

THE ABYSS

The Abyss is noted for the almost 3,000 feet of sheer cliff known as The Great Mohave Wall. Note the lack of rock debris, or talus, at the base of the cliffs. The carving of Grand Canyon has recently been dated at about five million years old by evolutionary geologists, much younger than previously assumed. Vertical rock walls generally erode faster than more gentle slopes. Is the lack of debris what would be expected with a 5 million year old canyon, or one about 5,000 years old?

FAST FACTS

- > There are billions of nautiloid fossils found in a 7-foot layer of limestone.
- > Almost 3,000 feet of cliff can be seen to the southwest.
- > Closed-shelled brachiopod fossils indicate rapid burial of living creature (see Page XX).
- > Lack of debris indicates a young Canyon.



Golden Eagle

Bald Eagle

Red-tailed Hawk

Several birds of prey inhabit the Park and are often seen soaring along the Rim. The Golden Eagle, with its 84-inch wingspan, is one of the largest birds in the Park. Bald Eagles are winter visitors, mostly feeding on trout. The Red-tailed Hawk can be spotted soaring along the cliffs searching for its dinner.

Question: What do these nautiloid fossils mean in regard to the deposition of limestone?

A. Hermit Shale and Supai Group, with high levels of iron oxide giving the Redwall Limestone below its color

B. Inner Granite Gorge, mostly schist and granite, considered to be day three creation rock (see page p31)

C. Nautiloid: Artist's rendition of a nautiloid, fossil found near the base of the Redwall Limestone

D. Contact, between the Redwall and Muav Limestones, represents 145 million years missing according to evolutionary thinking

E. Isis Temple, 7,012 feet above sea level, capped by the white Coconino Sandstone

F. Trinity Canyon, named after the triune nature of God (Father, Son, and Holy Spirit)

G. Slope above Tapeats Sandstone, caused by the weathering and breakdown of the softer Bright Angel Shale



C. Nautiloid: Artist's rendition of a nautiloid, fossil found near the base of the Redwall Limestone



Brachiopod fossil in limestone



Berries from the juniper tree (see page XX)

THE ABYSS

In an interpretive sign here describing the top six rock layers and their representative fossils, the layers are said to represent 80 million years of time, but notice the sharp contacts and the lack of any sign of erosion within and between the layers. Also notice the erosion of the Kaibab Limestone along the rim to the southwest. Modern examples show this kind of erosion happens fairly rapidly. Why don't you see any sign of this type of erosion between the layers?

The sign also points out the marine brachiopods found in the Kaibab Limestone. Brachiopods (pictured right) are common fossils found throughout the world. When such animals die, their shells quickly open due to the decay of the hinge muscles. If all these layers were deposited slowly over millions of years, we should see practically all of the brachiopod and clam fossils with open shells. But the vast majority of these shelled creatures are found with closed shells.

Also notice in the small picture at the top of the page, the extinct creatures with long cone-shaped shells. This is an

Rufous Hummingbird, with a 4 inch wingspan can flap its wings up to 80 times per second

artist's rendition of what a nautiloid may have looked like. There are billions of nautiloid fossils ranging in size up to five feet in length and only found in one 7-foot thick layer near the base of the Redwall Limestone (C). This fossil bed looks like a mass kill event and extends throughout the Grand Canyon region and west into Nevada (see page P45#4). Evolutionary geologists have assumed that the Redwall Limestone represents slow deposition over millions of years. But the directional orientation of nautiloid fossils suggests they were sorted and buried in a huge underwater landslide resulting in the rapid deposition for the nautiloid layer.

Over 350 species of birds have been recorded in the Grand Canyon region, ranging from the tiny hummingbird to the California Condor. It is estimated that at least 100 pairs of once endangered peregrine falcons nest along the cliffs of the inner canyon. Seventy percent of the birds are found in the lush riparian zone along the Colorado River. Since the construction of Glen Canyon Dam, many of the birds that used the Canyon only as a migration flyway now winter here.

Peregrine Falcon, with a 40-inch wingspan, can reach speeds in excess of 200 mph

ELEVATION 6,880 feet

The juniper trees along the Rim have a two-component root system: shallow roots to absorb thunderstorm water and deeply penetrating roots to draw water from far underground. In times of drought they "shut off" water to some of their branches which sacrificially die, but the rest of the tree will continue to grow.