

Phanerozoic Eon Encyclopedia Article

Phanerozoic Eon

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Phanerozoic Eon

The Phanerozoic Eon represents **geologic time** from the end of **Precambrian** time, approximately 544 to 570 million years ago (mya), until the present day. As such, the Phanerozoic Eon includes the **Paleozoic Era**, the **Mesozoic Era**, and the current **Cenozoic Era**. The Phanerozoic Eon and constituent eras are then further divided into 12 geologic periods.

The Phanerozoic Eon derives its name from *phaneros*, meaning visible or evident, and *zoon*, meaning life. Although early life existed in Precambrian time—including prokaryotes (e.g., bacteria) and eukaryotes (organisms with a true nucleus containing DNA)—the onset of the Phanerozoic Eon marks the start of complex life (e.g., invertebrates) found in the **Cambrian Period**.

In terms of the **fossil record**, the Phanerozoic Eon represents not the **origin of life**, but of life capable of leaving extensive fossil remains (e.g., organisms with shells, etc.). Fossilization refers to the series of postmortem (after death) changes that lead to replacement of **minerals** in the original hard parts (shell, skeleton, teeth, horn, scale) with different minerals, a process known as remineralization. Infrequently, soft parts may also be mineralized and preserved as **fossils**. Fossils of soft bodied Precambrian time fossils have been found but, as expected, they are rare and present an incomplete evolutionary record.

See Also

Archean; Cretaceous Period; Dating Methods; Devonian Period; Eocene Epoch; Evolution, Evidence Of; Fossil Record; Fossils and Fossilization; Historical Geology; Holocene Epoch; Jurassic Period; Miocene Epoch; Mississippian Period; Oligocene Epoch; Ordovician Period; Paleocene Epoch; Pennsylvanian Period; Pleistocene Epoch; Pliocene Epoch; Proterozoic Era; Quaternary Period; Silurian Period; Tertiary Period; Triassic Period