



PERIODICAL CICADAS

This month, our vet Joe Inglis has put down his stethoscope and picked up his calendar as he tracks down some very strange insects that keep perfect time...



Periodical cicadas are insects that look like locusts and grasshoppers. There are around 3,000 species of cicadas found in the world, but just seven species are periodical cicadas, and they all live in the eastern parts of North America.

TIME MACHINES

These cicadas are called 'periodical' because of their very strange 'time-travelling' life cycle. For most of their lives – around 99.5% – they live as larval nymphs in the soil. But one day, after an exact period of time (either 13 or 17 years), millions of them emerge together from the ground as adults.

LARVAL LIFESTYLE

During their long years underground feeding on plant roots, the nymphs go through five different stages of development. When they reach the final stage, they start to tunnel up towards the surface where they wait, ready to emerge at exactly the right time.

MARVELLOUS MAY METAMORPHOSIS

When the soil temperature reaches exactly 17.9°C, usually in April or May, the nymphs crawl out from their tunnels and undergo a final transformation into adult cicadas. They are about 2-3 cm long with wings and a long mouthpart called a **proboscis**.

BROOD BONANZA

Not all periodical cicadas emerge in the same year. There are 15 known groups, called broods, which start and finish their lives in different years. In 2024, two broods will emerge – brood XIII is on a 17-year cycle, and brood XIX is on a 13-year cycle.

1.5 million

The number of cicadas that emerge from each acre of land. In total, a brood of cicadas can include more than a trillion individual insects.

Yawn!
Is it that time
already?!

WORTH THE WAIT?

After waiting for 13 or 17 years to finally emerge from the soil and fly up into the sky, adult cicadas will only live for another few weeks. Their only goal is to mate with a partner to create the next generation of nymphs. Once this is done, their long lives are over and their offspring start their own wait underground.

PRIME TIME

Why do periodical cicadas emerge every 13 or 17 years and not every five or ten? One answer is that 13 and 17 are **prime numbers**, which means that they can only be divided by themselves and one. This means it is hard for animals that eat cicadas but have shorter life cycles to evolve so that they are always ready for the next brood to emerge.