

The Voyage of the Beagle

Page 1

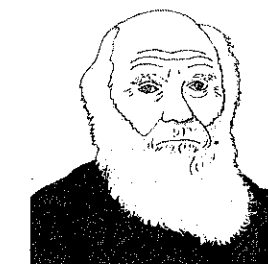
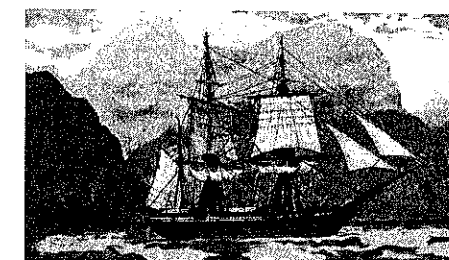
The Ring of Fire

Page 2

The Aliens are Already Here! - Part 1 **Page 3**

The Aliens are Already Here! - Part 2 **Page 4**

THE VOYAGE OF THE BEAGLE



The portrait of Charles Darwin on the left shows him as a young man of around 27 years old. In 1836, he had just returned from a voyage on board the Beagle, captained by Robert FitzRoy. During the five-year trip to South America, Captain FitzRoy made maps of the coastline. Darwin, on the other hand, was interested in collecting specimens to learn more about animals.

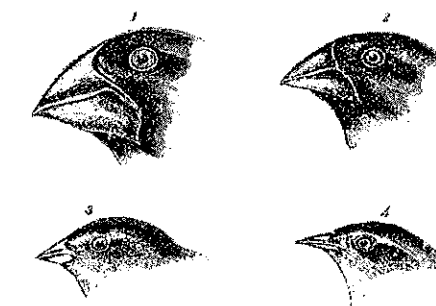
The portrait on the right shows Darwin when he was 60 years old. By then, he had written *On the Origin of the Species* – a book that changed the way people thought about life on Earth.

During the voyage, Syms Covington, the ship's fiddler and cabin boy, noted the following:

On the morning of 27th December, 1831, H.M.S. Beagle, with a crew of seventy-three men, sailed out of Plymouth harbour under a calm easterly wind and drizzly rain. Darwin became seasick almost immediately and started to have second thoughts about the voyage.

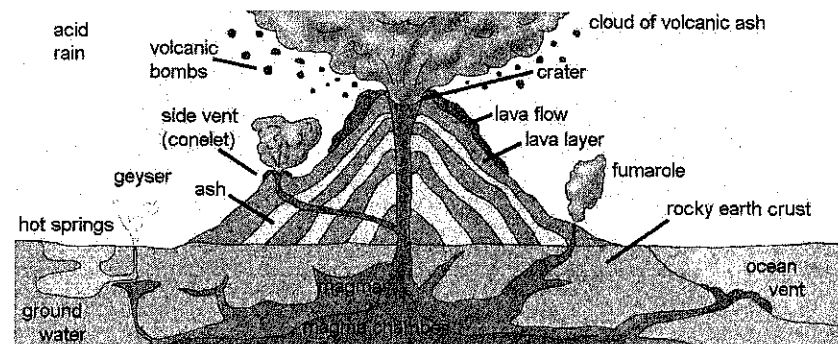
Syms Covington, however, was of great help to Darwin, especially when they landed on the volcanic islands of the Galapagos. Covington helped him by keeping notes of the different species and where they were found.

Darwin realised that many of the creatures and plants found on the islands were the same as those on the South American mainland, but they had changed. They had changed over time (evolved) to suit conditions on the islands. The beaks of songbirds, for instance, had adapted to the type of food they ate.



He later argued that human beings had evolved from apes. At the time, not everyone liked this new idea. Nonetheless, the survival of any species of animal or plant depends on how well it adapts to its environment. Watch any nature programme today to see how true this is.

THE RING OF FIRE



WHAT IS A VOLCANO?

A volcano is created when magma from deep inside the Earth works its way up to the surface, erupting into a cloud of gas, ash and lava. Noxious gases result in acid rain. The lava and ash add layers around a cone or smaller side vents. With each eruption, the volcano grows in size.

PAST ERUPTIONS

The loudest sound in modern history was caused by Krakatoa in Indonesia in 1883. After several small eruptions, the main explosion took place on 26th and 27th of August and was heard 3000 miles away. These eruptions led to 30m high tsunamis along the coasts of Java and Sumatra, killing 32,000 people. 165 villages were destroyed. It's possible that 120,000 people were killed altogether. Volcanic gases reached high up in the atmosphere, altering weather around the world for five years.

In 1927, a new volcano was born in the same place – Anak Krakatau (Child of Krakatoa) – the unpredictable child of a very bad-tempered parent!

WHY DO VOLCANOES ERUPT?

The surface of the Earth is made up of enormous plates that slide incredibly slowly over molten rock. These are called *tectonic plates*. These plates move in different directions. This means they rub against each other and sometimes collide. This leads to earthquakes and volcanic activity.

WHAT IS THE RING OF FIRE?

The Ring of Fire is the name given to the horseshoe shape that is formed by the countries that lie west, north and east of the Pacific Ocean. It is here that the action of different tectonic plates has produced 90% of the world's earthquakes.

It is also the site of 75% of the world's volcanoes that are either active or dormant (inactive but still liable to erupt in the future).

Volcanic islands include Hawaii and the Galapagos. In Hawaii, Mauna Kea, the world's biggest volcano, is considered to be dormant. Here, in the UK, Edinburgh Castle sits on a volcanic core – long extinct.

THE ALIENS ARE ALREADY HERE! - Part 1!

Some children in Class 5 have discovered that there are strange-looking creatures living right here on our planet. Each child has done a poster. Together they add up to a database of quite alien forms of life on Earth. There are eight altogether. Answer the questions about the posters on this page before you tackle the ones that follow.

Leaf-tailed Gecko



Location: Madagascar.

Dimensions: 7 – 15cm.

Habitat: in tropical forests – its green / brown colour provides camouflage among leaves.

Diet: a nocturnal reptile, with adhesive scales under its toes and large eyes, it quickly finds insects such as crickets and moths at night.

Predators: owls, rats and snakes – although the gecko can re-grow its tail if necessary; also badly affected by mass deforestation.

Feature: no eyelids; cleans eyes with tongue.

Star-nosed Mole



Location: North America.

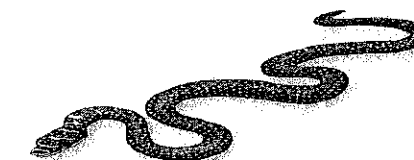
Dimensions: 15 – 20cm.

Habitat: in tunnels up to 270m long in moist soil, wet meadows, marshes, forest clearings.

Diet: it detects worms, slugs and small insects using the 22 sensitive tentacles of its nose. In streams and lakes, it finds amphibians and small fish. It will swim under ice in winter.

Predators: owls, hawks, skunks and weasels catch them on land (as well as dogs and cats); in water, they are preyed upon by mink.

Flying Snake



Location: South-East Asia.

Dimensions: 5 different species – smallest is 60cm; largest is 1.2m.

Habitat: mainly in trees. It launches itself into the air, flattening its body and slithering to control its landing as much as 100m away.

Diet: mildly venomous, they prey on lizards, frogs, birds and bats. (Harmless to humans.)

Predators: King cobras and kraits (a highly poisonous snake).

Leafy Sea Dragon



Location: off the south coast of Australia.

Dimensions: up to 35cm with leaf-shaped frills all over their body, blending in with seaweed.

Habitat: among kelp-covered rocks.

Diet: its nose is a long pipe through which it sucks in tiny shrimps and plankton.

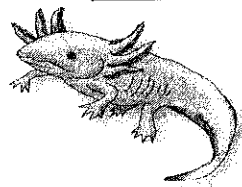
Predators: mainly human divers, taking them as souvenirs to such an extent that they are now a protected species.

Feature: after breeding the male, like sea horses, carries the eggs under its tail.

THE ALIENS ARE ALREADY HERE! - Part 2

Here are the posters of four more strange creatures. Read about them, then answer the questions that follow on the next page.

Axolotl



Location: in lakes near Mexico City.
Dimensions: 15-45cm, though over 30cm is rare.
Habitat: under rocks and in crevices at the bottom of lakes, with the result that they are often white or pink.
Diet: its diet includes small crabs, molluscs, worms and small fish.
Predators: because they remain at the bottom of lakes, they have few predators, though storks and herons will take them if they can. Fish, such as carp will eat their young. Human beings also take them as pets.
Features: often known as the Mexican walking fish, they are amphibians. Like newts, they are able to regrow damaged limbs.

Blue Dragon



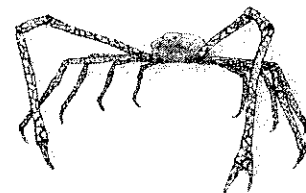
Location: wherever winds and currents take it.
Dimensions: up to 3cm.
Habitat: on the surface of the sea, floating upside-down.
Diet: the venomous Portuguese man-of-war and other jellyfish.
Predators: potential predators of this sea slug can receive a concentration of jellyfish poison it stores in its skin.
Features: a special gas-filled sac in its stomach enables it to float.

Streaked Tenrec



Location: Madagascar.
Dimensions: 16-19cm.
Habitat: in burrows 1.5m long near a stream or lake. It covers the entrance with leaves.
Diet: foraging for food mainly at night, it eats insects and worms.
Predators: mainly the mongoose, although the tenrec has detachable spines which it uses to drive into its attacker's nose or paws.
Features: It communicates by squeaking, stamping its feet, and rubbing together special spines to produce a high-pitched sound heard by other tenrecs.

Japanese Spider Crab



Location: the seas around Japan.
Dimensions: the leg span of this giant crab can reach 3.8m.
Habitat: 300m deep on the rocky and sandy bottom of the sea close to the islands.
Diet: despite its fearsome size, it eats small shellfish and the remains of dead animals.
Predators: their size deters most predators. When they are caught up in fishing nets, they can end up as spider crab sushi in restaurants.
Features: not only does the crab's bumpy armour-plating blend in with the rocks, it also adorns itself with sponges and seaweed to boost its camouflage.

Reading Comprehension

YEAR 5

Scaled Score TEST B

ANSWER BOOKLET

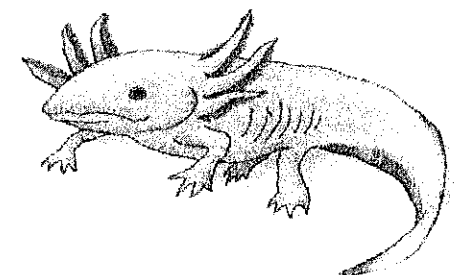
Name:

Class:

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Raw Score / 50

Scaled Score



The following questions are about **THE VOYAGE OF THE BEAGLE** (Page 1)

1 How old is Darwin in the portrait on the left?

.....

1 mark

2 What was the name of the captain of the Beagle?

.....

1 mark

3 What was the captain's reason for sailing to South America?

Tick one.

to map the coastline

to collect specimens

to observe animals

1 mark

4 Darwin's book, *On the Origin of the Species*, changed the way people thought about things. What changed?

.....

.....

1 mark

5 Darwin was not an experienced sailor. Write down **two** clues.

1.

2.

2 marks

6 Who was Syms Covington?

.....

1 mark

7 How did Covington help Darwin during the voyage?

.....

.....

1 mark

8 What word is used to describe the Galapagos islands?

.....

1 mark

9 What does **evolve** mean? Tick one.

turn around

change over time

involve

1 mark

10 The writer has included an illustration from Darwin's book showing the beaks of songbirds.

Why do you think this has been included?

.....

.....

2 marks

11 Later, Darwin came up with a new idea that not everyone liked.
What was it?

.....
..... 1 mark

End of questions about
THE VOYAGE OF THE BEAGLE

The following questions are about **THE RING OF FIRE** (Page 2)

1 Finish this sentence:
During an eruption, volcanic clouds are full of ...

.....
.....
and

2 marks

2 Circle a word that means the same as **noxious**.

explosive poisonous nocturnal

1 mark

3 Look at **WHY DO VOLCANOES ERUPT?**
Explain how the movements of tectonic plates lead to volcanic activity.

.....
.....
.....

2 marks

4 'The loudest sound in modern history was caused by **Krakatoa ...!**

How far away was the explosion heard?

..... 1 mark

TEST B

YEAR 5

5 This page is from a non-fiction book.

Tick the features that tell you this is non-fiction.

- diagram with labels
- conversations
- numbers and percentages
- explanations
- interesting characters

2 marks

6 Describe **two** of the terrible results of Krakatoa erupting.

- 1.
- 2.

2 marks

7 **Number** these events in the order in which they happened in Indonesia in 1883.

- small eruptions
- tsunami
- main explosion

1 mark

8 As well as volcanoes, what other destructive thing happens in The Ring of Fire?

.....

1 mark

TEST B

YEAR 5

9 Name **two** sets of islands inside the Ring of Fire.

- 1.
- 2.

1 mark

10 **Draw lines** to show whether these volcanic sites are active, dormant or extinct.

Anak Krakatau

extinct

Edinburgh Castle Rock

dormant

Mauna Kea

active

1 mark

11 In **PAST ERUPTIONS**, what is described as a **very bad-tempered parent**?

.....

1 mark

End of questions about
THE RING OF FIRE

The following questions are about **THE ALIENS ARE ALREADY HERE!**
- Part 1 (Page 3)

1 Which **two** creatures blend in well with their surroundings?

- 1.
- 2.

1 mark

2 What word describes the leaf-tailed gecko's habit of hunting at night?

.....

1 mark

3 How does the flying snake fly and land safely?

.....
.....

2 marks

4 Which **two** creatures are hunted by snakes?

- 1.
- 2.

2 marks

5 What does **deforestation** mean?

.....

1 mark

6 Which **two** animals are at risk from human beings and their pets?

- 1.
- 2.

2 marks

7 The noses of the star-nosed mole and the leafy sea dragon are very important. Describe how each creature uses them.

Star-nosed Mole	Leafy Sea Dragon
.....
.....
.....
.....
.....
.....
.....
.....

2 marks

End of questions about
THE ALIENS ARE ALREADY HERE! - Part 1

The following questions are about **THE ALIENS ARE ALREADY HERE!**
- Part 2 (Page 4)

1 Which one of these four animals is the smallest and the most dangerous?

..... 1 mark

2 Which animals prey on the axolotl?

..... 1 mark

3 Which **two** animals have most to fear from human beings?

1.

2.

1 mark

4 Describe the **three** different ways in which the streaked tenrec communicates.

1.

2.

3.

3 marks

5 Describe how the blue dragon protects itself.

.....

.....

2 marks

6 How does the blue dragon keep itself afloat?

.....

1 mark

7 Describe **two ways** in which the Japanese spider crab blends in with its surroundings.

1.

.....

2.

.....

2 marks

End of questions about
THE ALIENS ARE ALREADY HERE! - Part 2

End of TEST B