

GLOSSARY

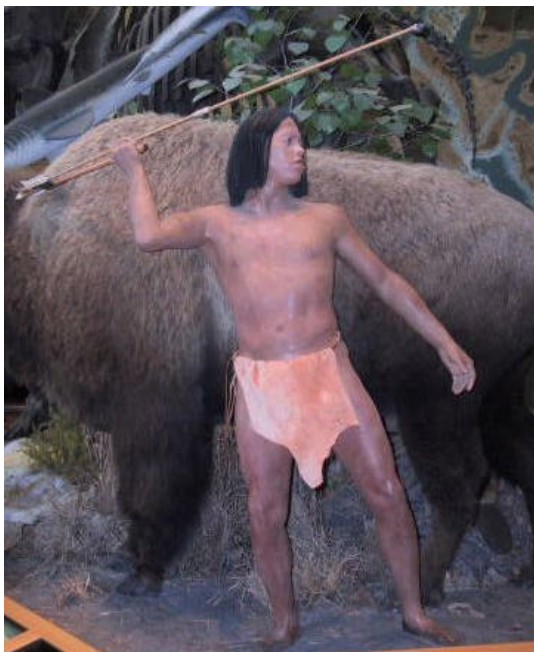
Archaic culture - Semi-nomadic people who lived between B.C. 8,000 - 1,000 moved seasonally to hunt, fish and forage. The people used tools (adzes, axes, etc.) and developed regional variations in their culture.

Archaeologist - A person who studies remains of past cultures, both prehistoric and historic.

Archaeology - The study of past lifeways, cultures, and cultural processes through the investigation of material remains left behind by humans.

Arrowhead - A general term for projectile points used for hunting by Native Americans. It includes spear and arrow points.

Artifact - Any object made, used or modified by humans.



Atlatl - A device for extending the range of a spear (see illustration above).

Avian - Relating to birds.

Biostrome - A layer or layers composed primarily of skeletons of organisms. It can be of limited or considerable geographic extent.



Blastoid (illustrated above) - A member of the phylum Echinodermata, Class Blastoidea that is characterized by a globular-shaped body with fused plates on a stalk. Fed with tentacles called brachioles.

Brachiopod - A marine invertebrate animal with a soft body and two shells that are symmetrical from left to right, not top to bottom. They were fixed by a pedicle muscle and could not move. Brachiopods are abundant in the fossil record, but are uncommon in the ocean today.

Brevispirifer gregarius - A species of Devonian brachiopod that is so common at the Falls, it forms a layer and one of the zones of the fossil beds. The layer may contain 10,000 shells per cubic foot.

Bryozoa - A phylum of colonial animal that builds an exoskeleton. Some bryozoans build colonies that superficially resemble corals. Individual members of the colony are microscopic. Some resemble netting or lace.

Calcium Carbonate - The chemical compound that makes the minerals calcite and aragonite. Calcite forms chalk, limestone, and marble. Aragonite forms the exoskeletons of most modern shell forming organisms.



Celt - A ungrooved stone ax used for wood cutting (illustrated above).

Chert - A sedimentary rock composed of quartz (silicon dioxide). It occurs in various colors. Prehistoric peoples used chert to make projectile points, scrapers, drills and other tools. Its origin is unknown.



Clam - Any of a variety of bivalve mollusks. They have a soft body and the two halves of the shell are held together by a pedicle muscle. (Devonian clam *Paracyclas* illustrated above.)

Colonial Coral - A growth habit of coral where individual animals live in adjacent tubular chambers.

Corals - A marine invertebrate, usually a colonial organism, that lives in an exoskeleton made of calcium carbonate. Corals live symbiotically with alga that builds the skeletal structure by protecting the algae from predators.



Coral Zone - A layer of rock at the Falls containing abundant corals (shown above).

Crinoid - A member of the phylum Echinodermata, Class Crinoidea, which usually have a stalk composed of circular plates (the column), a body composed of calcite plates held together by ligaments consisting of a cup and

arms with small tentacles (pinnules), and a holdfast or grapple to anchor it to the sea floor.

Culture - A system of shared, learned, symbolic human behavior for adaptation for our natural and social environment.

Dam - A structure built to block movement of water on a river or stream.

Devonian - The period of geologic time between 408 -360 million years ago, marked by the dominance of fishes and the first amphibians. The limestone layers at the Falls of the Ohio were deposited during the middle of the Devonian Period.



Dunkleosteus - A Devonian fish which reached 10 meters in length characterized by exterior bony plates and sharp cutting jaws which lacked teeth. A member of extinct fish called arthrodiras. (Shown above)

Ecology - A branch of biology that looks at the interrelationships between organisms and their environments.

Epoch - A subdivision in geologic time. Pleistocene is an epoch of the Quaternary Period.

Era - A subdivision of geological time consisting of the divisions: Precambrian, Paleozoic, Mesozoic and Cenozoic. The Devonian period falls within the Paleozoic Era.

Exoskeleton - The hard outer covering, or shell, protecting the soft organs of an organism.

Extinct – An organism that no longer exists in living form.

Falls - A drop in a river or stream over a rock ledge creating cascading water.

Fauna - Animal life which occupies a particular area.

Finger Coral - A slang name for small, finger-like corals in the coral zone at the Falls.

Flatboat - A steerable raft made of wood with sides and sometimes a shelter in the center. Flatboats were used by families and traders for river travel.

Flora - Plant life which occupies a particular area.

Fossil - Any evidence of pre-existing plant or animal life preserved in rock, generally older than 10,000 years.

Geological Time - the total time the earth has existed, estimated to be 4.5 billion years. It is subdivided into eons, eras, periods, epochs, ages and smaller units. (See page 10, this *Handbook*.)

Glacial boulder - A large rock transported by ice some distance from its source, and deposited in an area of melting ice.

Glacial outwash – An assortment of sand, pebbles, cobbles, and boulders (usually non-stratified) that remain as melting glaciers recede from an area.

Glacier – A large mass of moving ice. Ice has to be a minimum of 100 feet thick to move from its own weight. Formed by the accumulation of more snow than melts / sublimates during warmer months.

Horn Coral - A common name for solitary corals of the Order Rugosa, characterized by an internal radial pattern of vertical partitions called septae. Some species are shaped like a cow's horn or cornucopia.

Historic Time - Time usually measured from the time of recorded history or when Europeans first had contact with native people.

Igneous rock - Rock formed from molten magma (deep within the earth) or lava (on the surface). Occurs at the Falls in the glacial outwash. Examples include granite, basalt, rhyolite, and diorite.

Invertebrate - An animal without a backbone.



Joint - A linear fracture in rocks without lateral or vertical movement formed from stresses in the earth's crust. It may be filled with a mineral like calcite (as shown above).

Limestone - A sedimentary rock composed of calcium carbonate that is formed from the exoskeletons of marine invertebrates or chemical precipitation in seawater.



Locks - A man-made "water elevator" built on a canal and used to raise and lower boats to different levels. The McAlpine Locks on the Portland Canal at Louisville are one of 21 locks in the Ohio River System (see above).

Long hunter - A person who hunted and trapped in the wilderness, exploring and surveying areas while trading with the natives.

Mammoth - An ancestral elephant, with sharply curved tusks, which lived during the Pleistocene epoch. They preferred open woodlands and meadows where it could graze on grasses and other plants. There is a skeleton in the Interpretive Center lobby.

Marine – Oceanic, salt water environment.

Mastodon - An ancestral elephant similar to the mammoth, with shorter straighter tusks. Preferred woods where it would browse on trees. Also called a mastodont.

Mineral - A natural, solid, inorganic chemical compound. Rocks are mixtures of minerals.



Metamorphic rock - Rock which has been altered by heat and pressure (i.e. granite to gneiss, limestone to marble). Found at the Falls in glacial outwash. Gneiss is shown above. Other examples include quartzite and greenstone.

Mississippian culture - (A.D. 1,000 - 1650) - A native culture which lived throughout the mid-Mississippi valley and most of the Southeast. This culture lived in large villages, built houses, developed an economy based on agriculture, practiced religion, and created high levels of art.

Mollusks - A group of invertebrates that include snails, clams, squid and slugs. They consist of a soft body, most with an exo-skeleton (shell) exterior. Its shape depends upon where it lives.

Mussel - A bivalve mollusk found in fresh, brackish or sea water. Today they are commonly used as food. Their shells are used to make buttons.

Oil Shale - A type of shale rich in hydrocarbons (petroleum residue). With treatment, small amounts of the hydrocarbons can be released as oil.

Organism - Any living, individual plant or animal.

Paleo-ecology – The study of prehistoric life by reconstructing the ecosystem based on geological evidence.

Paleo-Indians - (40,000? - 8,000 B.C.) - A culture thought to have entered America via the Bering Strait land bridge between the last two Ice Ages. Current evidence leads to the possibility that some could have come to the Americas on boats. They were nomadic tribes that foraged and hunted in order to survive. Local sites date back to B.C. 12,000.

Paleontology - The study of prehistoric life in their geological context.

Plate Tectonics - The geological theory, with solid proof of evidence, that the earth's crust is composed of moveable plates above the mantle, that slide along over or under one another.

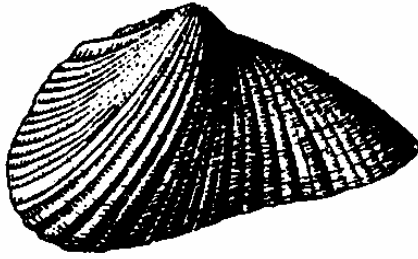
Portage - To carry boats and cargo over land between navigable waterways.

Prehistoric - Before the time of recorded (written) history.

Provenience – The horizontal and vertical location of an artifact at a site.

Rapids – Water flowing over small ledges of rock.

Rock - A mixture of two or more minerals, or an aggregate of a single mineral.



Rostroconch – A peculiar marine mollusk in the Class Rostroconchia, the only extinct mollusk class in the fossil record. Characterized by a single valve that wrapped around the mollusk. (*Hippocardia* is illustrated above.)

Sandstone - A Type of sedimentary rock formed from sand-sized particles cemented together by calcium carbonate or other minerals.

Sediment - Loose rock particles of any size – from microscopic clay to giant boulders.

Sedimentary Rock - Rock formed from sediments deposited by water, wind or ice. Examples include limestone, sandstone, siltstone and shale.

Shale – A sedimentary rock composed of compacted clay particles (i.e. mud).



Snail - A gastropod having a spiral shell. The animal typically lives in the last and largest whorl or section of the shell. The animal pokes its head out of the shell and moves on a fleshy foot that also protrudes from the shell. (*Turbinopsis* snail model illustrated above.)

Specimen – Any object of nature used in study. They are not made by humans. Examples include fossils, rocks, shells, insects.

Strata - (Singular - stratum) Layers of rock or sediment, usually laid down horizontally.

Stratification - The arrangement of rocks or sediment in distinct layers due to the action of water or wind.

Tectonics - Relating to the forces that cause earthquakes, mountain building, ocean trenches and volcanoes.



Trilobite - A group of extinct arthropods related to crabs, spiders, and insects. Trilobites had segmented exoskeletons divided into three lobes or sections. (Specimen shown above is an enrolled *Odontocephelaus* from the fossil beds.)

Weathering – The process by chemical or mechanical means that breaks down rock into products that are stable under conditions at the earth's surface.

Wicket - A gate (usually wooden) built into a dam which regulates water flow. The McAlpine dam at the Falls replaced the old wicket dam #41 in 1964.

Woodland culture - (B.C. 1,000 - A.D. 1,000) - A culture which began settling into villages and increasing their dependence upon agriculture. They developed complex social systems, used the bow and arrow to hunt game, stored food in ceramic vessels, and built mounds.

Zone – A layer of rock defined by its dominant fossils or minerals. At the Falls there is the coral zone, *Amphipora* zone, *Brevispirifer* zone, Brachiopod – Bryozoan zone and *Paraspirifer* zone.