

Eating Creepy Crawlies

Information pack

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“bacony taste” – sago beetle

Exhibition overview

The first insects appeared on this planet over 400 million years ago, before humans, before mammals and even before the dinosaurs.

They are the most successful inhabitants on earth, living in every part and climate of the world. They are also a valuable food source.

In the days before supermarkets and farming, insects provided a much-needed source of protein to the world's hunter-gatherers. Our ancestors made the most of any food source, particularly one as plentiful and protein rich as insects.

So why are we disgusted at the prospect of tucking into a plate of grasshoppers? For many people, it is the most natural thing in the world. In Venezuela they eat tarantulas, in China, water beetles whilst in Tokyo it is possible to feast on baby bees. *Eating Creepy Crawlies* looks at the variety of insects eaten in over 12 different countries; some are eaten as delicacies, whilst others form the staple diet.

Eating Creepy Crawlies is a flexible exhibition, which can include two giant animatronic models of a stick insect and a desert locust if space permits. The exhibition mixes real specimens, with graphic panels and stunning photographs from the book *Man Eating Bugs* by Peter Menzel.

The exhibition provides many opportunities for development of a varied activity programme including cookery demonstrations and workshops.

“bitter medicinal taste rather like eating a bitter sunflower seed” –
stink bugs

Exhibition components

Display panels

- 20 x Panels 600mm x 900mm (representing 13 countries with 13 specimens)
- 9 x Slim panels 300mm x 900mm (plus 1 panel with exhibition credits)
- 5 x Large images and captions 900mm x 1200mm
- 1 x Intro panel 1200mm x 900m (lightbox)

Fonts

Title: Trebuchet, size 32mm

Main body: Monaco, size 5mm

Scientific names: New Johnston light italic, size cap height 4.5

Animatronics

- 2 Giant insect models – Desert Locust and Stick Insect
- 2 Giant insect heads showing mouth parts – Dragonfly and Honeybee

Specimens

Specimens of insects and “packaged” insects attached to display panels:

- The Original Witjuti Australian Bush Tucker, a bottle of Australian sherry containing a witchetty grub, Australia
- Tin of silk worm pupae, Thailand
- Tin labelled as short-tailed crickets, Thailand
- Giant water bug, *Lethocerus indica*, Thailand
- Goliath bird-eating tarantula, *Theraphosa leblondi*, Venezuela
- Cicada, *Platylocma spinosa*. Various species of cicada are eaten in Indonesia and Malaysia
- Stink bugs, *Nezara viridula*
- Jar of locusts boiled down in soy sauce and seasoned with sugar and sweet sake, Japan
- A cricket, *Oxya japonica japonica*, Japan
- Jar of baby bees, *Vespula flaviceps*, from Japan. These baby bees have been boiled down in soy sauce and seasoned with sugar and sweet sake

- Jar of honeybees, Japan. These bees are said to add flavour to the honey and are eaten with it.
- Jar of honey with hornet, Japan. The hornet is placed in the honey to add flavour, but is not eaten with the honey like the baby bees.
- Acadia sp.
- A bottle of mescal, Mexico. The algave worm is placed in the bottle as proof of a high alcohol level.
- Various Hotlix products, containing insects including crickets and meal worm larvae

Target Audience

Families



Display panels 20 x panels 600mm x 900 mm
(Representing countries with 13 specimens)

Australia

In the desert during the night when temperatures are low and the humidity is high, the beetles are active. They are found in the soil and on the surface of the ground. They are found in the soil and on the surface of the ground.

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Display Panels

Space for specimens





Thailand

- 1 Fried bamboo worms, in fact these are not worms at all, but the larval stage of a moth. Many people "crawl" aren't really worms, but that's what they are commonly called.
- 2 Sold for sale at a local market.
- 3 Fun to eat some people, Thailand, still have people who still consume it though. They have a peanut buttery flavour.
- 4 They resemble an earth related creature, Thailand. Crickets are eaten in both Asia and South America. They are added to stir fried food or soup and roasted to eat with melted butter and horseradish in South America. They have a smooth nutty taste.



Display Panels

Space for specimens



**Display panels 9 x slim panels 300mm x 900mm
(plus one with exhibition credits)**



Prejudice

When you sit down at breakfast time, eating toast saturated in sweet delicious honey, have you ever considered that you are eating bee roasts? As you enjoy that oven-baked fruit for dinner, have you thought about its diet of insects and their contribution to the flavour? Probably not.

Conditioning

Our food habits are conditioned by culture. Most food psychologists would agree that we prefer the familiar, and we have an irrational fear of the new. Once established, food preferences are highly resistant to change. However, even today only people belonging to Eastern European cultures, and nations derived from them, do not use insects as food.

We are happy to eat some invertebrates - animals without backbones - such as the lobster, which is closely related to insects, yet the lobster has disgusting feeding habits and adores putrid flesh, unlike many insects that eat nothing but healthy green plant material.

So why is the lobster on our menus, but not the grasshopper? There may be certain practical reasons. Insects are small, which can make them more difficult to collect and process. Unpredictable supply could be a major problem with wild insects if our urban societies here to require large amounts regularly. It would be necessary to develop advanced culture techniques to fulfil demand.

Top: Selection of unusual Foods, China.

Bottom: Goliath Bird Eating spider, *Theraphosa leblandi*, the world's largest tarantula, Venezuela.



Animatronic stick insect model

Name / Title: **Jungle nymph, *Heteropteryx dilatata***

Description: Animated model in surrounding housing, 30 times life-size

Dimensions

Static

Height: 1100mm
 Width (inc.legs): 7400mm
 Body width: 1000mm
 Length: 5800mm

Active

Height: 3500mm
 Width: 7400mm
 Body width: 1000mm
 Length: 5800mm

What? Female stick insect

Where? Malaysia

Lifestyle? Lives among tropical plants and feeds on leaves

Big Threat

By raising its tail the jungle nymph makes itself look more threatening. Usually jungle nymphs prefer to remain unseen, moving slowly and blending in with the leaves.

If attacked, the jungle nymph makes a fearsome hissing noise by rustling its wings and kicks out with its sharp-spined back legs.

Master of Disguise

Many stick insects, and their relatives the leaf insects, actually resemble the twigs and leaves of the plants they live on. To keep hidden they rarely move during hours of daylight.



Stick insect, birds view



Animatronic locust model

Name / Title: **Desert locust, *Schistocerca gregaria***
 Description: Animated model in surrounding housing, 60 times life-size

Dimensions

Static	Active
Height: 1700mm	Height: 3000mm
Width: 1200mm	Width (wing-span): 6600mm
Length: 4000mm	Length: 5000mm

What? Adult male locust of swarming form
Where? Dry regions across northern Africa, Arabia and Asia
Lifestyle? Flies during the day and roosts on bushes at night

Taking Off

The locust flexes its powerful back-legs to launch into the air. Both wings are used to help in flight. When at rest, the thicker front pair of wings helps protect the delicate back pair.

Long Legs

Desert locusts are a kind of grasshopper with the characteristic long, strong back pair of legs. Inside the outer skeleton of the legs are muscles 1000 times stronger than an equal weight of human muscle. Locusts can jump ten times their own length.

Swarming Hordes

Desert locusts usually live on their own but after seasons of good rains they lay eggs that hatch into a different form which is brightly coloured, Unless controlled, these gather into a huge swarm, which devours all the plants in its path.



Girls under locust

Interactive dragonfly head

Name / Title: **Golden ringed dragonfly**, *Anotogaster sieboldii*, 80 times life-size

Dimensions

Height: 2100mm

Width: 1300mm

Length: 2050mm (including magnifier)

What? Adult dragonfly

Where? China, Japan, Korea, Taiwan, Eastern Russia

Lifestyle? Flies back and forth along a stream, hunting for insects such as midges

Body Length? Female 10cm / Male 8cm

Jaws

The dragonfly opens its jaws to chew, cutting up its prey with shear-like mouthparts before taking it in.

Big Eyes

Dragonflies have big eyes to pinpoint their insect prey, which they catch with their legs as they fly along.

Interactive honeybee head

Name / Title: **Honeybee, *Apis mellifer*, 200 times life-size**

Dimensions

Height: 2100mm
 Width: 1300mm
 Length: 2050mm (including magnifier)

What? Foraging worker bee

Where? Native to Europe, Middle East and Africa

Lifestyle? Collect nectar and pollen from flowers

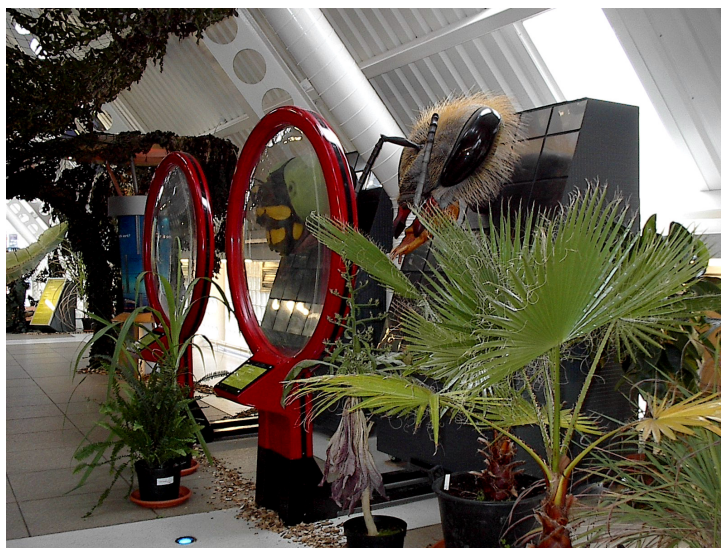
Body Length? 12 – 14mm

Sucking

The worker honeybee unfolds her tube-like tongue to suck nectar from flowers, which she carries back to the nest for other workers to turn into honey. The honeybee also uses her tongue to feed on honey and to drink water.

Jobs for Jaws

Worker honeybees' jaws are multi-purpose tools. They can chew pollen, mould wax and plant resin to make the nest, feed young bees and haul debris out of the nest. The bee also uses its jaws for grooming and fighting.



Magnified insects

Article

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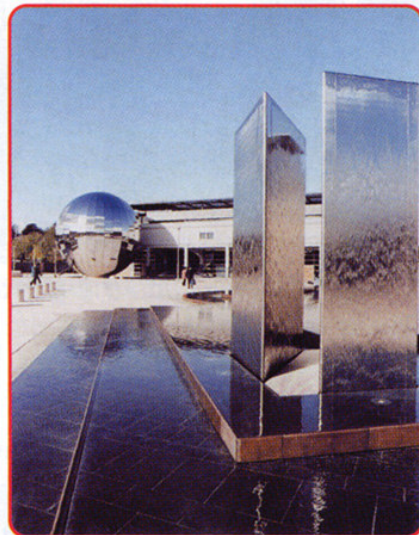
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ReDiscover awards for science

Science centre renewal fund ReDiscover has announced a further round of awards which included grants to At-Bristol, Thinktank and Sensation.

At-Bristol has received two grants, of £1.6m and £2m. The first will fund the redevelopment of Wildwalk – with completion expected by the end of 2005 – and the second has been secured on behalf of ECSITE-UK for the creation of three science-based interactive touring exhibitions.

Thinktank, the Birmingham science centre based at Millennium Point, is set to use a £673,000 grant towards its Future Horizons project to create the region's first planetarium, while Dundee science centre Sensation has secured a £1.4m award to develop new



At-Bristol received a total of £3.6m from ReDiscover

permanent exhibitions following the success of its temporary exhibitions, which included Eating Creepy Crawlies and the BBC Walking with Dinosaurs.

“chewy with a gutsy, almost fishy taste” - scorpion