

WHAT? WHERE? WHEN? WHO?

THE
POLAR MUSEUM

SCOTT POLAR RESEARCH INSTITUTE



FOSSIL PLANT

This rock contains fossils of leaves from an ancient plant called glossopteris. It was found in the Antarctic. Fossils like these show that the Antarctic was once much warmer than it is now and supported very different forms of life.

The stone is fine-grained mudstone. This suggests that the leaves were probably blown into a lake. Over millions of years, layers of mud formed over the leaves and hardened, fossilising the leaves. This fossil was collected during the Heroic Age of Antarctic exploration and science in the early 20th century. The Heroic Age includes the expeditions of Captain Scott, Ernest Shackleton and Roald Amundsen.

DID YOU KNOW?

During Captain Scott's journey to the south pole, his team stopped for a number of days to look at rocks and fossils. Realising how important their discovery was to science, they collected 35lbs of the rocks and fossils. In November 1912, the search party found a tent containing the bodies of Scott and two of his men. The rock and fossil collection was on the sledge outside the tent.

MORE DETAILS ABOUT THE OBJECT: bit.ly/PM-Y-2010-38-1

SHORT FILM ABOUT THIS OBJECT: www.vimeo.com/polarmuseum/science

DOWNLOAD A HIGH RESOLUTION IMAGE: bit.ly/PM-resources

Accession number: Y: 2010/38/1 – Dimensions: height: 21mm, length 122mm, width: 85mm

This object is part of the collection at the Polar Museum, Scott Polar Research Institute in Cambridge – see more online at: www.spri.cam.ac.uk/museum

ACTIVITY IDEAS FOR THE CLASSROOM



Visit our website for a short film about this object, high resolution image and more: www.spri.cam.ac.uk/museum

BACKGROUND	ACTIVITY IDEA	RESOURCES	CURRICULUM LINKS
The majority of Antarctica is covered in ice and snow. Plants like this no longer grow in the Antarctic.	Scott's scientists were thrilled to discover fossils of plants. Imagine that you are the geologist Frank Debenham, write a conversation between the men in the photo as they look for and find fossils.	Scott's scientists looking for fossils: www.spri.cam.ac.uk/picturelibrary/catalogue/article/p54.16.218/	LITERACY: conversation, exclamation marks, speech marks
Antarctic plants have changed dramatically since the subtropical phase. Find out more: www.bas.ac.uk/about/antarctica/wildlife/plants/	Look carefully at a range of leaves from your local area. Draw a diagram of each leaf and label the key parts. Can you see any similarities between the leaves? Can you sort them into types?	A selection of leaves, magnifying glasses. Learn why plants have leaves here: www.bbc.co.uk/education/clips/zm89wmn	SCIENCE: plants, the function of leaves, classification
The leaves are from 'glossopteris', a type of subtropical tree fern that is now extinct.	Test plants in different temperature, light, and water conditions. Observe and record what happens to the plants. Research plants that grow in cold climates, are there any similarities between them?	Plants, box, fridge	SCIENCE: plant adaptation, observation
These leaves fell in to a lake over 500 million years ago. They were covered in layers of mud which, over time, turned to stone. Geologists call this grainy rock formation 'sedimentary.'	Sedimentary rocks often contain fossils. Sandstone is a grainy sedimentary rock that is very popular to build with or tile floors with. When you're out and about in your local area, look around you. Can you spot any sedimentary rocks? Look even closer, can you see any fossils? (This could be a homework activity.)	More activity ideas can be found at: www.edenproject.com/learn/schools/lesson-plans/great-fossil-hunters The Sedgwick Museum in Cambridge sells a geological trail of the city.	SCIENCE: rocks describe how fossils are formed, formation of sedimentary rocks
Most of the Antarctic bedrock is hidden below ice. There could still be fossils beneath the ice that are new to science.	Imagine you are in the Antarctic and have found a fossil plant that has never been seen before. Sketch it at full size. Trace and transfer the image to card, marking in the veins of the leaves. You could relief print the leaves or layer them up with tissue paper to emulate the layering of mud over the original leaves.	Card, paper, paint, ballpoint pen, tracing paper, tissue paper, glue. For inspiration look at the works of Nick Gentry and Anne Ryan	ART: relief printing, negative images, layering, collage, colour