

Earth-Based Education in the Cathedral of Time:

Strategies Learned While Working as a Geologic Interpreter in the Grand Canyon

Wayne Ranney

GSA Annual Meeting, 2016 - Session T89

Bringing the Horse to Water and Getting It to Drink: Obstacles and Innovative Ways of Getting the Religious Public to Consider Scientific Evidence

I have led hundreds of multi-day geologic backpacks and day hikes since 1982



***And nearly 100, 7-10 day river trips
since 1980 (including GSA Geo-Ventures)***



I have encountered and interacted with many different belief systems in this setting



Strategies found to not work:

“Do not engage with them because you cannot win them over” (Disengage entirely)

Exclusive use of scientific, fact-based arguments

Equating YEC ideas for GC's origins with ass.
Native American origin stories ***

Appearing dismissive of faith-based ideas

Argumentative or challenging

Strategies found that do work:

Refer YEC's to Old Earth Creationist resources

Establish dialog rather than flee from it

Emphasize modern geologic processes vs. ancient

Use diplomacy always - before - during - after

Bring up the topic in advance – an invitation

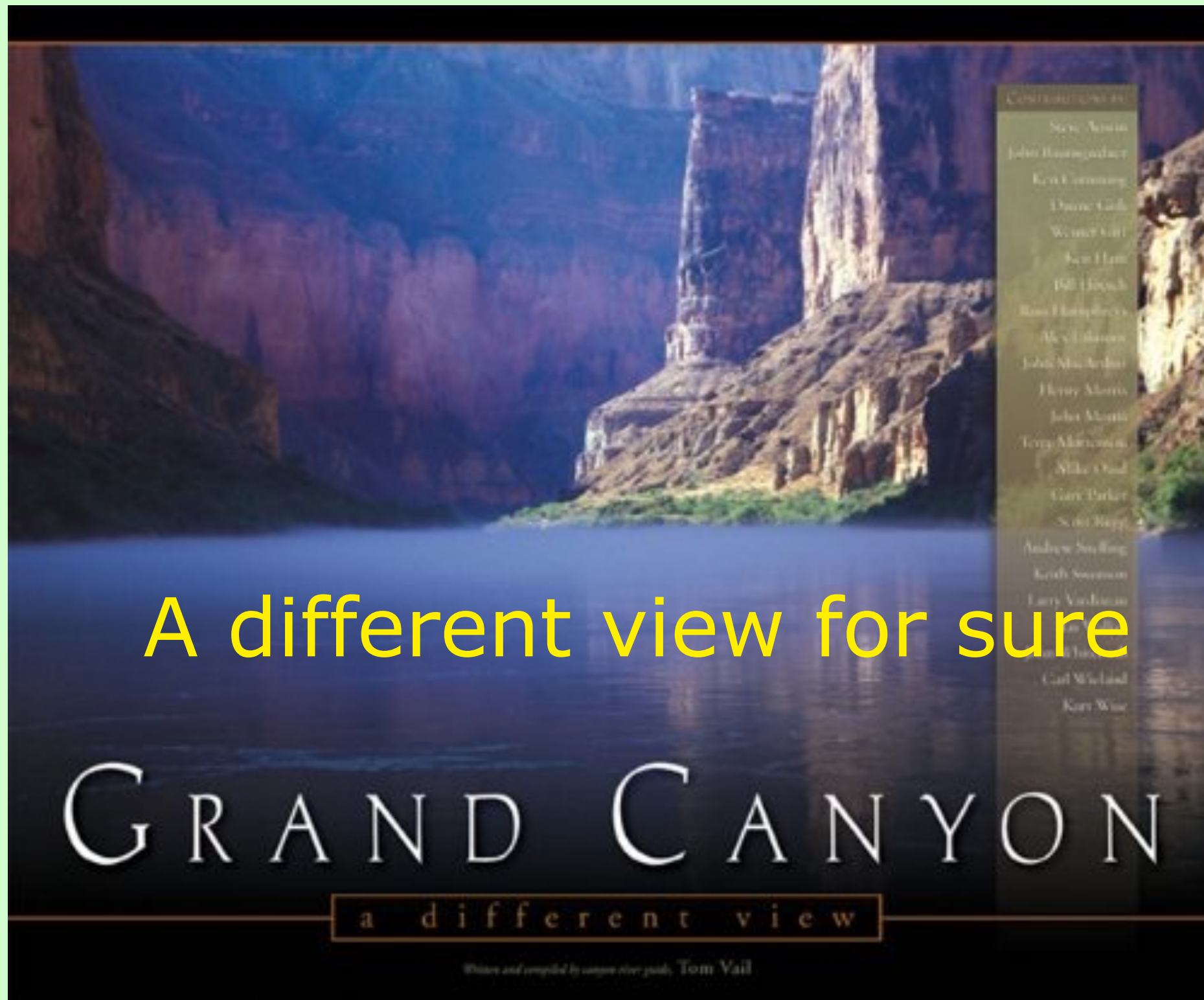
***Grand Canyon
has become
Ground-Zero
in debates
with YEC's***



Grand Canyon: A Different View

by Tom Vail

Published May, 2003



Canyon Ministries offers Rim Tours and River Trips



Photo courtesy Dr. Randy Moore, Univ. of Minn.

Canyon Ministries - Foundational Beliefs

We believe the account of origins presented in Genesis...

... is a simple but factual presentation of actual events ...

... occurred in the span of six consecutive twenty-four hour days, six to ten thousand years ago...

... the great flood was an actual historic, global, catastrophic event; [and] is responsible for the formation and subsequent sculpturing of much of the earth's geologic record, including the Grand Canyon.



It's time for us to engage

All geologists should strive to better engage the public and YEC's who are 'on-the-fence'

“Nothing I am about to share with you is meant to challenge your spiritual or religious beliefs”



Strategies that work:

Refer YEC's to Old Earth Creationist resources

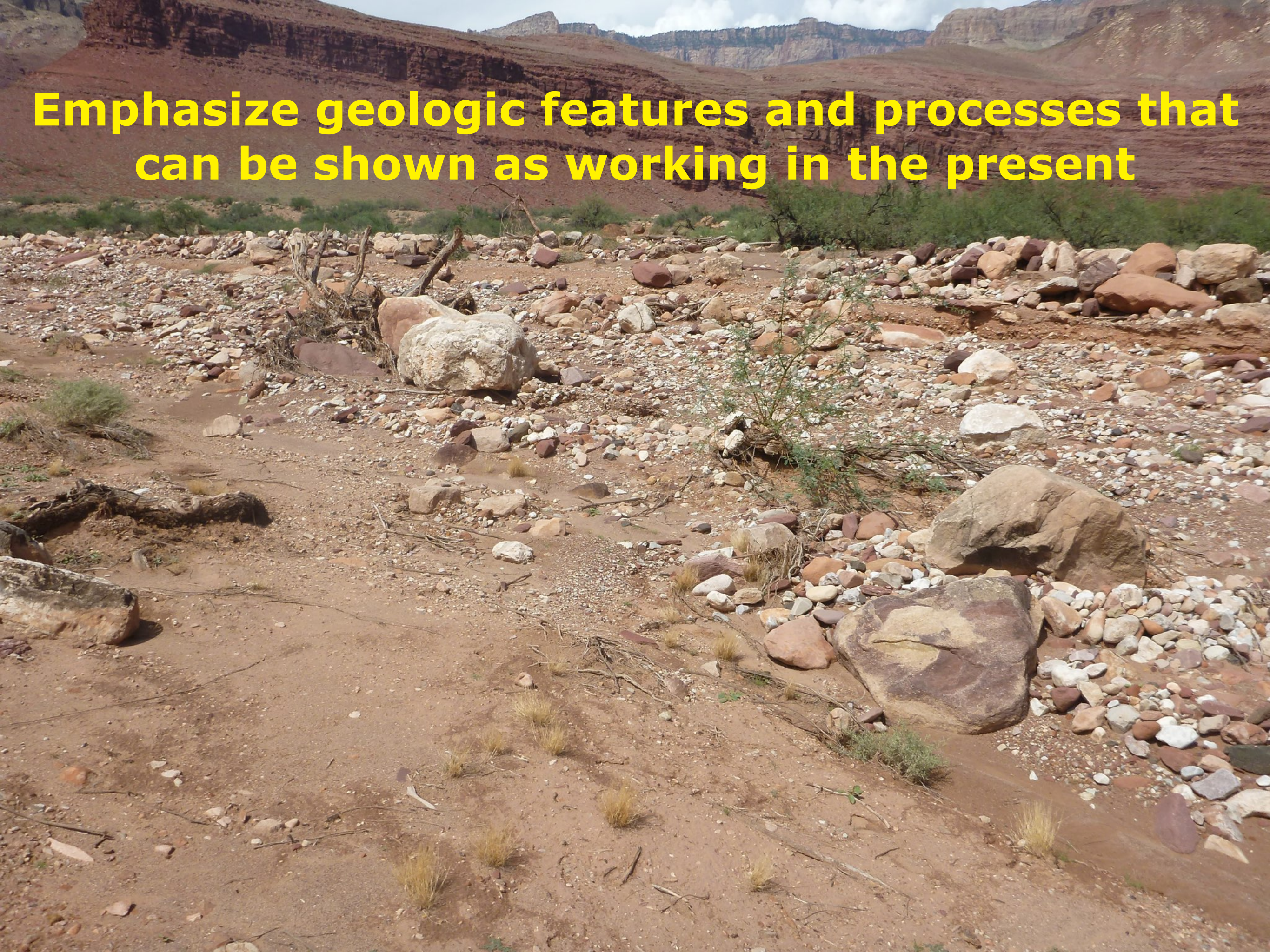
Establish dialog rather than flee from it

Emphasize modern geologic processes vs. ancient

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**Emphasize geologic features and processes that
can be shown as working in the present**





Shift geologic discussions to features and processes that can be observed in the present

Flash flood events and deposits

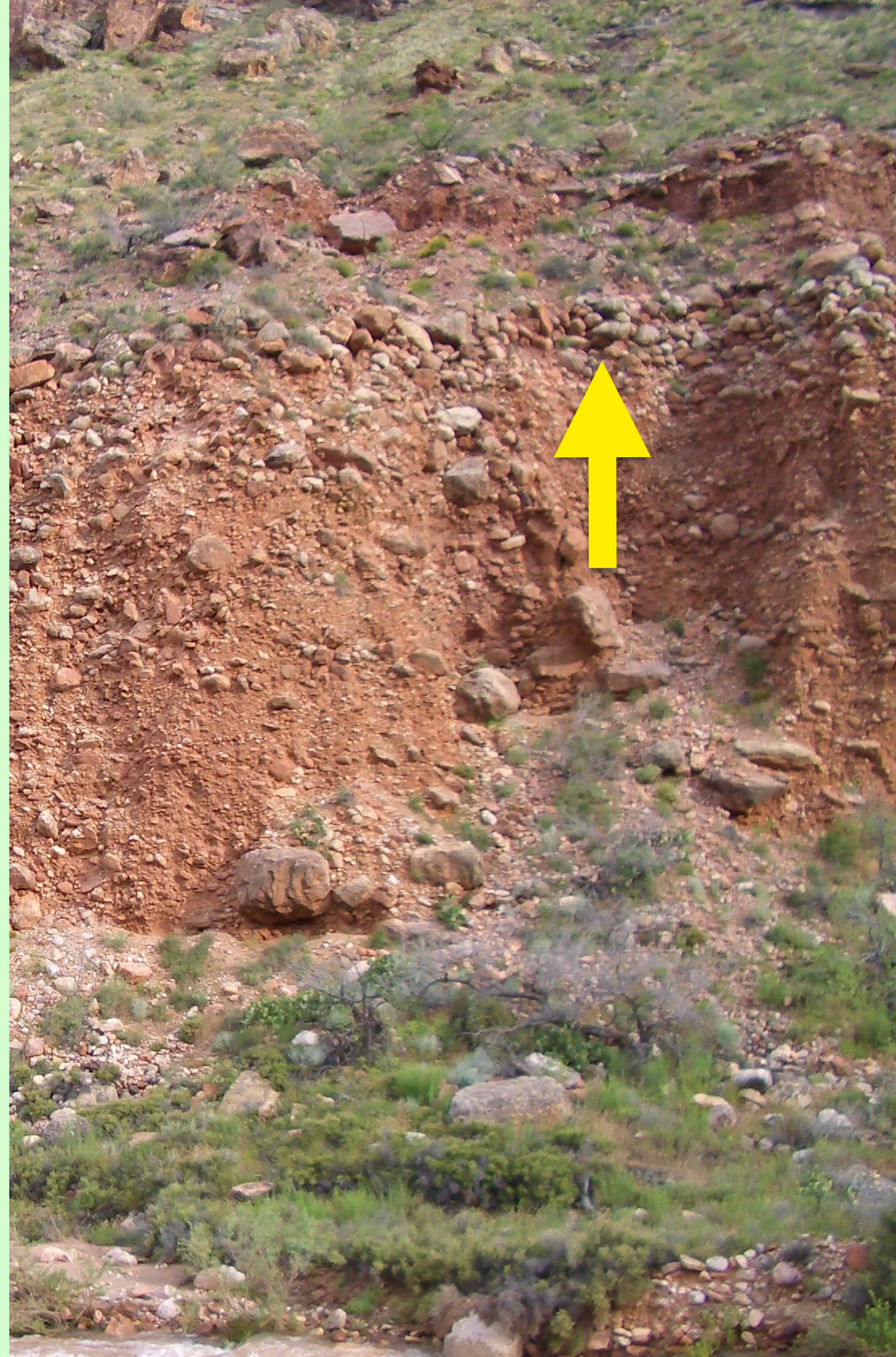
Rockfalls

Biological inputs

History of science

***Debris flow deposit
along Bright Angel
Creek - coarsening
upwards***

***Analogy used -
Shake a jar of coins***





Catastrophic outburst flood deposit

Intra-canyon lava flow



Resources that YEC's and traditional geologists should be aware of:

The Clergy Letter Project

The Clergy Letter Project is an endeavor designed to demonstrate that religion and science can be compatible and to elevate the quality of the debate of this issue.

www.theclergyletterproject.org

The Clergy Letter Project

The Clergy Letter Project has been officially endorsed by:

The Presbyterian Church (USA)

The 2016 General Assembly voted overwhelmingly in favor on 22 June 2016.

The United Methodist Church (worldwide)

The 2008 General Conference issued the following statement: "The United Methodist Church endorses The Clergy Letter Project and its reconciliatory programs between religion and science, and urges United Methodist clergy participation." This statement was reaffirmed by the 2016 General Conference.

Resources that YEC's and traditional geologists should be aware of:



BioLogos invites the church and the world to see the harmony between science and biblical faith as we present an evolutionary understanding of God's creation.

www.biologos.org

BioLogos

What We Believe

- 1 We believe the Bible is the inspired and authoritative word of God.
- 2 We believe that God also reveals himself in and through the natural world he created, [and that] properly interpreted, Scripture and nature are complementary.
- 4 We believe in the historical incarnation of Jesus Christ [and the] the historical death and resurrection of Jesus Christ.
- 6 We believe that God typically sustains the world using faithful, consistent processes that humans describe as "natural laws."
- 7 We believe that the methods of science are an important and reliable means to investigate and describe the world God has made. In this, we stand with a long tradition of Christians for whom Christian faith and science are mutually hospitable.
- 8 We believe that God created the universe, the earth, and all life over billions of years. God continues to sustain the existence and functioning of the natural world.

www.biologos.org

Resources that YEC's and traditional geologists should be aware of:

THE AMERICAN SCIENTIFIC AFFILIATION

A NETWORK OF CHRISTIANS IN THE SCIENCES

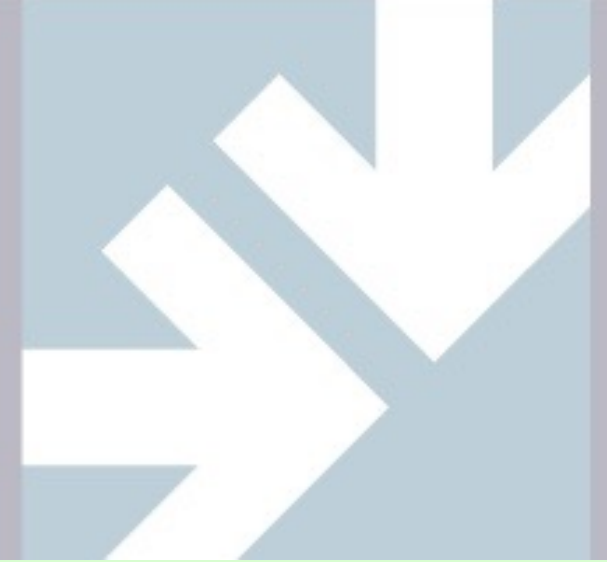


The American Scientific Affiliation, (ASA), was founded in 1941 as an international network of Christians in the sciences. As scientists, members of the ASA take part in humanity's exploration of nature, its laws, and how it works. As Christians, we want to know not just how the universe operates and came into being, but why it exists in the first place.

www.network.asa3.org

THE AMERICAN SCIENTIFIC AFFILIATION

A NETWORK OF CHRISTIANS IN THE SCIENCES



Our platform of faith has four important planks:

We accept the divine inspiration, trustworthiness and authority of the Bible in matters of faith and conduct.

We confess the Triune God affirmed in the Nicene and Apostles' creeds, which we accept as brief, faithful statements of Christian doctrine based upon Scripture.

We believe that in creating and preserving the universe God has endowed it with contingent order and intelligibility, the basis of scientific investigation.

We recognize our responsibility, as stewards of God's creation, to use science and technology for the good of humanity and the whole world.

www.network.asa3.org

Scientific

Comprehensive

Diplomatic

Non-threatening

Approachable

**Beautifully
designed**

**Provides a new and
different tact for
geologists to engage**

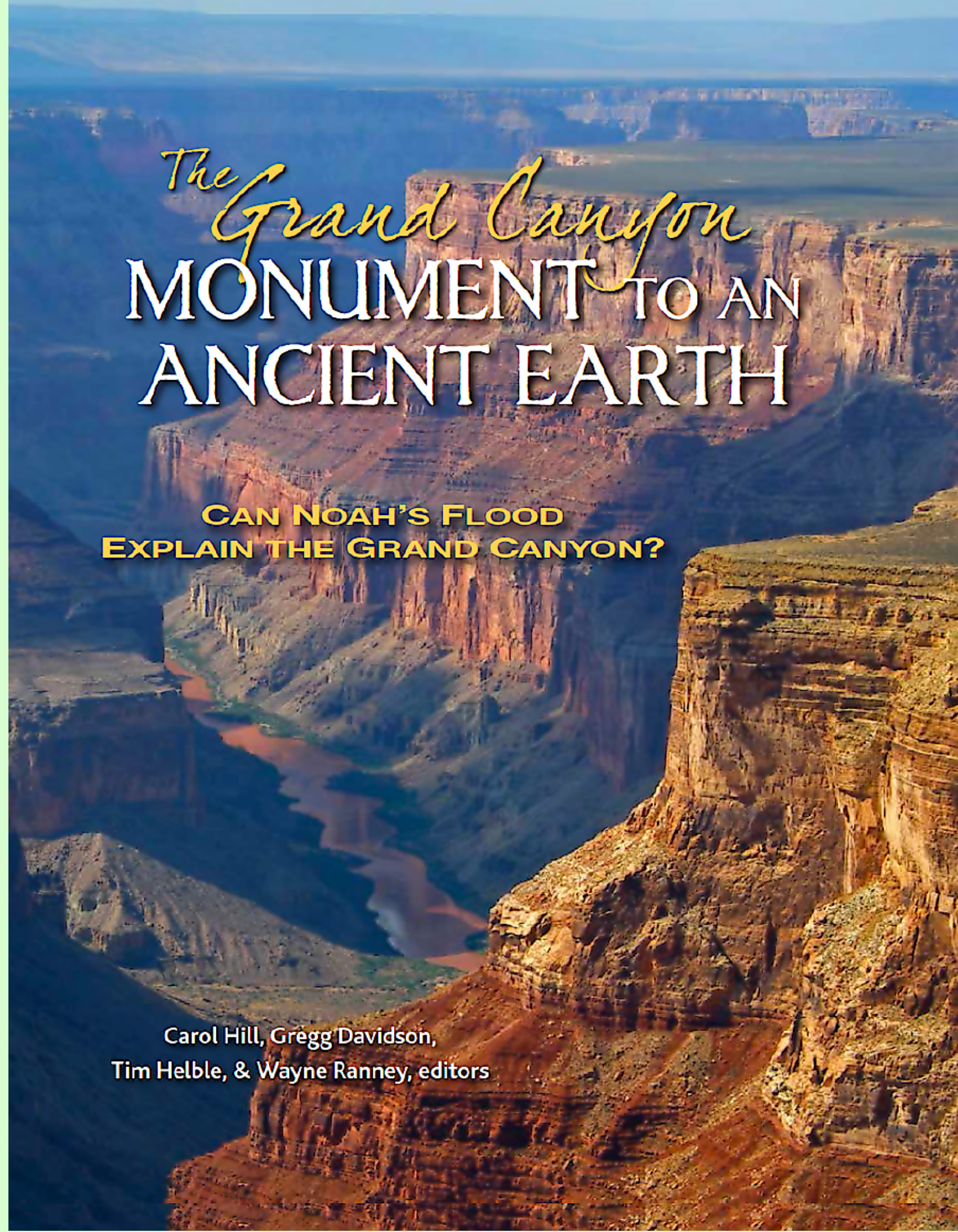
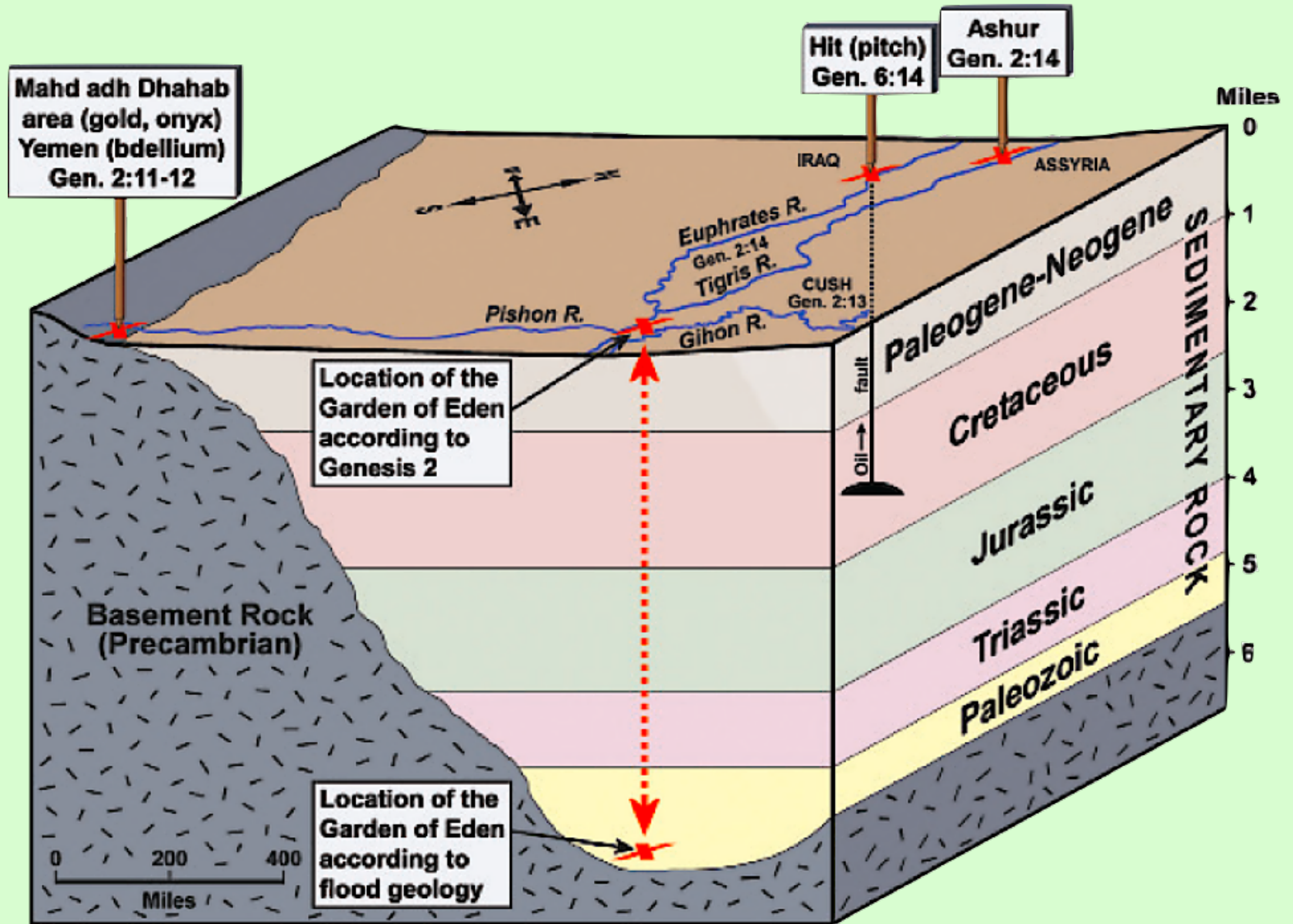


Figure 2.5 - GC - Monument to an Ancient Earth



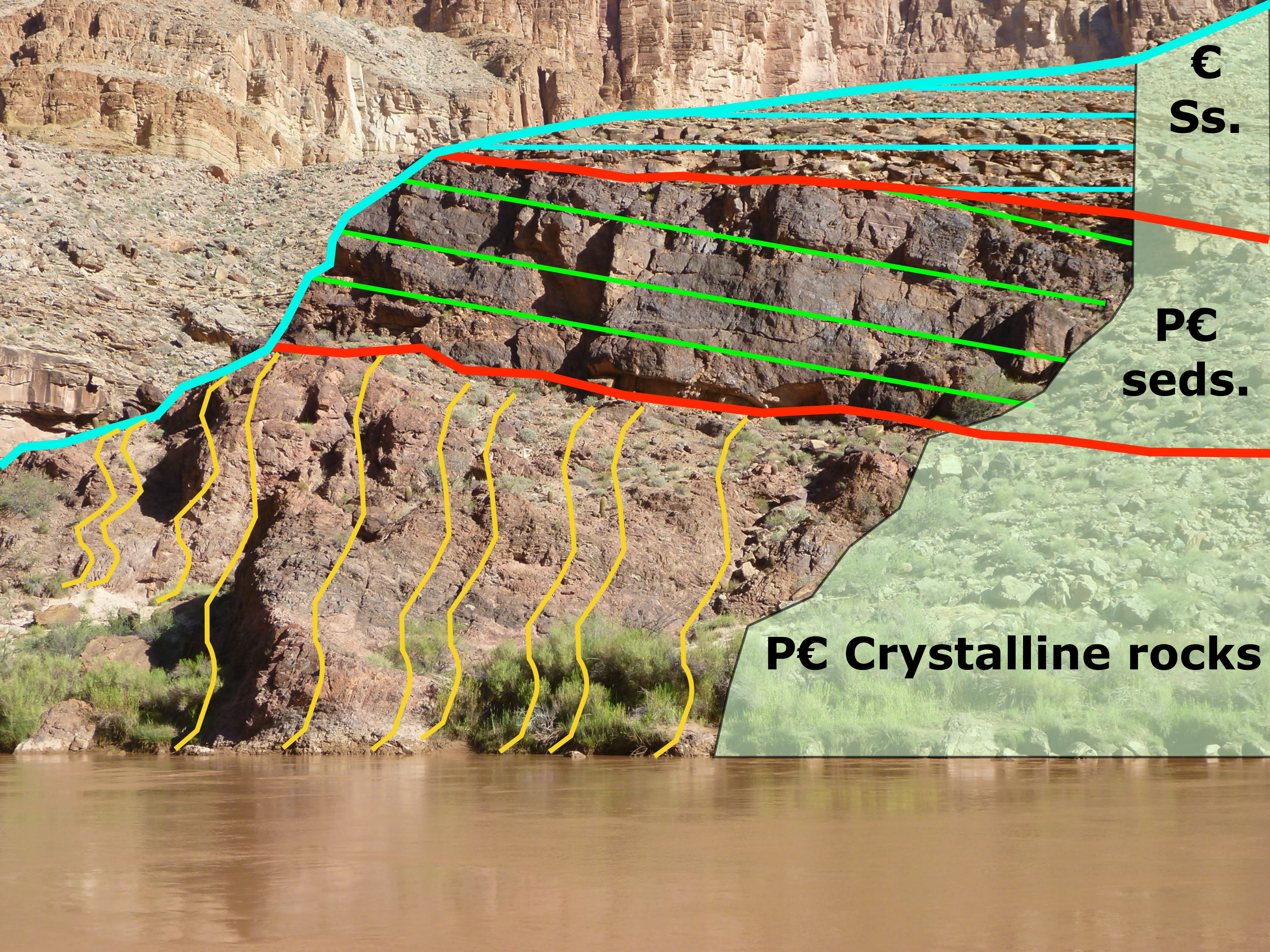
This graphic shows the inconsistencies in YEC views

It is of interest to me that religious and geologic thinking share a common outcome



That is, they both serve to show how humanity is secondary to much larger themes





€
Ss.

P€
seds.

P€ Crystalline rocks





A group of approximately 15 people are posing for a photo on a sandy riverbank. In the background, a large, rugged rock formation rises from the water. The people are dressed in outdoor gear, including hats, jackets, and shorts. Some are standing, while others are kneeling or sitting in the front. The overall scene is bright and sunny.

Thanks to:

Carol Hill - University of New Mexico

Ken Wogelmuth - Solid Rock Lectures

Grand Canyon Assn. Field Institute

Colorado River and Trails Expeditions

Arizona Raft Adventures

Northern Arizona University

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