# OUR TIME ON EARTH

## Multispecies Banquet

# Refuge for Resurgence by Superflux

This multispecies banquet showcases crockery and cutlery designed for 14 different species, creating a welcoming environment that invites visitors to rethink their position within the natural world.

# Rat

Mammal. Omnivorous. Lives 1-3 years.

Characteristics: Incredibly adaptable. They live in loose colonies and dig their own burrows. They are famously good breeders; a female brown rat can breed from around 3 months old, and has an average of five litters a year, each of up to 12 young. Only needs food and shelter. Lives in any habitat. Mostly lives alongside humans without issue. Spread across the world in 1700s during industrialisation and colonisation of territories on ships. They were seen as the cause of the plague in the 14$^{th}$ century and hated ever since, but now scientists think the plague spread too fast for rats to be culprits.

Not to be confused with: Mouse or water vole. Mice are smaller, and water voles have rounder faces, small ears that do not protrude, and a furry tail.

Latin name: Rattus norvegicus

# Beaver

Mammal. Omnivorous. Lives 1-3 years.

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Latin name: Rattus norvegicus

# Wasp

Insect. Only eats sugars. Lives on average 18 days.

*Characteristics:* There are social and solitary wasps. Most of the ones we know are social, and live in colonies. They can't really function in winter - most wasps die off in the autumn, although some colonies hibernate and get back to work in spring. The sugars they feed on often come from flower nectar and honeydew produced by aphids, or the sugary drinks we drink in the park. When on the hunt for nectar, wasps can also become accidental pollinators by travelling from plant to plant carrying pollen, making them vital to the ecosystem.

They also kill millions of insects. They don't eat the prey they kill - they feed it to their young. Social species capture insects, chop them up and carry parts back to the nest. Without wasps, the world could be overrun with spiders and insects. Each summer, social wasps in the UK capture an estimated 14 million kg of insect prey, such as caterpillars and greenfly. Perhaps we should be calling them a gardener's friend.

*Not to be confused with:* The hoverfly, which is easily confused with a wasp. There are over 270 types of hoverfly in Britain and about 120 of them have the distinguished black and yellow markings of a wasp. They key is in the name! They hover, which makes them different to the way wasps fly about and are also smaller than wasps.

*Latin name:* Vespula vulgaris

# Human Female

Mammal. Omnivorous. Lives 81+ years.

Characteristics: Animals that can survive in many climates on land, and generally settle in groups. Their ability to think (cognition) is slightly different from the ape family, meaning they have a capacity for speech, and abstract reasoning. Human females are distinct from males in that they usually have different reproductive organs. Human behaviour in the last 12,000 years, particularly the behaviour that led to farming and industrialization, has changed the face of the earth so drastically that we have entered a new time period scientists are calling The Anthropocene, which they say began in the 1950s. There were 2.5 billion humans on earth in 1950, now, there are almost 7.8 billion. Humans are very social, sharing food and ideas, caring for infants, and building social networks – these behaviours help us meet the daily challenges of our environments. Humans also have culture, using symbols to express emotions and ideas.

Latin name: Homo Sapien

# Raven

Bird. Omnivorous. Lives 10-15 years.

Characteristics: The common raven is a big black bird, the biggest member of the crow family. It is all black with a large bill, and long wings. In flight, it shows a diamond-shaped tail. They are noisy, aggressive omnivores whose diet includes rodents, insects, grain, and birds' eggs. In winter, especially, it is a scavenger and feeds on carrion, dead fish, and garbage. The raven is an intelligent bird with a large and varied vocabulary, including guttural croaks, gurglings, and a sharp metallic "tok." Studies have shown that the common raven is capable of saving items of value that can be used later as tools or as goods for barter, behaviour that strongly suggests that this bird has the ability to plan for a future when these items might be needed. You can see them all year round. The common raven is a near-universal symbol of dark prophecy—of death and disease. They are usually solitary but may feed in small flocks. The young remain in the nest for about a month. A raven can make an interesting pet capable of learning to mimic a few words.

Not to be confused with: Crows, which are related but different, smaller and have thinner beaks. A magpie, which has white stripes and longer tails.

Latin name: Corvus Corax

# Fungi

Fungi is a “kingdom” of organisms under this classification, with millions of species within this category. It as big as the term “animal” or “plant”.

Characteristics: Fungi include microorganisms such as yeasts, moulds and mushrooms. To name a few – the appearance of black spots on bread left outside for some days, the mushrooms and the yeast cells, which are commonly used for the production of beer and bread are also fungi. They are also found in most of the skin infections and other fungal diseases. Most types of fungi grow in moist conditions. Thus, we can say that fungi usually grow in places which are moist and warm enough to support them.

Fungi consist of long thread-like structures known as hyphae. These hyphae together form a mesh-like structure called mycelium. They reproduce using tiny spores, and their reproductive organ is usually the mushroom, which appears only occasionally to spread these spores. This is the part of the fungi humans usually eat. It is similar to the “fruit” of a plant. Fungi can break through concrete, live inside other organisms, and span the length of a forest floor. We know very little about fungi, as humans have only started to discover their importance to the whole of the planets ecosystem. Fungi are what turn old plants into soil, and allow nutrients to move between plants and animals. While they can live as diseases, they often live in harmony with other living beings in a beneficial relationship.

Not to be confused with: Bacteria. They can seem similar but they are different at the cellular level. Bacteria are unicellular, not multicellular organisms, and they are asexual – they don’t “reproduce” via spores in the same way as fungi.

Latin name: Fungi

# Wild Boar

Mammal. Omnivorous. Lives 15-20 years.

Characteristics: Wild boars live in groups in forests. Except for old males, which are solitary. The animals are swift, nocturnal, and omnivorous and are good swimmers. They have stocky, powerful bodies with a double layer of grey-brown fur – the top layer harsh, bristly hair; the under layer much softer. Mature males have tusks that protrude from the mouth. Piglets are a lighter ginger-brown, with stripes on their coat for camouflage. Although they are normally unaggressive, they can be dangerous.  The majority of their diet is made up of roots, bulbs, seeds, nuts and green plants. However, as opportunistic feeders, they will eat much of what they come across on the forest floor. This can include dead animals, small mammals, birds' eggs, earthworms and other invertebrates.

Not to be confused with: Domestic pigs. All wild boars are pigs, but not all pigs are wild boars. This just means that the wild boar is a species of pig. The two are not the same animals. Wild boars are hairy and smaller, and pigs are generally bigger and pink or black.

Latin name: Sus scrofa

# Human Child

Mammal. Omnivorous. Physically developed by age 25.

Characteristics: : Animals that can survive in varied climates on land, and generally settle in groups. Their ability to think (cognition) is slightly different from the ape family, meaning they have a capacity for speech, and abstract reasoning. Human children are born much earlier in their development than other mammals, only after nine months in the womb, meaning human babies are much more dependent on their parents than in other species. By one estimation a human fetus would have to develop in the womb for 21 months instead of the usual nine to be born at a development stage similar to that of a chimpanzee newborn. The traditional explanation for this is that natural selection favoured childbirth at this stage to accommodate large brain size and upright walking — defining characteristics of humans.

Latin name: Homo Sapien

# Fox

Mammal. Carnivores. Lives 10-15 years.

Characteristics: Urban foxes live in cities where they have learned to adapt and survive. They take refuge in abandoned buildings and in small plots of land that still have a few trees and bushes. They live in any place where they can safely raise their young, feeding on rats and vegetation. They successfully live with humans, and this is not based upon their mythical cunning, but rather their ability to adapt to a range of changing conditions. Wherever you live, you probably have at least one fox visiting your garden. They have very varied diet, foxes eat earthworms, insects, fruit and vegetables and a wide variety of both domestic wild birds and mammals. They like cooked or raw meat and tinned pet food. Foxes also like other savoury items such as cheese, table scraps, bread soaked in fat, fruit and cooked vegetables. However, be aware that anything you put out for foxes could equally be taken by dogs, cats and other wildlife. Foxes can sometimes bury extra food they have in flower beds. They don't care if the food has gone off or full of maggots, they will still eat it with relish!

Not to be confused with: Dogs. These are wild animals and will be much more shy. They have fluffier tails and are red in colour.

Latin name: Vulpes vulpes

# Longhorn

Mammal. Omnivorous. Lives 20-30 years.

Characteristics: The British Longhorn is a type of cow, a breed of beef cattle characterised by long curving horns. They are kept by farmers for beef and milk. Their horns are very long and curved down to around the nose. There have a white patch along the line of their spine and under their bellies. They are usually very friendly and have relatively docile temperament. There are no wild types in the UK. The industrial farming of cattle is one of the key causes of climate change globally, including the mass deforestation of rainforest in order to grow grains to feed cattle. However, the keeping of cattle in smaller groups in areas where they can graze can support the biodiversity of ecosystems, if managed correctly.

Not to be confused with: Bulls. The long, curved horns that serve to distinguish this breed from others can make them look aggressive like any young bull, although by temperament they are usually friendly and easy to manage.

Latin name: Bos primigenius

# Pigeon

Bird. Omnivorous. Lives 3-5 years.

Characteristics: City pigeons are descendants from pigeons that were kept by humans and have returned to the wild. Owing to their abilities to create large amounts of excrement and be an occasional disease vector to humans combined with crop and property damage, pigeons are largely considered a nuisance and an invasive species, often being referred to as 'rats with wings'. Pigeons are gentle, plump, small-billed birds. All pigeons strut about with a characteristic bobbing of the head. Because of their long wings and powerful flight muscles, they are strong, swift fliers. They are very intelligent and used to be used for carrying information (carrier-pigeons), as they can recognise areas from the sky with incredible accuracy. They are smart enough to be able to recognise themselves in the mirror, known as the ‘mirror test’. They eat mainly seeds and left overs, and they spread rapidly in cities as people feed them.

Not to be confused with: Dove. Urban pigeons are actually in the same family as the dove, and are genetically almost identical. You can sometimes see a white dove/pigeon cross in the city, which is partly white and partly grey. Urban pigeons are descendent of the rock dove which are wild birds that live on the coast. If you search for what a Rock Dove looks like, you might be surprised... !

Latin name: Columba livia

# Human male

Mammal. Omnivorous. Lives 81+ years.

Characteristics: Animals that can survive in many climates on land, and generally settle in groups. Their ability to think (cognition) is slightly different from the ape family, meaning they have a capacity for speech, and abstract reasoning. Human males are distinct from females in that they usually have different reproductive organs. Human behaviour in the last 12,000 years, particularly the behaviour that led to farming and industrialisation, has changed the face of the earth so drastically that we have entered a new time period scientists are calling The Anthropocene, which they say began in the 1950s. There were 2.5 billion humans on earth in 1950, now, there are almost 7.8 billion. Humans are very social, sharing food and ideas, caring for infants, and building social networks – these behaviours help us meet the daily challenges of our environments. Humans also have culture, using symbols to express emotions and ideas.

Latin name: Homo Sapien

# Moss

Plant. Absorb water and nutrients through leaves. Lives 2-10 years.

Characteristics: On the roofs above our heads, on garden walls, and in cracks in the pavement; mosses are growing all around us. They are ancient species that can survive huge varieties in habitat. Because of their range of adaptations, they are able to occupy areas that are otherwise uninhabitable such as rocky ledges on mountainsides.  They are non-flowering plants which produce spores and have stems and leaves, but don't have true roots. Often overlooked, these tiny plants have incredible properties. From hot deserts to damp caves, they can survive in extreme conditions and play an important role in biodiverse habitats across the world. The individual plants are usually composed of simple leaves that are generally only one cell thick. Mosses function like sponges, and can hold water in the same way. They help to soak up rainfall, maintain moisture in the soil below and keep conditions around them humid. This enables other plants and fungi around them thrive, such as in habitats like marshes and woodland.

Not to be confused with:  Grass. Mosses typically form dense green clumps or mats, often in damp or shady locations. Different from grasses e.g. in lawns, where there are roots in the ground and they thrive in the sun.

Latin name: Bryophyta

# Snake

Reptile. Carnivorous. Lives 20-30 years.

Characteristics: Snakes are a type of reptile distinguished by the fact they have no limbs and a long body and tail. All snakes are predators, but venomous snakes have given an inaccurate reputation to the entire group, as most people cannot tell the dangerous from the harmless. In Mexico, 10 times as many people die annually from bee stings as from snakebites. Most snakes are not aggressive. Statistics show that the vast majority of snakebites occur while either catching and handling captive snakes or trying to molest or kill wild ones. In either case, the snake is only defending itself. Given their exquisite colours, patterns, and graceful movements as they crawl, swim, or climb, some snakes can be considered among the most beautiful animals.

Nearly every culture since prehistoric times has worshipped, revered, or feared snakes. Serpent worship is one of the earliest forms of veneration, with some carvings dating to 10,000 BCE. Many stem from the snakes' biological peculiarities: their ability to shed their skin is associated with immortality; their ever-open eyes represent being all-seeing; their ability to suddenly appear and disappear links snakes with magic and ghosts; a phallic resemblance embodies procreative powers; and the ability to kill with a single bite creates fear of any snakelike creature.

Not to be confused with: Lizards are classified with snakes in the same order, but snakes are simplified lizards, usually distinguished by their lack of limbs or eyelids.

Latin name: Serpentes

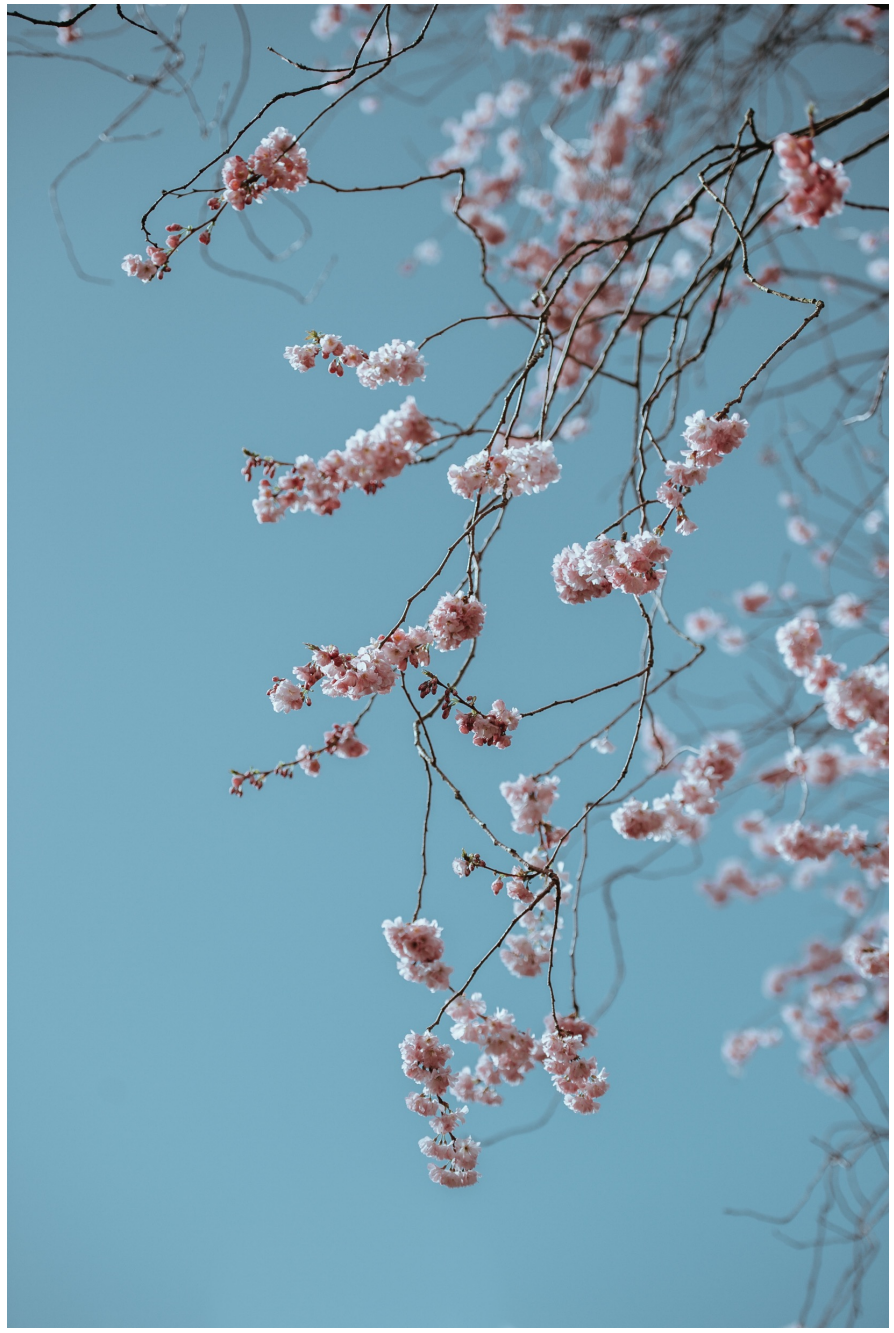
# New Vocabulary

**Ecosystem** – An ecosystem (or ecological system) consists of all the organisms and the physical environment with which they interact.

**Biodiversity** – The variety of life in the world or in a particular habitat or ecosystem.

**Anthropocene** – The name given by some scientists for the current geological age, viewed as the period during which human activity started to have a significant impact on the planet's climate and ecosystems.

**Mass Extinction** – An event on planet earth in which at least 75% of all the species go extinct within 2.8 million years – which is a short amount of time in terms of geology. Humans have only existed for about 200,000 years so far.



# Biodiversity — why does it matter?

Biodiversity is the incredible variety of all life on earth.

The more variety and balance, the more robust the system is.

There is always a "why" for everything in nature.

Causes of biodiversity depletion include climate change, pollution and land use for buildings or agriculture.

Explore levels of biodiversity loss across the globe with The Biodiversity Intactness Index by the Natural History Museum.

# Anthropocene – where do we come in?

There have been 5 mass extinctions on the planet – and scientists are suggesting we are heading for a 6th one. A famous extinction is the one you may have heard of already, where the dinosaurs were wiped out by meteors that hit the earth.

The 5 previous mass extinctions are as follows.

“Ordovician” Period - 440 million years ago

“Devonian” Period - 375 million years ago

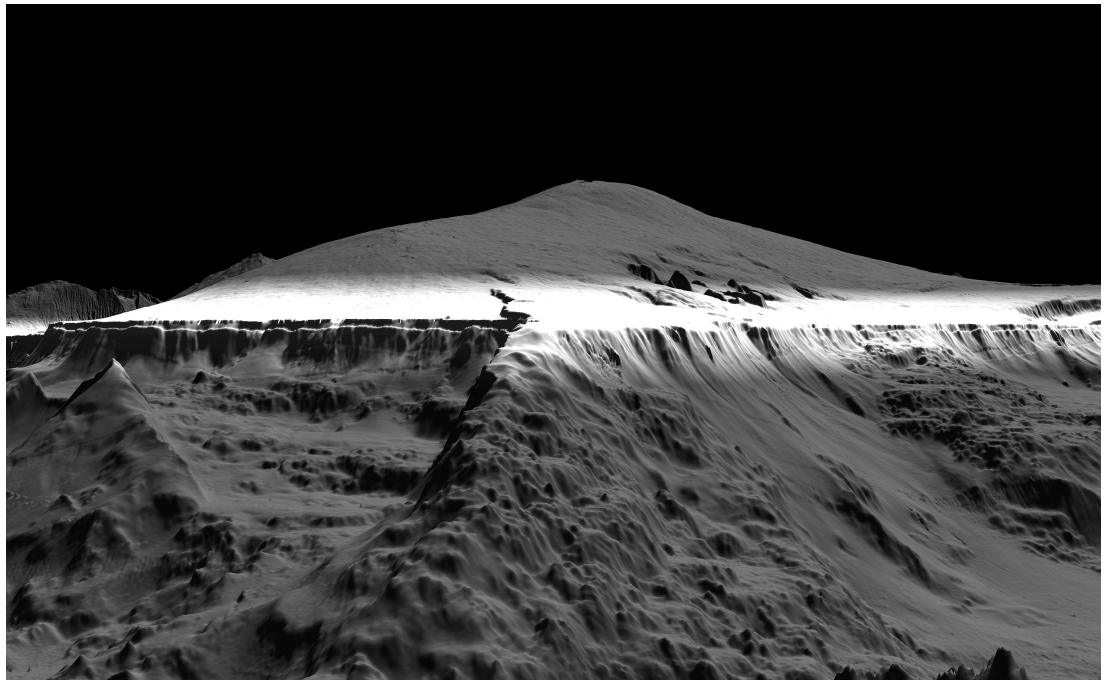
“Permian” Period - 250 million years ago

“Triassic” Period - 200 million years ago

“Cretaceous” Period - 65 million years ago

Scientists believe we are in a new era called the Anthropocene. It could be that this period begins the sixth mass extinction on earth, caused by climate change, pollution and land used by humans for industry, urbanization and agriculture.

Extinctions can take millions of years, and many people think that the rate of biodiversity loss is so fast that we are likely to be at the beginning of the next one.



Courtesy of Territorial Agency

# Activity: Come Dine With Us

Courtesy of Superflux