



CREATION DETECTIVES

#1

THE FLOODED DESERT

(BASED ON TRUE EVENTS)





CREATION DETECTIVES

THE FLOODED DESERT

BASED ON RESEARCH BY SCIENTISTS
LEONARD BRAND AND JOHN WHITMORE



FAITH &
SCIENCE
COUNCIL



GEOSCIENCE
RESEARCH INSTITUTE



NATURALEZA Y CREACION

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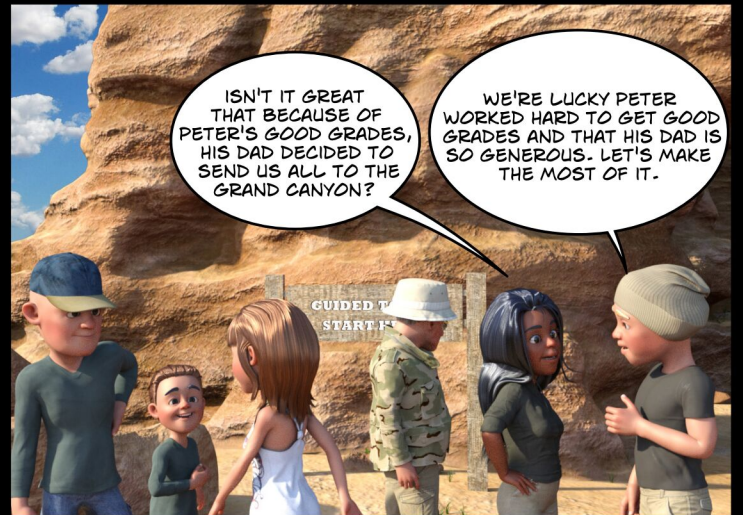
ALEJANDRO TORQUEMADA

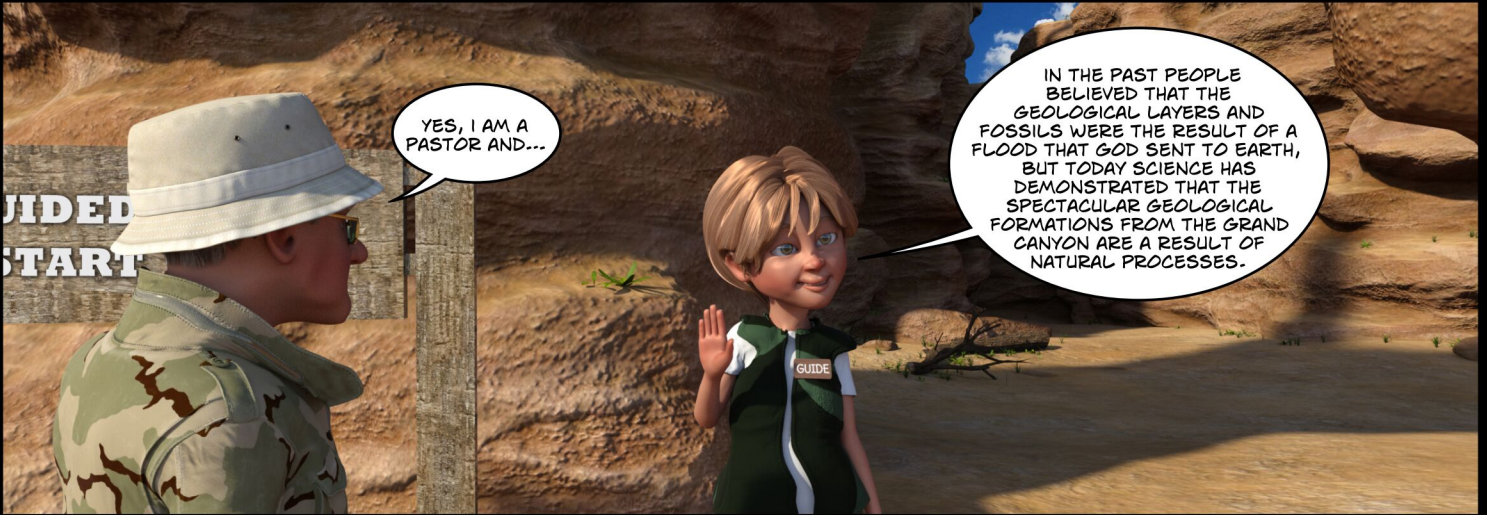
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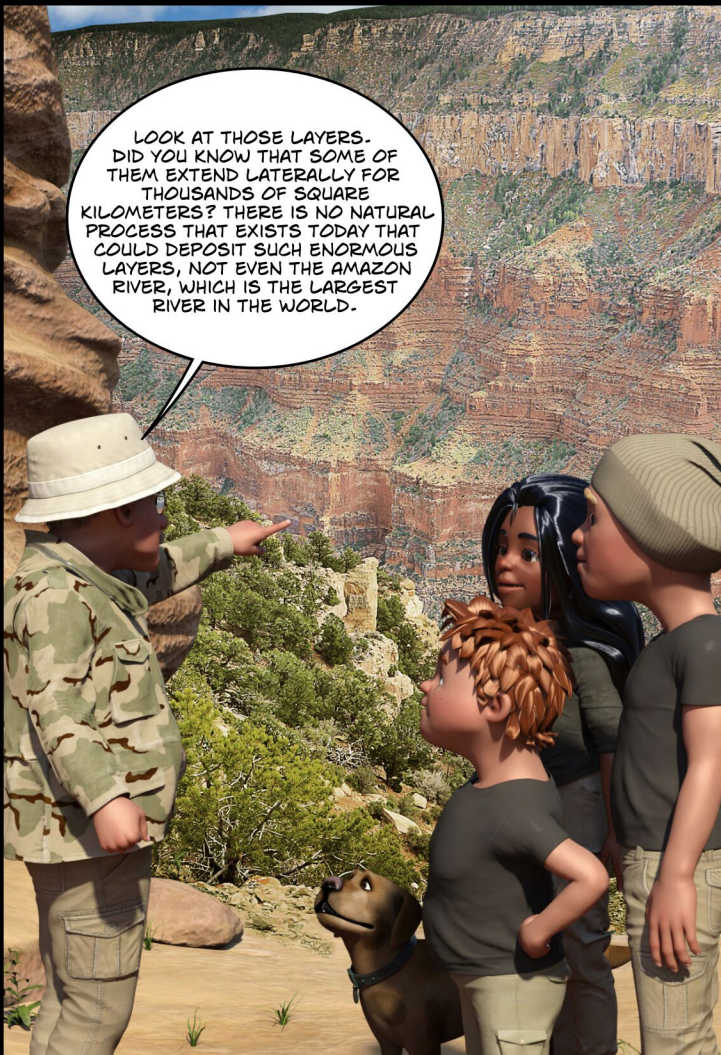


THE FLOOD THAT THE BIBLE DESCRIBES WAS MUCH MORE THAN 40 DAYS OF SIMPLE RAIN.

IT WAS MORE LIKE FOUR OR FIVE DISASTER MOVIES HAPPENING ALL AT ONCE: TROPICAL STORMS, TSUNAMIS, VOLCANOES, EARTHQUAKES, AND PROBABLY EVEN METEORITES FALLING AND HITTING THE EARTH.

THOUSANDS OF TONS OF MATERIAL AND DEBRIS MOVING FROM ONE PLACE TO ANOTHER, GIGANTIC CURRENTS DEPOSITING THE LAYERS AND THEN ERODING THEM, AND THESE PROCESSES CONTINUED FOR A LONG TIME EVEN AFTER THE RAIN HAD STOPPED, COMPLETELY CHANGING THE APPEARANCE OF THE PLANET.





LOOK AT THOSE LAYERS. DID YOU KNOW THAT SOME OF THEM EXTEND Laterally FOR THOUSANDS OF SQUARE KILOMETERS? THERE IS NO NATURAL PROCESS THAT EXISTS TODAY THAT COULD DEPOSIT SUCH ENORMOUS LAYERS, NOT EVEN THE AMAZON RIVER, WHICH IS THE LARGEST RIVER IN THE WORLD.



IN MY CAREER AS AN ARCHAEOLOGIST, I'VE FOUND LOTS OF EVIDENCE PREDICTED BY THE BIBLE'S HISTORICAL RECORD. AFTER RETIRING, I STUDIED GEOLOGY AND PALEONTOLOGY BECAUSE I'M CONVINCED THESE SCIENCES SHOULD ALSO YIELD THEORIES CONSISTENT WITH WHAT THE BIBLE REVEALS.

WOW! HOW DO YOU KNOW SO MUCH ABOUT THIS?



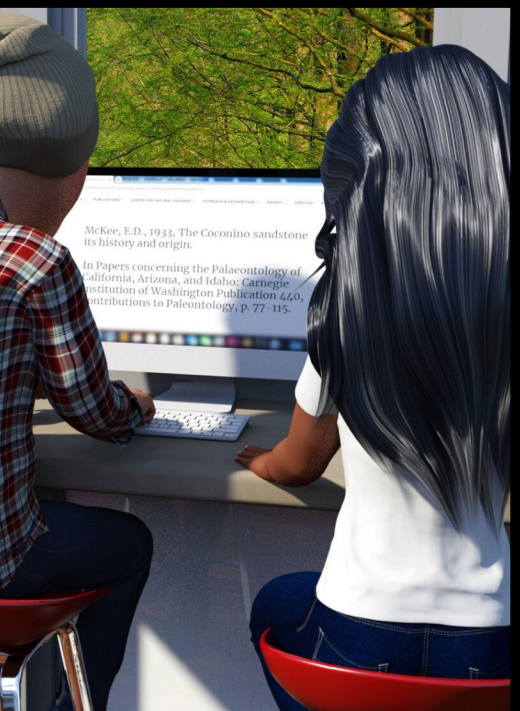
THIS TAN-COLORED LAYER IS THE COCONINO SANDSTONE. IT FORMED FROM WINDBLOWN DESERT SAND THAT WAS SLOWLY BURIED AND COMPACTED BEFORE BEING CEMENTED INTO SOLID ROCK...

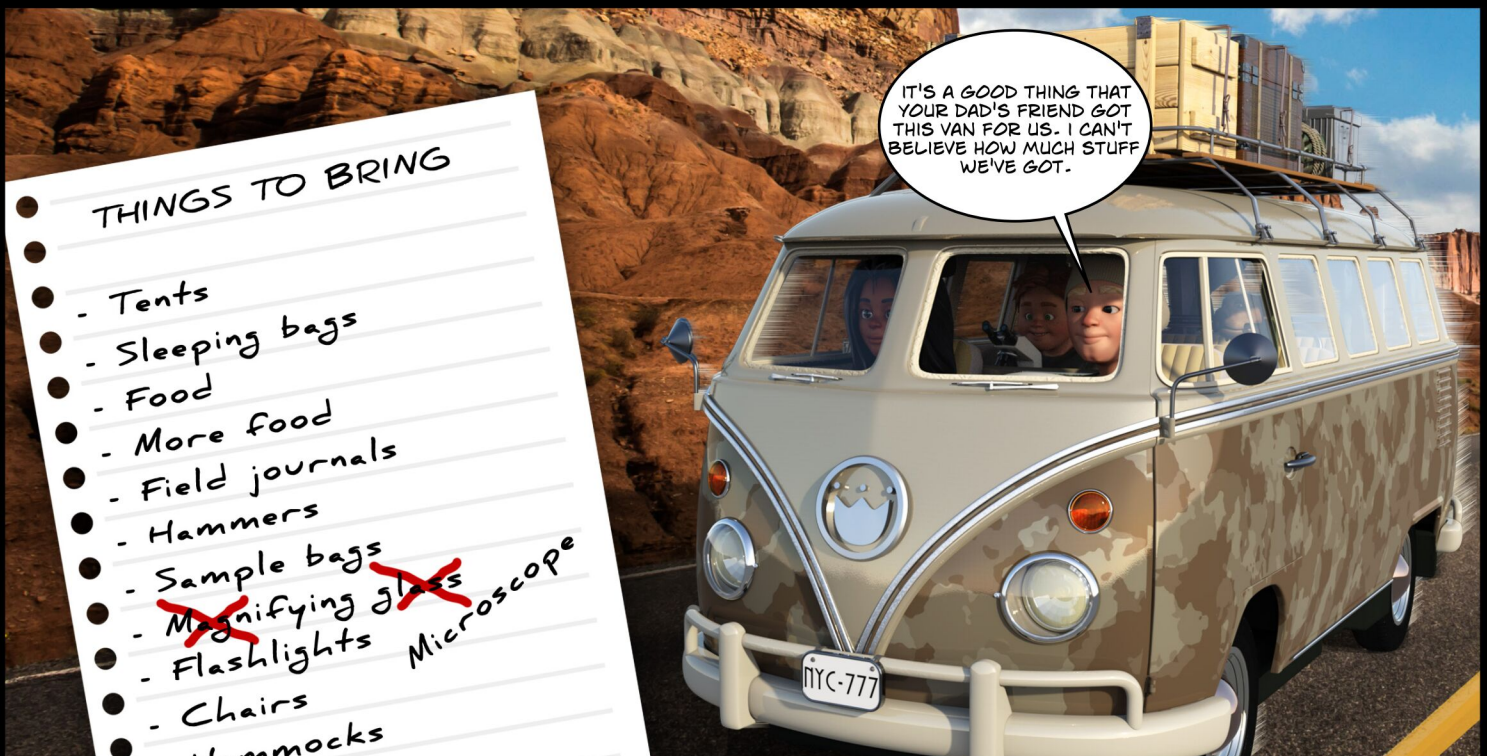
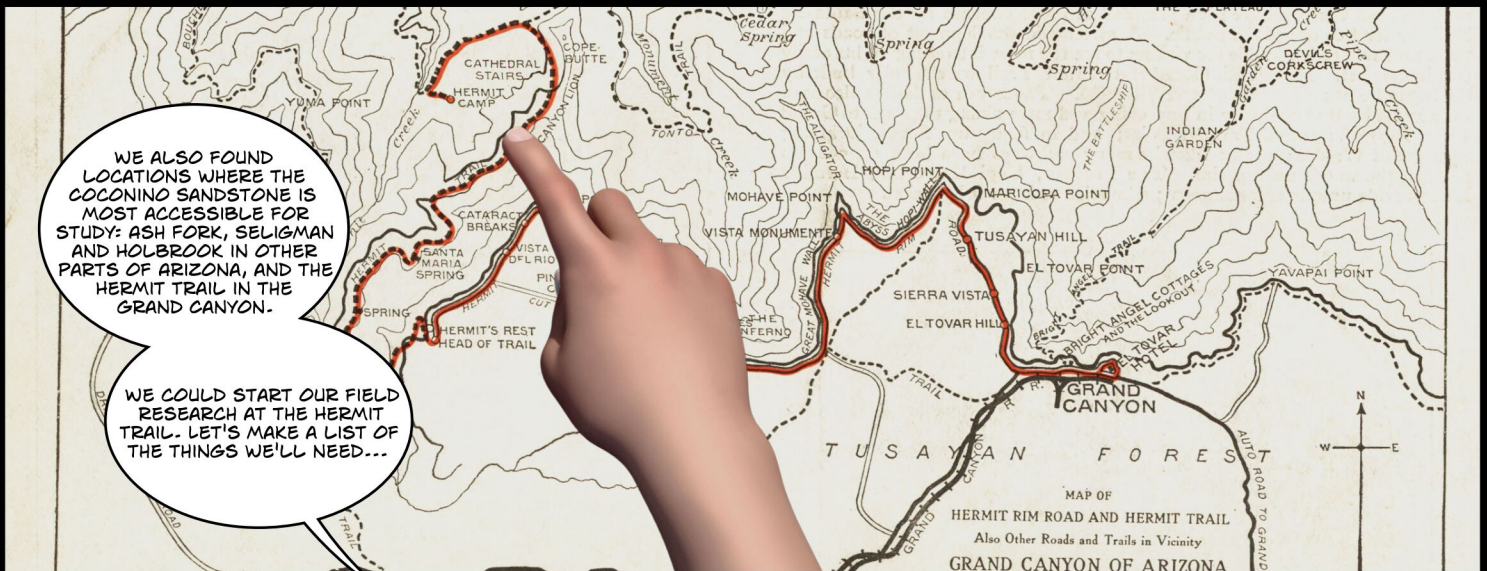
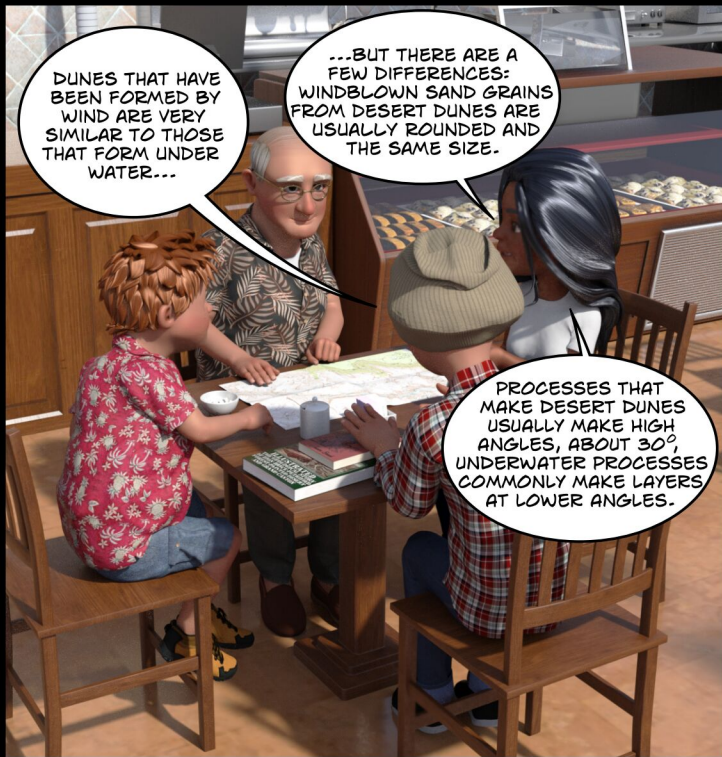


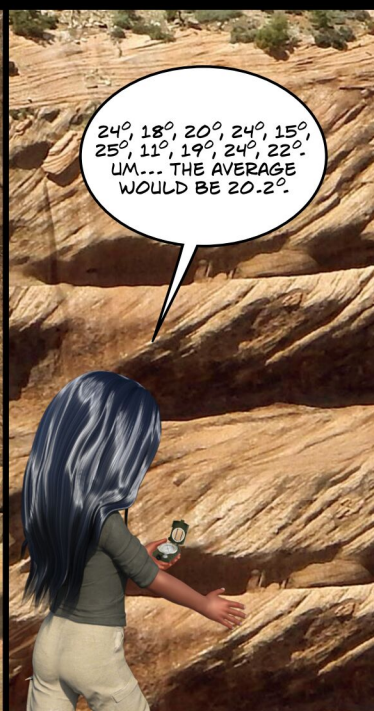
...THESE ARE THE REMAINS OF ANCIENT DESERT DUNES THAT ONCE OCCUPIED THIS PLACE.

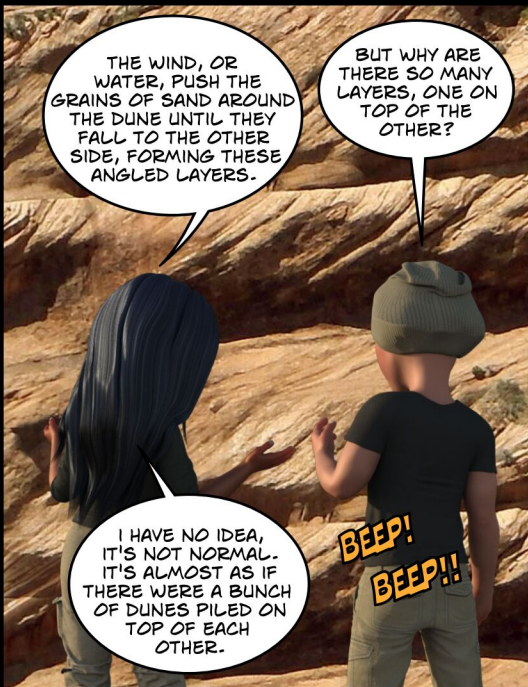
ARE YOU SURE THAT THIS LAYER WAS A DESERT?









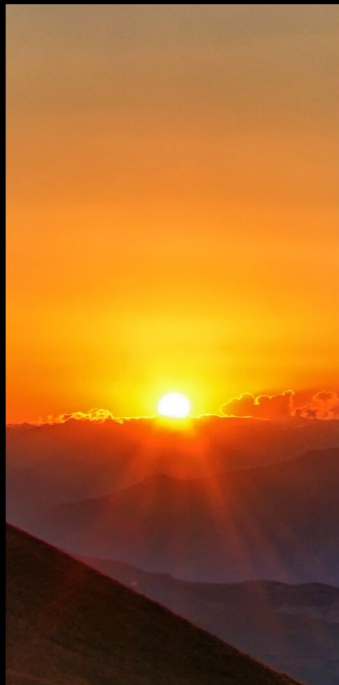




WHAT IS THAT SMELL? YOU DIDN'T BRING YOUR BOOTS IN THE TENT, DID YOU?

UH YEAH. WHAT, DO YOU WANT BUGS TO GET IN THEM OR SOMETHING?

ZZZZZZZ



SO, WHAT DO WE HAVE SO FAR?

UNDER THE MICROSCOPE THE GRAINS DON'T LOOK ROUND AND THEY'RE NOT ALL THE SAME SIZE.

AND THE AVERAGE ANGLE OF THE LAYERS IS WELL BELOW 30°.

IT'S SO OBVIOUS: THIS WASN'T A DESERT, IT WAS AN OCEAN.

WOOF! WOOF!

I'M NOT SURE THAT THIS EVIDENCE WILL BE ENOUGH.



POIROT, WHAT IS IT? DID YOU FIND THE ONLY LIZARD OF THE DESERT?

AND FOOTPRINTS!

GRRRRR!



BUT THESE FOOTPRINTS... THEY ARE PART OF THE ROCK!



PASTOR MAX, JAMES, DIANA, COME LOOK AT THIS! FOSSIL FOOTPRINTS!

GRRRRR!



VERY GOOD PETER.

WAY TO GO!

I'M THE ONE WHO ACTUALLY FOUND THEM.



THESE FOOTPRINTS COULD REALLY HELP.

WHAT IF THEY'RE FROM A MARINE ANIMAL? THAT WOULD SOLVE THE PROBLEM...



MAYBE WE SHOULD CONSULT A ZOOLOGIST.



I KNOW A SCIENTIST WHO STUDIES GRAND CANYON FAUNA. TAKE A FEW MORE PICTURES WHILE I TRY TO CONTACT HER.



OF COURSE! I'LL BE WAITING FOR YOU IN MY OFFICE AFTER LUNCH.



WE'LL GO BACK TO THE CITY AND MEET UP WITH MY ZOOLOGIST FRIEND THERE.

GREAT, TIME TO CLEAN UP.



WELCOME. WHAT DO YOU HAVE TO SHOW ME?

THIS SURE BEATS THE LIBRARY, DOGS ARE WELCOME HERE.



I'M PRETTY SURE THAT THE FOOTPRINTS ARE FROM A SMALL LAND VERTEBRATE, PROBABLY A LIZARD OR AN AMPHIBIAN, BUT IT'S HARD TO KNOW EXACTLY.



AMPHIBIANS? AREN'T THOSE FROGS AND TOADS? THEY DON'T LOOK LIKE FROG FOOTPRINTS TO ME.

THERE ARE OTHER KINDS OF AMPHIBIANS LIKE SALAMANDERS THAT DON'T JUMP, AND THEY HAVE FOUR LEGS SIMILAR TO THOSE OF LIZARDS.

IF SALAMANDERS ARE AMPHIBIANS THEN THEY CAN WALK ON BOTH LAND AND UNDER WATER, RIGHT?

THAT'S RIGHT.

MAYBE WE COULD USE SALAMANDERS TO INVESTIGATE WHETHER THE FOOTPRINTS WERE MADE IN THE DESERT OR UNDER WATER.

THAT'S NOT A BAD IDEA.

YOU CAN USE MY LAB FOR THE EXPERIMENTS.

REMEMBER THOUGH, THAT WHEN YOU USE LIVE ANIMALS IT'S VERY IMPORTANT THAT YOU TREAT THEM WELL AND IN COMPLIANCE WITH ANIMAL WELFARE LAWS.

I'LL HELP YOU.





WE'LL PUT THE SALAMANDERS IN TWO TERRARIUMS.

AND WE'LL TAKE PICTURES OF THE FOOTPRINTS THAT THEY LEAVE IN EACH ONE.

FOOTPRINTS? I CAN DO FOOTPRINTS.



FOSSIL FOOTPRINTS

UNDER WATER

DRY SAND



POIROT!!! WHAT ARE YOU DOING? WATCH OUT!



THE FOSSIL FOOTPRINTS LOOK MUCH MORE LIKE THE FOOTPRINTS LEFT BY THE SALAMANDER UNDER WATER THAN ON DRY SAND.

BUT, WHAT IF IT WAS SIMPLY WET SAND FROM THE RAIN?

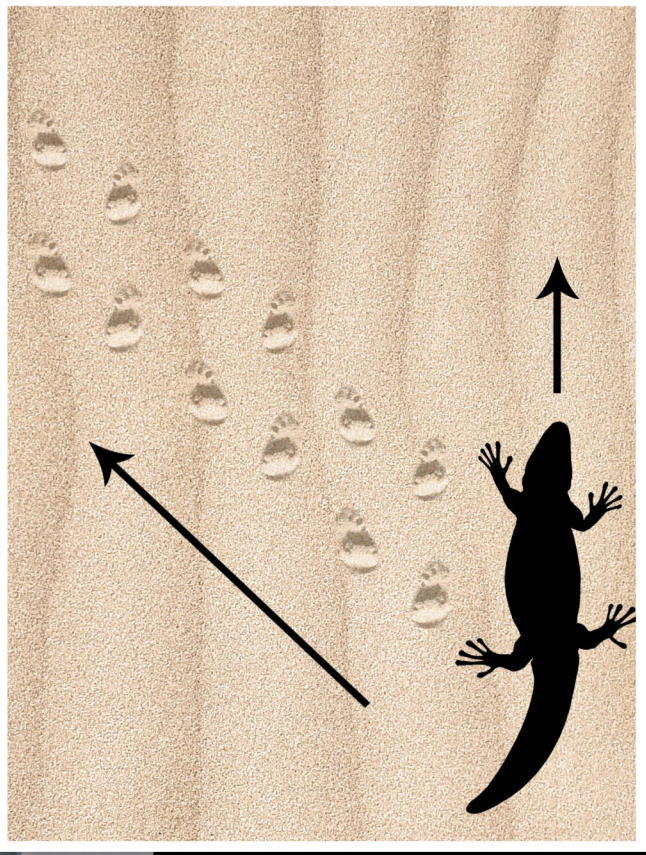


AM I THE ONLY ONE THAT THINKS THAT THERE'S SOMETHING WEIRD ABOUT THE DIRECTION OF THESE FOOTPRINTS?



THE DIRECTION OF THE FOOTPRINTS DOESN'T MATCH THE POSITION OF THE TOES.

IT LOOKS LIKE THE ANIMAL TRIED TO WALK STRAIGHT BUT SOMETHING FORCED IT TO MOVE SIDeways. HOW CAN THAT BE?

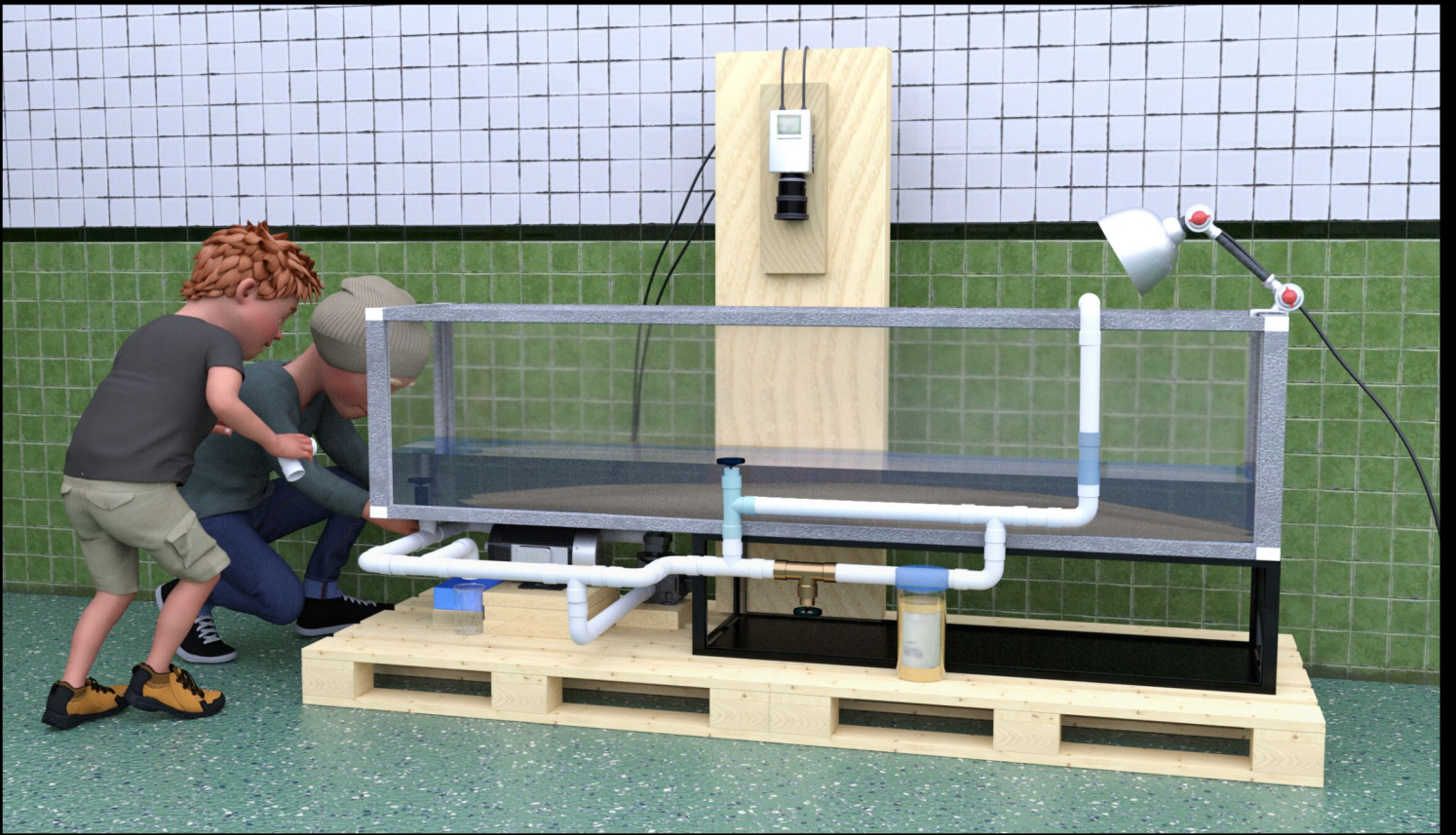
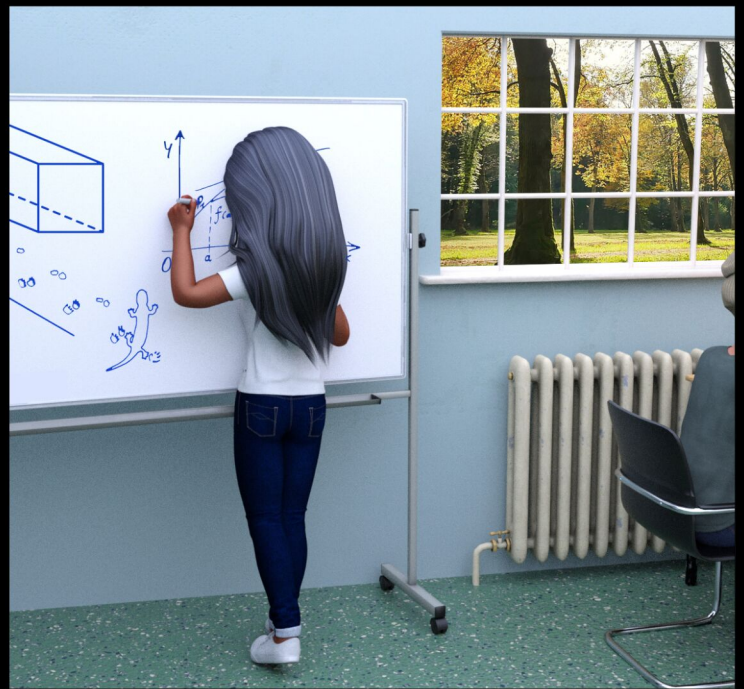


WATER CURRENTS!!!



THERE WAS PROBABLY SOME KIND OF CURRENT THAT PULLED THE ANIMAL SIDeways.

LET'S INVESTIGATE IT!



POIROT ALSO WANTS TO CHECK WHAT HAPPENS WHEN YOU TRY TO WALK FORWARD, BUT SOMETHING DRAGS YOU SIDWAYS AND ...







WE'RE HERE!



CONFERENCE
Oral Communication:
THE FLOODED DESE

THESE CONCLUSIONS CALL INTO QUESTION THE COMMONLY ACCEPTED HYPOTHESIS THAT THE COCONINO SANDSTONE IS A DESERT DEPOSIT. THEY INSTEAD FAVOR REINTERPRETATION OF THE COCONINO SANDSTONE AS ANCIENT UNDERWATER DUNES THAT HAVE BEEN CEMENTED INTO SANDSTONE.



I THINK THIS RESEARCH HAS BEEN MANIPULATED.

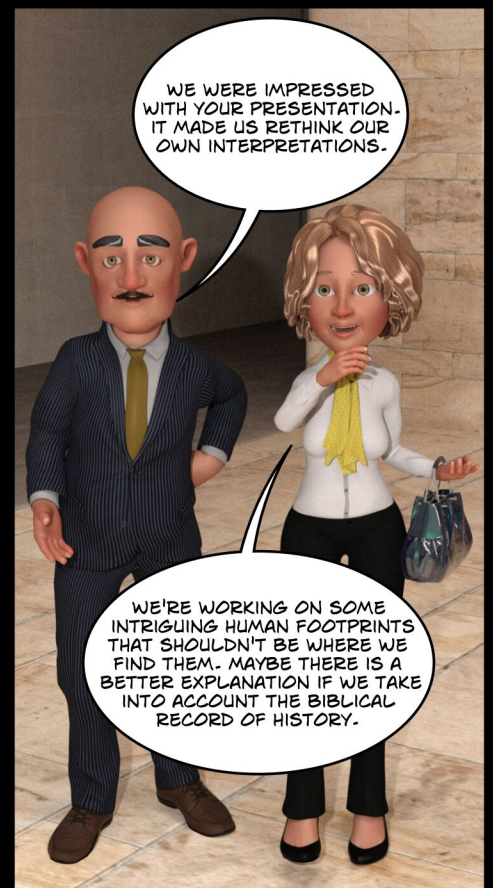
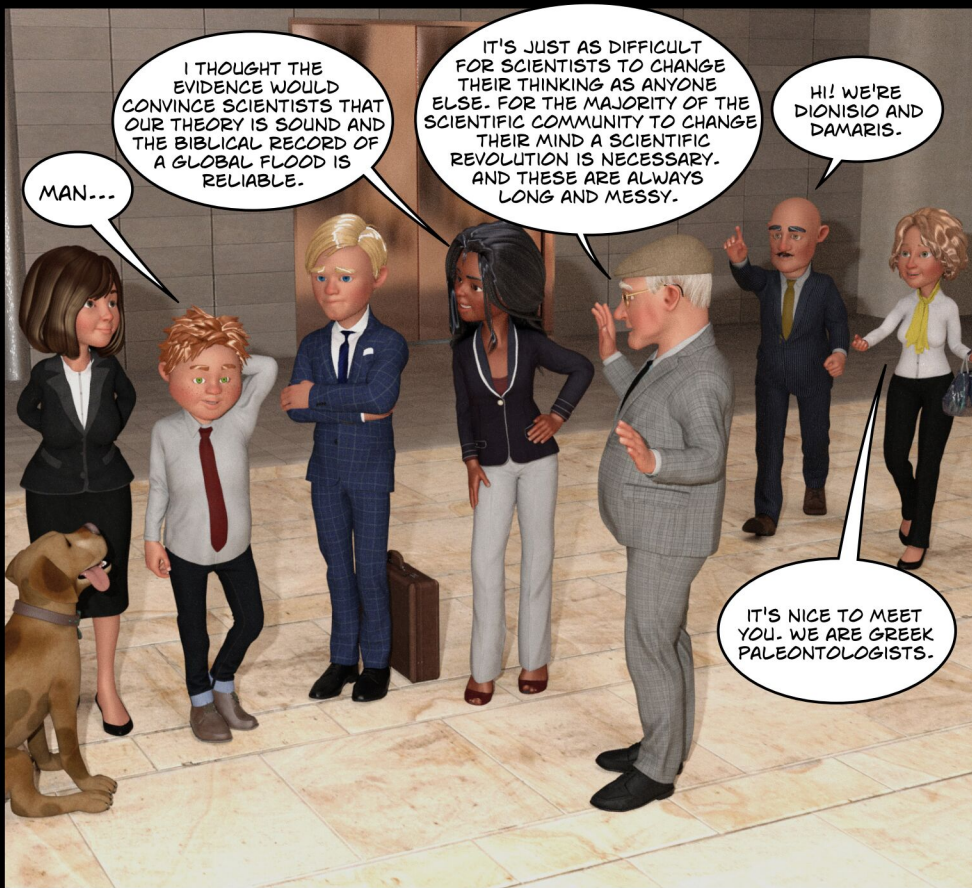
I WOULD LIKE TO KNOW WHAT YOUR **REAL** OBJECTIVE IS WITH THIS INVESTIGATION. IT WOULDN'T HAVE ANYTHING TO DO WITH A FLOOD AND A BOAT FULL OF ANIMALS, WOULD IT?

I DIDN'T COME TO A SCIENTIFIC CONFERENCE TO LISTEN TO THIS RELIGIOUS TRASH.

PFF... HERE WE GO AGAIN WITH THE BIBLICAL FLOOD STORY.

THESE KIDS ARE REALLY INTELLIGENT AND BRAVE. I SHOULD DEFEND THEM, BUT I'M AFRAID THAT I COULD LOSE MY JOB.





Now that you finished reading the story...

DO YOU DARE TO PUT YOUR MEMORY AND UNDERSTANDING TO

THE TEST?



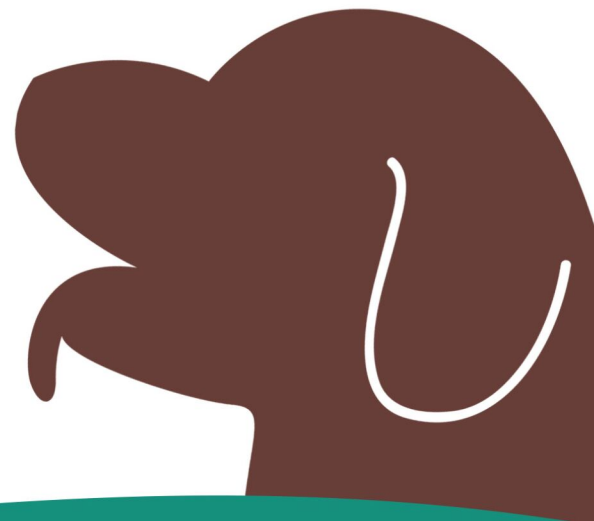
Try answering these questions about the story:

1. What is Max's profession, besides being a pastor?
2. What "disaster movie" events probably happened during the flood?
3. What famous geologist published a monographic on the Coconino Sandstone in 1933?
4. What is the name of the trail where you can observe the Coconino Sandstone at the Grand Canyon?
5. Can you recall 5 things from the Creation Detectives camp list?
6. Which two French expressions can be found in this comic book?
7. What was the average angle of inclination in Coconino Sandstone layers?
8. What kind of animals are frogs, toads and salamanders?
9. What is the title of the oral communication that James, Diana and Peter presented at the conference?
10. What is it called when the scientific community changes its way of thinking?



Can you find these objects in the comic book?:

1. A little girl dressed exactly as her mother
2. A sun in paradise
3. A red bow
4. A water fountain
5. A necklace with a cross
6. A book about Persia
7. A book written by Dr Leonard Brand
8. Colored stars
9. A Greek purse
10. The name of the zoologist



ANSWERS:

B1-Page 5; B2-Page 8; B3-Page 22; B4-Page 17; B5-Pages 22 y 23; B6-Page 20; B7-Page 8; B8-Page 18; B9-Page 24; B10-Page 14.
and "Quelle folle"; A7-20.20; A8-Amphibians; A9-The Flooded Desert; A10-Scientific Revolution.
A1-Archaeologist; A2-Storms, tsunamis, volcanoes, earthquakes and meteorites; A3-Edwin Mckee; A4-Hermit; A5-Tents, sleeping
bags, food, hammers, notebooks, simple bags, magnifying glasses, microscope, flash lights, chairs, hammocks; A6-"Mon ami"

THE TRUE HEROES:

LEONARD BRAND AND JOHN WHITMORE

The characters in this comic book are fictional, but real scientific research has been done on the Coconino Sandstone. The data discussed, along with much more, were discovered in this research. Several scientists participated in the investigation, but the main players were professors Leonard Brand and John Whitmore. Would you like to know them a little more?

LEONARD BRAND



Dr Leonard Brand is a professor in the Earth and Biological Sciences Department at Loma Linda University, California. Dr Brand has been studying the Coconino Sandstone since 1975. Yes, he is an expert on the subject! He designed the salamander experiments showing that the Coconino sandstone fossil trackways formed underwater.

JOHN WHITMORE



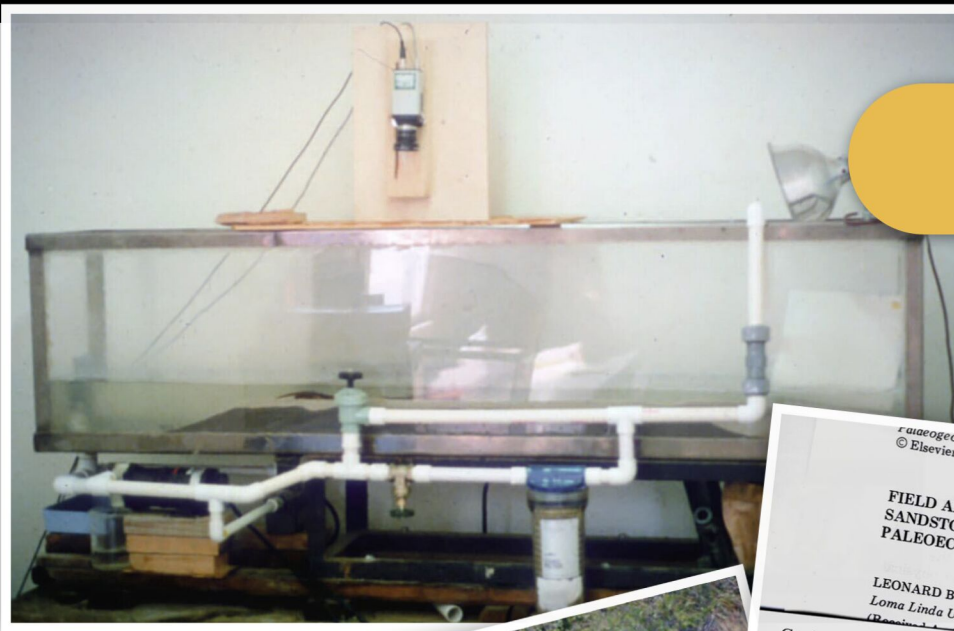
Dr John Whitmore is a Geology professor at Cedarville University, Ohio. He has studied the Coconino Sandstone for 20 years, starting as a graduate student at Loma Linda University. He discovered that the angle of the layers is too small for desert dunes, the sand grains are not as rounded as described in the literature, and that the sandstone contains minerals typical of a marine environment.

Doctors Brand and Whitmore, along with some of their students and other collaborators, have published several articles on the Coconino Sandstone in renowned scientific journals*. And the research on this important geological formation is not over yet! Dr. Sarah Maithel (photo), a former student of both professors, is currently studying some of the mysteries that are still hidden in the Coconino Sandstone.

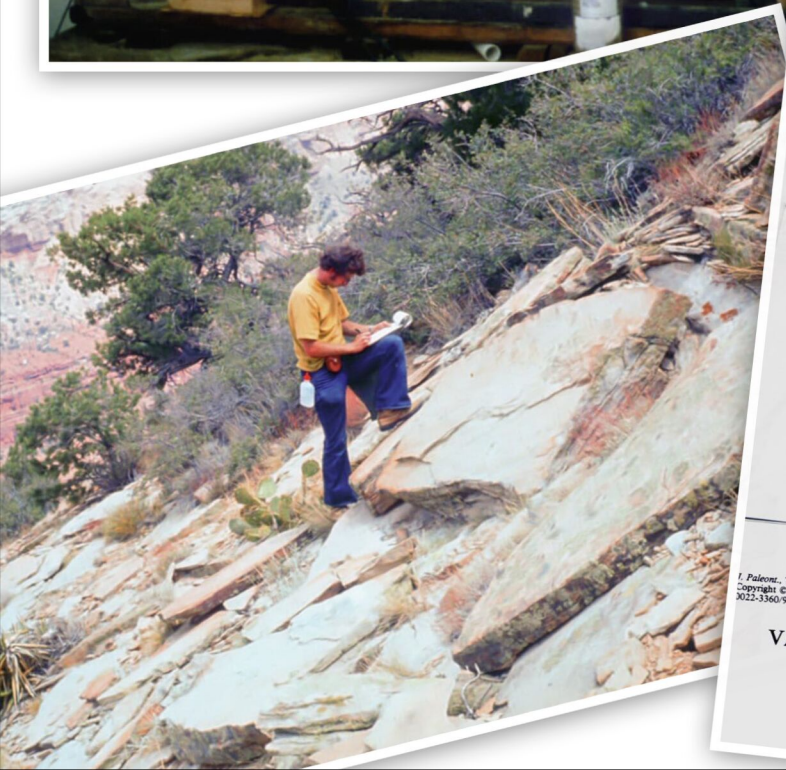


Find more information on the Coconino Sandstone, other exciting research projects and valuable help to deal with the apparent conflicts between science and the Bible at grisda.org (English), grisda.org/espanol (Spanish), nyc.org.es (Spanish) and nyc.org.es/en (English).

* Brand, L.R.; Tang, T. (1991). "Fossil vertebrate footprints in the Coconino Sandstone (Permian) of northern Arizona: Evidence for underwater origin". *Geology*. 19 (12): 1201–1204; Whitmore, J. H., & Strom, R. (2010). "Sand injectites at the base of the Coconino Sandstone, Grand Canyon, Arizona (USA)". *Sedimentary Geology*, 230(1–2), 46–59 and several others.



**IMAGES FROM THE RESEARCH
CARRIED OUT BY DR LEONARD BRAND**



Journal of Paleogeography, *Palaeoclimatology, Palaeoecology*, 28(1979): 25–38
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FIELD AND LABORATORY STUDIES ON THE COCONINO SANDSTONE (PERMIAN) VERTEBRATE FOOTPRINTS AND THEIR PALEOECOLOGICAL IMPLICATIONS

LEONARD BRAND
Loma Linda University, Loma Linda, Calif. 92354 (U.S.A.)

Geology v. 19 (1991): 1201-1204

Fossil vertebrate footprints in the Coconino Sandstone (Permian) of northern Arizona: Evidence for underwater origin

Leonard R. Brand, Thu Tang
Department of Natural Sciences, Loma Linda University, Loma Linda, California 92350

Ichnos, v. 4, pp. 225–230, 1996
An International Journal for Plant and Animal Traces
Reprints available directly from the publisher
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Underprints of vertebrate and invertebrate trackways in the Permian Coconino Sandstone in Arizona

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Amsterdam B.V. Published in The Netherlands
by Harwood Academic Publishers GmbH
Printed in Malaysia

Leonard R. Brand¹ and Loma Linda University

VARIATIONS IN SALAMANDER TRACKWAYS RESULTING FROM SUBSTRATE DIFFERENCES

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Department of Natural Sciences, Loma Linda University,
Loma Linda, California 92350

COMING SOON...

**A NEW ADVENTURE
WITH OUR FRIENDS
THE CREATION
DETECTIVES!**



NO POIROT!
THAT'S NOT A FIRE
HYDRANT...



**FAITH &
SCIENCE**
COUNCIL

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