



The Dawn of Diversity

LIFE IN THE BURGESS SHALE

Glossary

Amber — Hardened tree sap.

Annelid — The phylum of invertebrates that includes the segmented worms, such as earthworms and their relatives, leeches, as well as a large number of mostly marine worms known as polychaetes. Various species of polychaete are known as lugworms, clam worms, bristleworms, fire worms and sea mice.

Arthropod — Animals with segmented bodies and an exoskeleton. Members includes spiders, insects, scorpions, crabs and butterflies.

Basalt — Hardened lava that cooled on the surface. Basalts are generally dark and often filled with many holes, indicating gas pockets. Extensive basalt layers make up much of eastern Washington.

Benthic — The bottom of the sea. Animals that live on the bottom of the sea comprise the benthos. They may be anchored to the sea floor or mobile.

Brachiopod — Animal made of two unequal shells. They feed via tentacles and catch organic material that floats by them. They are anchored to the substrate. Most abundant during Paleozoic. Now, much more limited. Also known as lamp shells.

BYA — Billion years ago.

Cast — Material that fills a mold.

Chordates — Animals with backbones as adults.

Crustacean — The group of arthropods that includes shrimps, lobsters and crabs, as well as the terrestrial woodlice (also known as potato bugs or roly-polies).

Cyanobacteria — The earliest known form of life. They are a type of bacteria, sometimes called blue-green algae, although they are not algae.

Ediacaran — The group of fossils found around the world in rocks between 650 to 543 million years old, the end of the Proterozoic. Almost all are soft-bodied. They are named for the Ediacara Hills of Australia.

Eukaryote — An organism that has the cell DNA enclosed in a nucleus in a cell. This includes most species people are familiar with, such as plants, animals and fungi.

Exoskeleton — A rigid external covering of the body. Some may be shed during lifetime of animal.

Invertebrate — Those animals that lack a notochord or backbone.

Lobopod — A soft walking appendage. They consist of muscles surrounding a blood-filled cavity. Although soft and pliable, they can transport an animal.

Mold — Impression left in the surrounding rock by a shell or other organic structure.

Mollusk — A phylum of soft bodied animals, differentiated into a head, a ventral foot (used for motion), and mantle, which secretes a shell in many species. Examples include slugs, oysters, clams, snails, squid and octopus.

MYA — Million years ago.

Notochord — An elastic skeletal rod found in all the embryo adults of all chordates. It strengthens and supports the body.

Paleozoic — The time period from 543 to 238 million years ago.

Pelagic — Organisms that swim or float in the water column of the sea or a lake.



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Phylopod — A subgroup of the crustaceans, which includes fairy shrimp (.5- to 1.5-inch long animals that superficially resemble a sawed-off toothbrush.)

Phylum — A category used to classify organisms. Next in rank below Kingdom. About 35 phyla exist.

Pillow Basalt — When basaltic lava hits water and cools, it has a rounded, pillow-like structure.

Proboscis — A structure found at the front of certain animals, such as an elephant's trunk. Often used for feeding.

Prokaryote — Organisms that lack a nucleus and where the DNA floats freely through the cell. Bacteria are prokaryotes.

Proterozoic — The period of Earth's history that began 2.5 billion years ago and ended 543 million years ago.

Pyrite — A mineral consisting of iron and sulfur.

Sessile — Plant or animal anchored to substrate.

Shale — A layered sediment that consists of fine-grained sediments.

Sulfate — A salt of sulfuric acid.

Tar — Natural asphalt.

Tommotian — The Tommotian Age, which began about 530 million years ago, is a subdivision of the early Cambrian. Named for rock exposures in Siberia.

Trace Fossil — The remains of biological activity of an animal, such as a trail, burrow, or scat.

Trilobite — An extinct group of arthropods that flourished in the Paleozoic. They were characterized by an exoskeleton consisting of three lobes that ran the length of the body. More than 15,000 species have been described. The biggest reached nearly two feet in length.

Vendian — Another name for the Ediacaran.

Willy-nilly — Haphazard, shilly-shally, indeterminate. A fine term that should be used more often.