathers and the number of eyespots on them.

If the hen is impressed, she crouches down and the peacock spreads his tail feathers over her as they mate. A successful peacock may attract a group, or “harem”, of about four females.

Each of a peacock's long tail feathers, called coverts, has a shimmering golden “eye” at its tip.



EAST AFRICA

FOR MONTHS, this Nile crocodile has been guarding her clutch of eggs. In February, the young crocodiles finally hatch. The mother gathers them in her mouth and carries them to a quiet pool.

Alerted by the cries of the hatchlings, the father joins the female to help care for his young. When another of his broods hatches—he has mated with several females—he will move on to help care for that family.

The hatchlings stay with their mother for three months, after which they split up to establish their own territories. The young may then be preyed on by herons, storks, eagles and other predators.

Only one or two will live to adulthood.

In the safety of a quiet pool, the hatchlings swim in the shallow water, feeding on insects, frogs and small fish.

SOUTHWEST AFRICA

FOR MUCH OF THE YEAR, the Kalahari in southwestern Africa is a semi-arid desert, with only patches of dry grasses

and low shrubs growing on the parched ground. But in February, the rainy season starts: dry riverbeds fill with water and the desert is quickly transformed into a paradise of lush vegetation.

Grazing animals such as gemsbok, wildebeest and giraffe come from far and wide to feed on the young, sweet plants. They are followed by predators such as lions, leopards and cheetahs.



A pair of gemsbok antelope feed by a stream, unaware that a cheetah is stalking them. The cheetah aims to startle the animals, so they will split up, enabling it to single out a victim.

SOUTHERN AFRICA

IN FEBRUARY, huge flocks of birds swoop over the African grasslands. They are red-billed queleas, following the rains as they sweep across the country at the start of the rainy season. Where the land is drenched, grass seeds are starting to ripen, and the birds can feast. They must eat half their own weight in seeds each day just to survive.

Breeding colonies gather around areas of abundant food, and may consist of millions of birds. Male queleas weave nests of grass in reeds or thorny bushes. A good spherical nest will help to attract a mate. Once a female has chosen her partner, the pair line their nest, and she lays a clutch of pale blue eggs.

The young hatch out after 10-13 days. They are fed on caterpillars and insects for about three weeks. After this, they start to eat grass seeds like their parents.



A male red-billed quelea perches by his new nest, waiting for a mate.

MADAGASCAR

THE AYE-AYE is a member of the lemur family, found only in the rainforests of Madagascar. Moving through the forest at night, it uses its bat-like ears to listen out for insect grubs, and its long, thin fingers to scrape them out from under tree bark.

Meanwhile, a hissing cockroach scuttles around the rainforest floor. It has a very unusual way of protecting itself. When threatened, it fills up with air to look bigger, then suddenly forces the air out with a loud hissing sound to startle its enemies.



A hissing cockroach, camouflaged against the leaves of the rainforest floor.



Clinging to its mother's fur is a tiny aye-aye, just days old.



Having dug a hole, this green turtle lays her eggs in the sand.

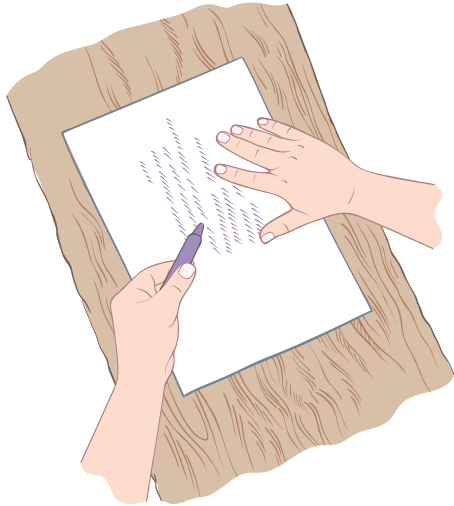
ASCENSION ISLAND

AFTER A LONG JOURNEY across the Atlantic Ocean, a green turtle finally reaches the shores of Ascension Island. In the shallow waters around the island, she mates with a male, before crawling ashore.

Females only come to the nesting beaches every three or four years, but males make the migration every year, with the hope of mating.

The female drags herself up the beach—often the very beach where she herself hatched out. High up the beach, out of the reach of the tides, she uses her strong front flippers to dig a pit in the sand. Here, she lays between 100 and 200 eggs. She covers them with sand and returns to the sea.

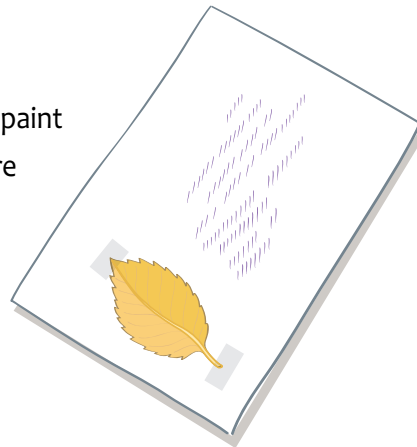
THINGS TO DO: MAKING BARK RUBBINGS



Trees are covered by a protective layer called bark. Making wax rubbings of bark allows you a closer look.

Hold a piece of white paper against a tree trunk with one hand and rub a wax crayon over the paper, using long, smooth strokes.

When you get home, wash watery paint over the rubbings to see them more clearly. Stick in a fallen leaf from beneath the tree to help you identify which species it is.

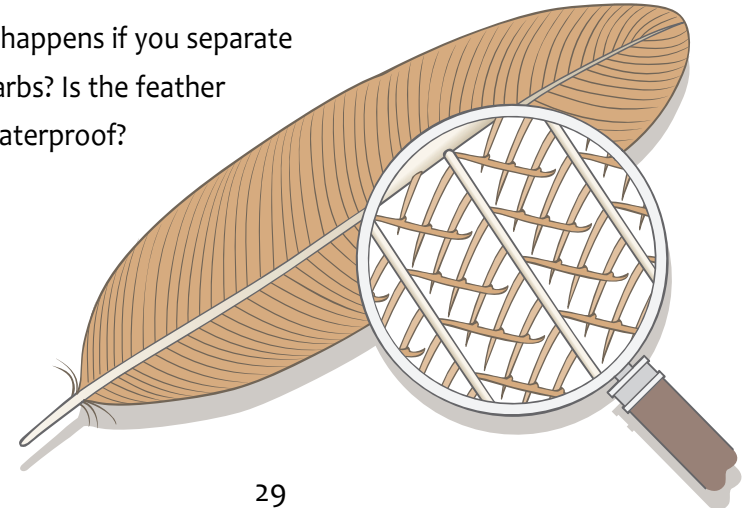


LOOKING AT FEATHERS

Find a bird's feather lying on the ground. Tap a little water on to it. See how the water drop rolls off the feather but does not soak it? Now look at the feather through a magnifying glass to understand why.

This happens because the feather is made up of hair-like structures called barbs, which are coated with an oily waterproof substance. Note how the barbs are joined together by tiny hooks called barbules. When birds wash themselves, they use their beaks to make sure all of the barbs are hooked together.

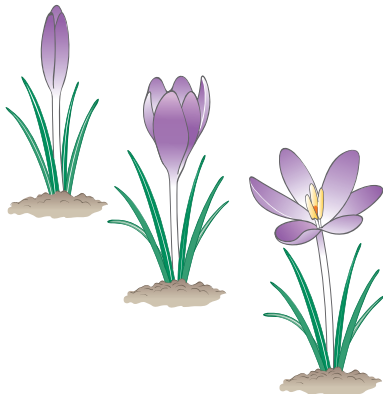
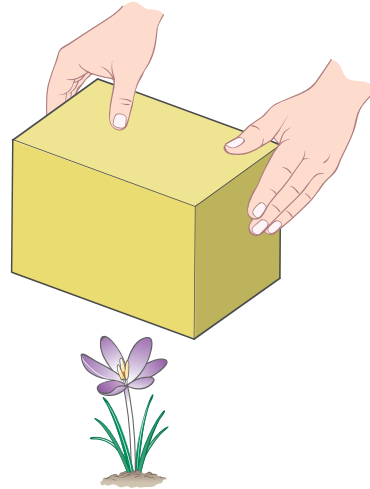
What happens if you separate the barbs? Is the feather still waterproof?



THINGS TO DO:

HOW LIGHT AFFECTS FLOWERS

All plants respond to light. They even move slightly throughout the day to follow the sun. Most flowers close their petals at night to protect themselves from the cold and to keep their pollen dry. Here is an experiment to show this behaviour over a much shorter time span.



1 Cover a crocus with a box.

2 Five minutes later, remove the box. The crocus will have already closed its petals. You can watch as they open up again. They will do so quite quickly if the sun is shining.

NATURE WATCH



Snowdrops

10



Catkins on branches

20



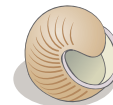
Lichen on a tree

30



Owl pellets

40



A snail sleeping inside its shell

50

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

