

FOSSIL PATTERNS SHOW THE ORDER OF FLOOD DEPOSITS

Because there is a clear order in the rock layers, we can look closely at the fossils contained in each of these layers to get clues about why the creatures were deposited in this particular sequence. We find a definite sequence of fossils (*Figure 4*) that show evidence of waters rising and progressively burying different ecological zones. We also see patterns of fossilized tracks in rock layers lower than we find the actual fossilized creature (*Figures 5-6*).

VERTEBRATE TRACKWAYS BELOW VERTEBRATE FOSSILS (*FIGURE 6*)

Reptile footprints (*right*) are found much lower than the fossilized bodies of reptiles in the Grand Canyon. This strange pattern is easy to explain if the reptiles were scrambling to safety with each incoming deposit, until they died in exhaustion.



TRILOBITE TRACKS BELOW TRILOBITE FOSSILS (*FIGURE 5*)

Trilobite footprints (*bottom right*) are consistently found lower than the fossilized bodies of trilobites (*upper right*). This pattern makes sense if these shallow marine invertebrates were scrambling to safety with each incoming deposit of mud, until they died in exhaustion.



ORDER OF CREATURES BURIED IN THE GRAND STAIRCASE (*FIGURE 4*)

This table identifies the types of fossils found in each rock layer.

The fossils in bold text represent the **first appearance** of that type of fossil.

BRAIN HEAD FORMATION	terrestrial and freshwater vertebrates, invertebrates, and plants
WASATCH FORMATION	terrestrial and freshwater vertebrates, invertebrates, and plants
KAIPAROWITS FORMATION	terrestrial and freshwater vertebrates, invertebrates, and plants
STRAIGHT CLIFFS FORMATION	marine and freshwater invertebrates; freshwater, marine, and terrestrial vertebrates
TROPIC FORMATION	marine plants, vertebrates, and invertebrates
DAKOTA SANDSTONE	terrestrial plants, vertebrates and invertebrates; marine invertebrates
CARMEL FORMATION	marine invertebrates and vertebrates, and algae
NAVAJO SANDSTONE	terrestrial reptiles, plants, and invertebrate trace fossils; dinosaur tracks
KAYENTA FORMATION	terrestrial plants and vertebrates; dinosaur tracks
MOENAVE FORMATION	freshwater fish, crocodiles , dinosaurs , and reptile tracks
CHINLE FORMATION	terrestrial plants and freshwater invertebrates
MOENKOPI FORMATION	marine invertebrates; terrestrial and freshwater vertebrates , invertebrates and plants; trace fossils
KAIBAB LIMESTONE	brachiopods, bryozoans, sharks , nautiloids, fish, sponges, trilobites, crinoids, trace fossils, and microfossils
TOROWEAP FORMATION	bivalves, gastropods (molluscs), cephalopods, brachiopods, bryozoans, crinoids, corals
COCONINO SANDSTONE	vertebrate and invertebrate tracks, and trace fossils
HERMIT SHALE	trace fossils (trackways, burrows) and plants
SUPAI GROUP	trace fossils (vertebrate trackways , burrows), brachiopods, foraminifera, and plants
REDWALL LIMESTONE	bivalves, cephalopods , brachiopods, corals, bryozoans , crinoids, trilobites, fish teeth , foraminifera , and algae
TEMPLE BUTTE LIMESTONE	corals , fish scales , crinoids , stromatoporoids , brachiopods, gastropods, microfossils, and trace fossils
MAUV LIMESTONE	trilobites, brachiopods, sponges, gastropods, algal structures
BRIGHT ANGEL SHALE	brachiopods , molluscs , sponges , echinoderms , gastropods , trilobites, trace fossils (tracks, burrows)
TAPEATS SANDSTONE	trace fossils (tracks, burrows) and trilobites
CHUAR GROUP	stromatolites, algae, microfossils, and trace fossils
UNKAR GROUP	none