Mary Anning - Fossil hunter

Mary Anning was born on 21 May 1799. She lived in the English seaside town of Lyme Regis in Dorset. Her family were very poor, which meant she didn't get to attend school much. Instead, she mainly taught herself to read and write.

Mary would spend her time searching the coast looking for what she called **'curiosities'.** Later in her life, as she developed a better understanding of her finds, she realised they were actually **fossils.**

Over the course of her life she made many incredible discoveries. This made her famous among some of the most important scientists of the day. They would visit her for advice and to discuss scientific ideas about fossils. Today, Mary is remembered as one of the greatest fossil hunters to have ever lived.

Growing up by the sea

Mary's parents were Richard Anning and Mary Moore. As a baby, Mary had a lucky escape when a woman carrying her was struck by lightning.

Fossil hunting

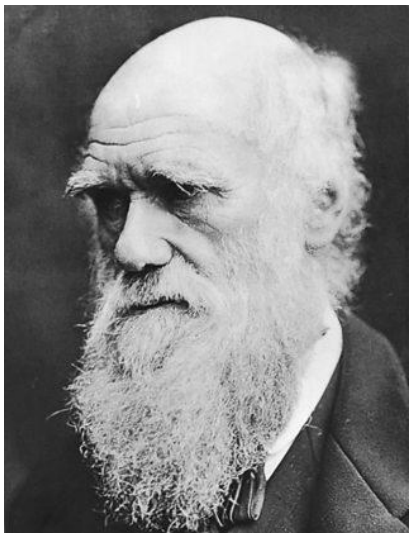
Mary's family had little money so she spent most days searching the beaches with her brother looking for items to sell.

When she was just 12, they discovered the skull of a mysterious creature poking out from a cliff. They thought it might be a crocodile, but what she had discovered was actually an ancient reptile called an **ichthyosaur** (which means 'fish lizard').

Mary went on to make more incredible discoveries in her life, including a long-necked marine reptile called a **plesiosaur** and a flying reptile called a **Dimorphodon.**

Darwin's work on evolution

Darwin's theory of evolution



Charles Darwin

Charles Darwin was an English naturalist who studied variation in plants, animals and fossils during a five-year voyage around the world in the 19th century. Darwin visited four continents on the ship HMS Beagle.

Darwin's theory of evolution challenged the idea that God made all the animals and plants that live on Earth, which contradicted the commonly held Christian views of his era. He did not publish his scientific work and ideas until 28 years after his voyage.

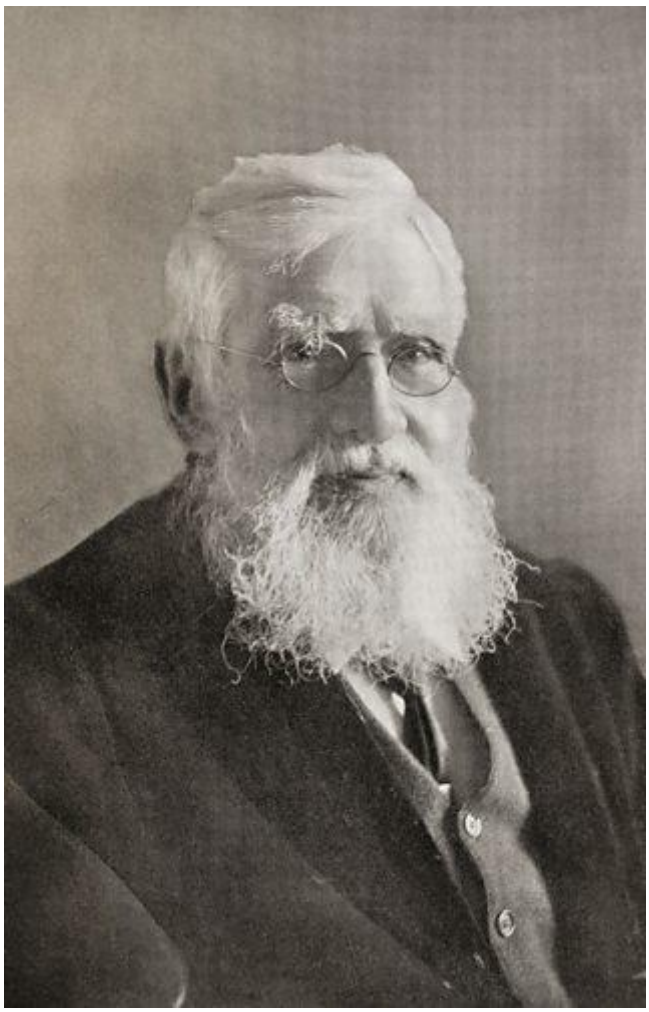
Finally, as a result of Darwin's world expedition and observations, which were backed by many years of experimentation; his discussions with like-minded scientists and his developing knowledge of geology and fossils; he proposed the theory of evolution by natural selection.

Darwin proposed that:

- individual organisms within a particular species show a wide range of variation for a characteristic
- individuals with characteristics most suited to the environment are more likely to survive to breed successfully
- the characteristics that have enabled these individuals to survive are then passed on to the next generation

This theory is called natural selection.

Wallace



Alfred Russel Wallace

Alfred Russel Wallace was a great admirer of Darwin and a fellow naturalist, who independently proposed the theory of evolution by natural selection. Wallace produced scientific journals with Darwin in 1858, which prompted Darwin to publish On the Origin of Species the following year.

Wallace worked around the world gathering evidence to support his evolutionary theory. He is best known for studying warning colouration in animals, and examples include the Golden Birdwing Butterfly *(Ornithoptera croesus)* and his theory of speciation.

After a variety of zoological discoveries Wallace proposed a theory of evolution, which matched Darwin's unpublished ideas that he had kept secret for nearly 20 years. This encouraged Darwin to collect his scientific ideas and collaborate with Wallace. They published their scientific ideas jointly in 1858.