## Seba the amazing seed disperser

Seba's short-tailed fruit bat weighs only 19 grams but is an incredible disperser of seeds. It is probably the commonest bat in Latin America and eats fruits containing lots of small seeds, such as piper fruit. One bat alone might eat 60,000 seeds in a night! On average there are 400 bats in a Seba colony, which means that a group of this size could disperse almost 9 billion seeds in a year. Even if only 0.1% of these seeds germinated, this would produce 9 million new seedlings – quite a feat for such a tiny bat!

## Trouble brewing

Bats are threatened by disturbance to their feeding habitats or their roosts. In some areas of the world bats are revered but in many countries they are feared. Bats are creatures of the night and as such are sadly treated with suspicion and fear – in folklore bats often have a negative press. Bats also face the wrath of nature, especially on islands where they have to contend with cyclones and typhoons that can devastate their habitat.

## On the way out?

Approximately 25% of the world's bats are threatened with extinction. Forty-four species are classed as Critically Endangered and may not survive without human help. Sadly at least 12 species, such as the Puerto Rican flower bat, have already gone the way of the dodo.

## But perhaps a bright future

Today there are more and more people working hard to conserve bats. Educating the public is a top priority and in many cases people now treasure their bats. Twenty years ago in the Comoros in the Indian Ocean bats were declining. After much effort a community group was established to protect the bats and numbers are now increasing. In India, bats were officially "vermin" but the law has now changed – the first step towards long-term conservation.

## The future for bats

The Bat Conservation Trust (BCT) wants a future where everyone, everywhere can enjoy seeing and hearing bats as a natural part of their environment.

If you would like to know more about bats, you can join BCT or your local bat group. There are nearly 100 bat groups around the UK, just ask us for details of your nearest group!

The Bat Conservation Trust (BCT)
15 Cloisters House, 8 Battersea Park Road, London SW8 4BG
Call the Bat Helpline today on **0845 1300 228** or visit **www.bats.org.uk**



Bat Conservation Trust

# Bats of the world

An introduction to the amazing variety of bats

**There are more than 1,100 species of bats worldwide, making up around one-fifth of all mammals. New bat species are still being discovered but relatively little is known about many of these incredible animals. Few people realise what an essential part they play in the natural world.**

Above: white tent-making bats of Central America

## All over the world

Bats are one of the most widely distributed groups of mammals. Flight has enabled them to live all over the world apart from the Arctic, the Antarctic and a few isolated oceanic islands. There are bats in the far north of Scandinavia, as well as in the deserts of the south-western USA.

## The bat family tree

Bats are split into two major groups, the megachiropterans (megabats) and the microchiropterans (microbats); the names are slightly misleading, as some megabats are small and some microbats are big! Megabats occur only in the Old World tropics and subtropics, but are not found in the New World of North and South America – one species (the Egyptian fruit bat) just about makes it to Europe. Microbats are found in both the Old and the New World.

## Megas vs Micros

Megabats and microbats are different in many ways. Megabats have large eyes and often dog-like faces; microbats have small eyes and often have elaborate facial structures. Microbats use echolocation to detect their prey while megabats rely on smell and vision to find food. Megabats feed almost exclusively on fruit and flowers, while microbats have more varied tastes, eating insects, fruit, pollen, nectar, fish, frogs, other bats and blood.

The megabats, such as the Egyptian fruit bat pictured far left, look noticeably different to the microbats, such as the lesser horseshoe bat pictured on the left.

## Hot tropics

Bats are most numerous in the tropics; Indonesia has 175 species of bats (over ten times the number of species found in the UK), while there are 154 in Venezuela and 137 in Mexico. Central and South America are home to almost one third of the world's bats.

## Little and large

Bats can be as large as a small dog or as small as a bumblebee. The largest bats are the flying foxes with wingspans of up to 2 metres and a body weight of 1.5 kilograms. At the other end of the scale is the bumblebee bat, weighing only 2 grams – the world's smallest mammal. Most of the world's bats are small, similar in size to those found in the UK.

## Island paradise

Islands are interesting places for bats; many of the bats that occur on islands are found nowhere else in the world and in some places bats are the only native mammals. On some islands in the Pacific Ocean bats are so important that they are known as keystone species; without them the ecosystem would collapse. In New Zealand there are only two native mammals, both of them bats; while in Madagascar, there are 28 different species of bats, half of them found nowhere else in the world.

## Let's go to the bat cave

Caves can provide shelter for bats. In temperate areas, bats use caves as breeding sites in summer and hibernation sites in winter. Bats have no need to hibernate in the tropics but caves are still important there. Bats form the largest aggregations of mammals in the world – there are as many as 20 million in some caves in the southern USA, producing an enormous amount of guano.

Left: greater horseshoe bats can roost in caves all year round

## What's on the menu?

Most bats eat insects, just like British bats. Some bats feed on pollen and nectar whilst others eat fruit. A few are highly specialised and feed on fish, frogs and even other bats. There are also, of course, the vampire bats that feed on blood (see the vampire bat facts on the right).

## Flower power

In tropical forests, bats are important pollinators of many plant species. Some plants flower only at night to attract bats. There are bats that behave much like hummingbirds – their long, narrow faces and exceptionally long tongues allow them to delve deep inside flowers to drink the nectar. During their travels from plant to plant bats may carry pollen and therefore help to pollinate the flowers.

## Fruits of their labours

Some bats feed on fruit, some of which are of commercial importance to us humans. Bats eat the soft fruits but discard the seeds that later become mature trees. Avocados, peaches and mangos are all fruits that might not be here but for bats.

## Forests need bats

Bats are vital to the health of forests. Many plants depend partly or wholly on bats for pollinating the flowers or spreading their seeds. Bats are also important in helping regrowth after forest clearance. In return, the forests are vital for the bats, providing food and roosting sites.

## Something to chew on

Chewing gum, tequila and sisal are just three products that come from plants that at least partly rely on bats for pollination or seed dispersal. Others include foodstuffs, drink, medicine, dyes, fuel, fibre and timber.

## A tasty snack

Bats are eaten by some communities worldwide. Even tiny bats no bigger than those you find in the UK are consumed. It is the larger flying foxes that are most sought after, and in the 1980s a flourishing trade in bat meat in the Pacific brought some species to the verge of extinction. This is now controlled by CITES (Convention on International Trade in Endangered Species) but there are still worries about over-hunting of bats in some countries such as Madagascar and New Caledonia.

## The curse of Dracula

The famous novel by Bram Stoker has given bats a poor press. Vampires are a reality, but how much do you really know about them? Here are some vampire bat facts to test your knowledge...

- Vampire bats don't live in Transylvania; there are three species and they all live in Central and South America.
- Vampire bats rarely feed on human blood; they much prefer the blood of cattle, horses, pigs and birds.
- A vampire bat doesn't actually 'suck' blood, it makes a graze on its host's skin to encourage a flow of blood and then laps this up with its tongue.
- Vampire bats are small. The commonest is only 7cm to 9cm long and takes approximately a tablespoon of blood each night.
- They are caring towards members of their colony; apart from behaviour such as mutual grooming, they will even take care of others who are unable to feed by regurgitating the blood they have collected!
- Stroke victims may soon benefit from studies of a clot-dissolving substance in the vampires' saliva.

Above: the common vampire bat