

6° giorno - 14 Novembre 2007

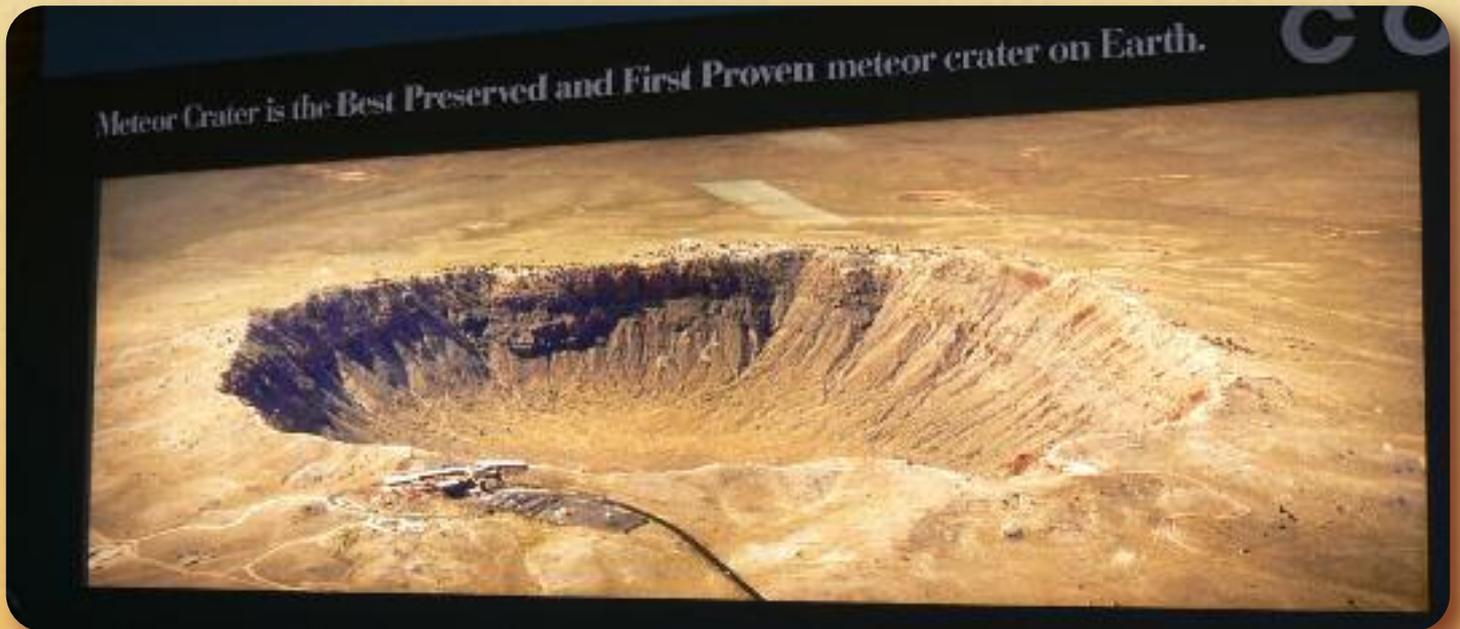
Visita al Meteor Crater

Una meteorite formata da ferro e nichel del peso stimato di circa 300 mila tonnellate, precipitò sulla terra alla velocità di circa 50.000 chilometri all'ora nel deserto dell'Arizona. L'energia sprigionata dall'esplosione causata dall'impatto, valutata in circa 150 volte quello della bomba atomica che distrusse Hiroshima, scagliò in aria grandi blocchi di terreno e sollevò in maniera permanente la crosta terrestre circostante di 50 metri.

Oggi quel cratere è profondo 180 metri e la sua larghezza è quasi 3 chilometri e mezzo.

La meteorite che provocò il cratere andò distrutta nell'istante dell'impatto, a causa della fusione e della frammentazione dovute alle alte temperature provocate dall'attrito durante l'ingresso nell'atmosfera terrestre e dall'impatto stesso.

Oggi ne restano solo alcuni piccoli frammenti ritrovati nella zona circostante.



The Holsinger Meteorite is the largest discovered fragment of the 150-foot (45-meter) meteor that created Meteor Crater.

Ten seconds until **IMPACT!**

That's approximately how long it takes for a large **METEOR** to burn its 100 mile course through our atmosphere before impacting on Earth.

Stages preceding impact...

10 SECONDS BEFORE IMPACT, or approximately 100 miles above the Earth's surface, friction instantaneously superheats and vaporizes the leading surface of the Meteor as it enters Earth's atmosphere. A shock wave is simultaneously created.

In **OUTER SPACE**, a Meteoroid can attain speeds in excess of 44 mps (158,400 mph)/ 70 kps (103,000 kph).

5 SECONDS BEFORE IMPACT, or about 50 miles above the Earth, fragmentation of the Meteor may occur due to the vast pressure differential between the leading and trailing surfaces.

Stony Meteors may experience a breaking away of the outer crust, creating a brilliant light flash in the night sky.

IMPACT! The Meteor impacting here lost less than 1% of its initial 40,000 mph velocity. The surviving fragments are Meteorites.

“From our knowledge of these terrestrial impact structures and craters, we have been able to establish with confidence the impact origin of most large lunar craters. From the combined evidence from the Earth and the Moon we have learned to recognize impact craters on such diverse celestial bodies as Mercury, Mars and the icy satellites of Jupiter and Saturn.”

— Dr. Eugene Shoemaker, 1964

The Birth of Meteor Crater

Fifty thousand years ago, a meteor ripped through the skies over the land we now call Arizona. Traveling at roughly 40,000 miles an hour (64,000 kilometers an hour)—11 miles per second (18 kilometers per second)—it smashed into the surface of the high plateau. Within a few seconds, the resulting massive explosion threw millions of tons of rock over the surrounding area, opening a crater three-quarters of a mile across and 700 feet (210 meters) deep. A shock wave of hurricane force winds flashed out in every direction, causing destruction for miles.

The massive METEOR impacting at this site is estimated to have been traveling at about 40,000 mph, or 11 miles per second, through Earth's atmosphere. As an example, the METEOR could have passed over New York City 5 minutes after being sighted in Paris, then impacted in Arizona only 3 minutes later!

The METEOR mass is calculated to have been approximately 150 feet in diameter, weighing several hundred thousand pounds, and containing sufficient iron-nickel to produce about 42,000 automobiles!



The impact site is nearly a mile across, over 3 miles in circumference, and 550 feet deep... large enough to engulf a 60-story building or to accommodate 20 football fields on the floor of the Crater.

What became of the METEORITE that impacted at this site?

Numerous attempts have been made to locate the meteoric mass that hurtled to Earth some 50,000 years ago and impacted with an explosive force in excess of 20 million tons of TNT. These attempts were unsuccessful since there was never a single large mass buried beneath the crater.

A small percentage of the meteor mass was vaporized upon impact, then recondensed into tiny spheroids raining over a 7 mile radius.

7 mile radius

The following conclusions have been reached:

Less than 1% of the meteor surface was stripped away by atmospheric friction prior to impact (ablation).

About half was blasted out upon impact, raining tiny fragments on the rim of the crater and the surrounding plain.

3,000 feet

About half is present in very small to microscopic iron-nickel spherules and fragments in the breccia lens beneath the crater floor to a depth of 3,000 feet.

All'esterno del Meteor Crater la capsula test della missione Apollo e una intera parete in onore degli astronauti americani delle varie missioni spaziali



Dal Meteor Crater, una finestra sull'Arizona



Meteor Crater was formed when a meteor slammed into the Earth. Though dramatic, this event is far from unusual—collisions and impacts involving meteors and comets have been critical to the formation and development of Earth and the entire solar system.

Today, Meteor Crater appears much as it did when it was formed nearly 50,000 years ago. It remains the world's **Best Preserved and First Proven** example of a large impact crater, and a valuable laboratory for research into the origins and evolution of our solar system.

“Without impact, Earth, Mars, Venus, and Mercury wouldn't exist.”

—Dr. Eugene Shoemaker



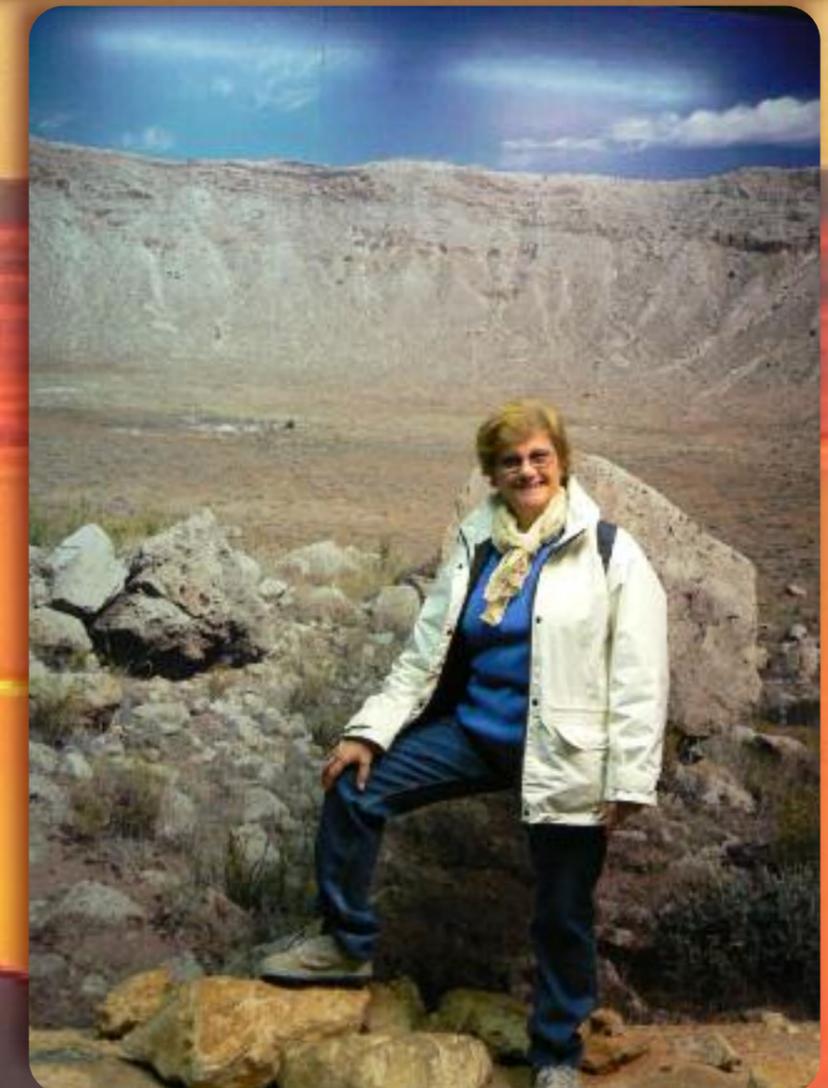
Sul fondo del cratere ci sono attrezzature che probabilmente vengono utilizzate per delle simulazioni a scopo didattico





Un treno kilometrico passa in
 lontananza

Sono scesa in fondo al cratere?
 Se non fosse per il riflesso delle luci dei
 faretti potrebbe sembrare vero.
 In realtà si tratta solo di una
 scenografia.



Dopo il Meteor Crater
La Foresta Pietrificata





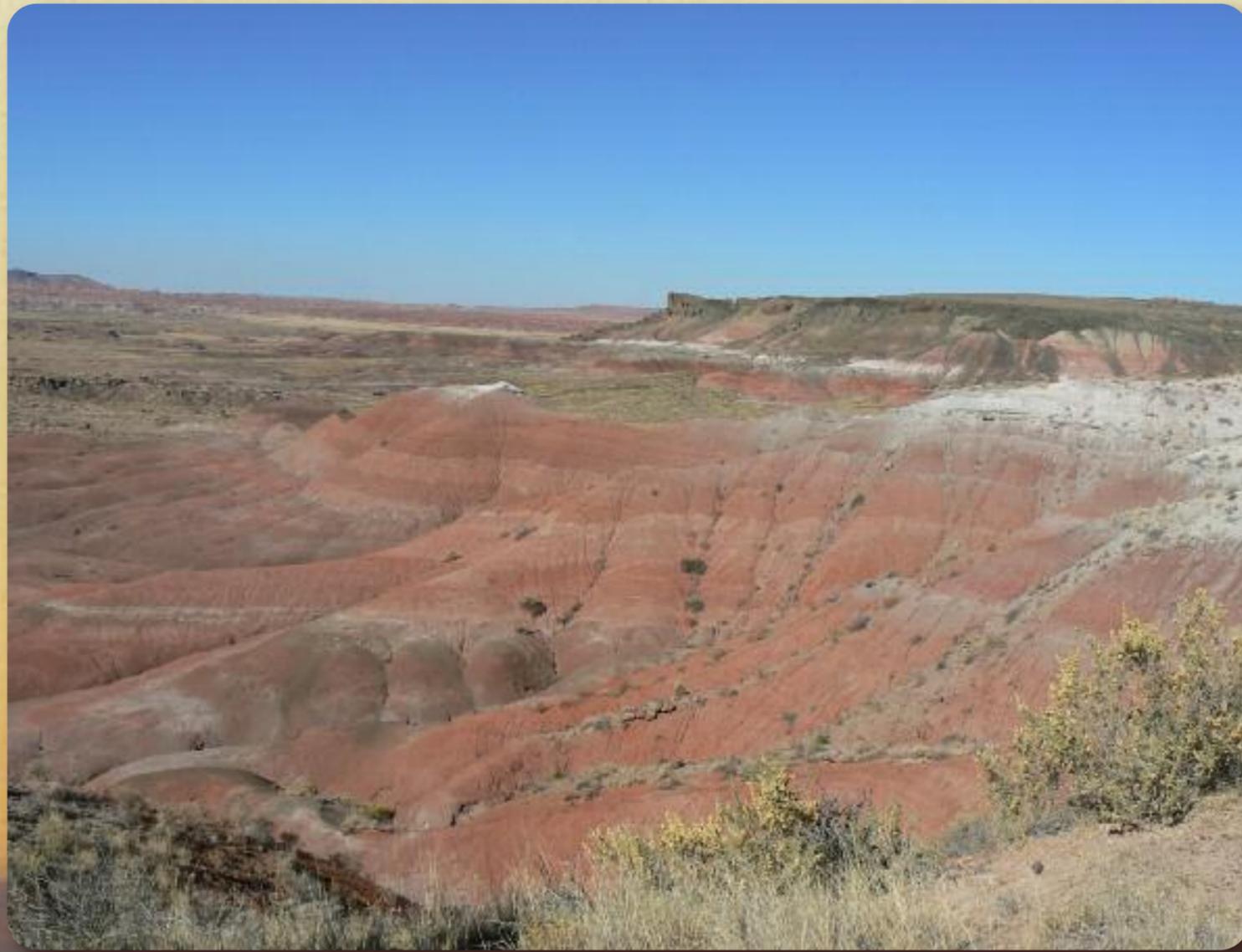
Non perdiamo l'occasione
per una foto di gruppo



Oggi è una giornata
molto intensa,
dopo il Meteor Crater
e la Foresta Pietrificata il
Painted Desert









Dopo una sosta per il pranzo
ripartiamo verso il
Canyon de Chelly



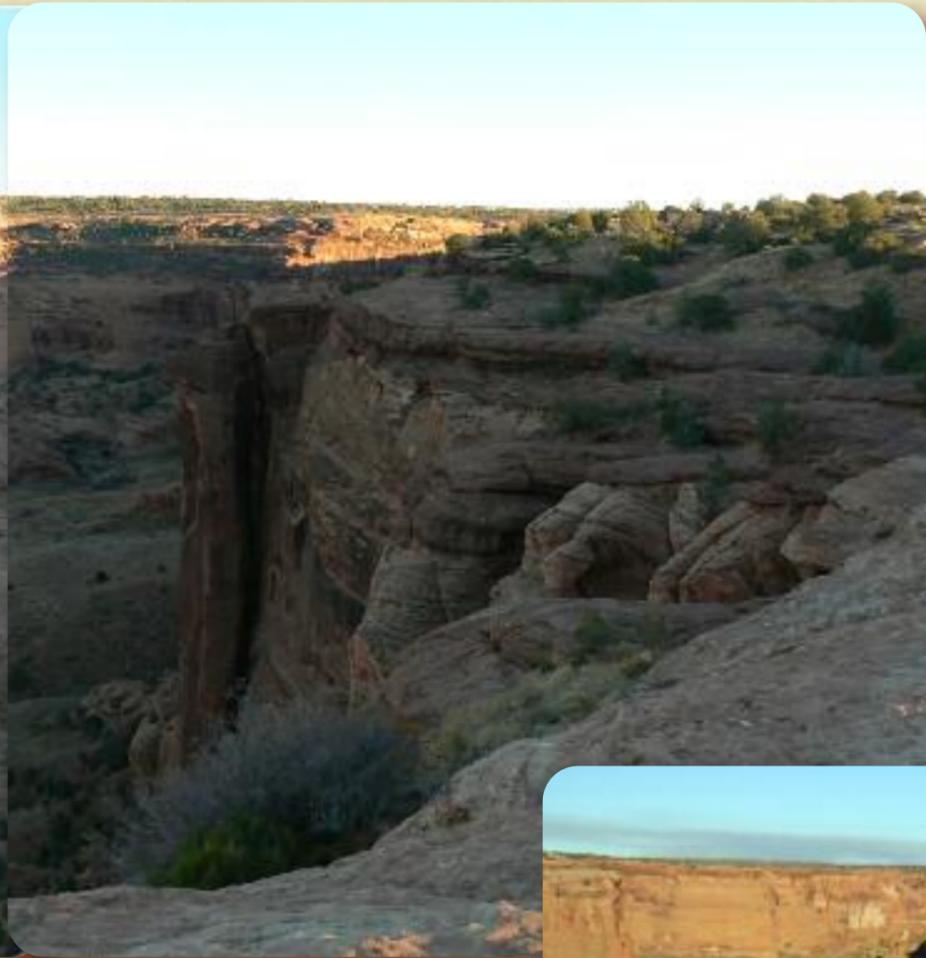
Siamo ormai prossimi
all'ora del tramonto
quando arriviamo al
Canyon de Chelly



Campi coltivati e auto in fondo al Canyon



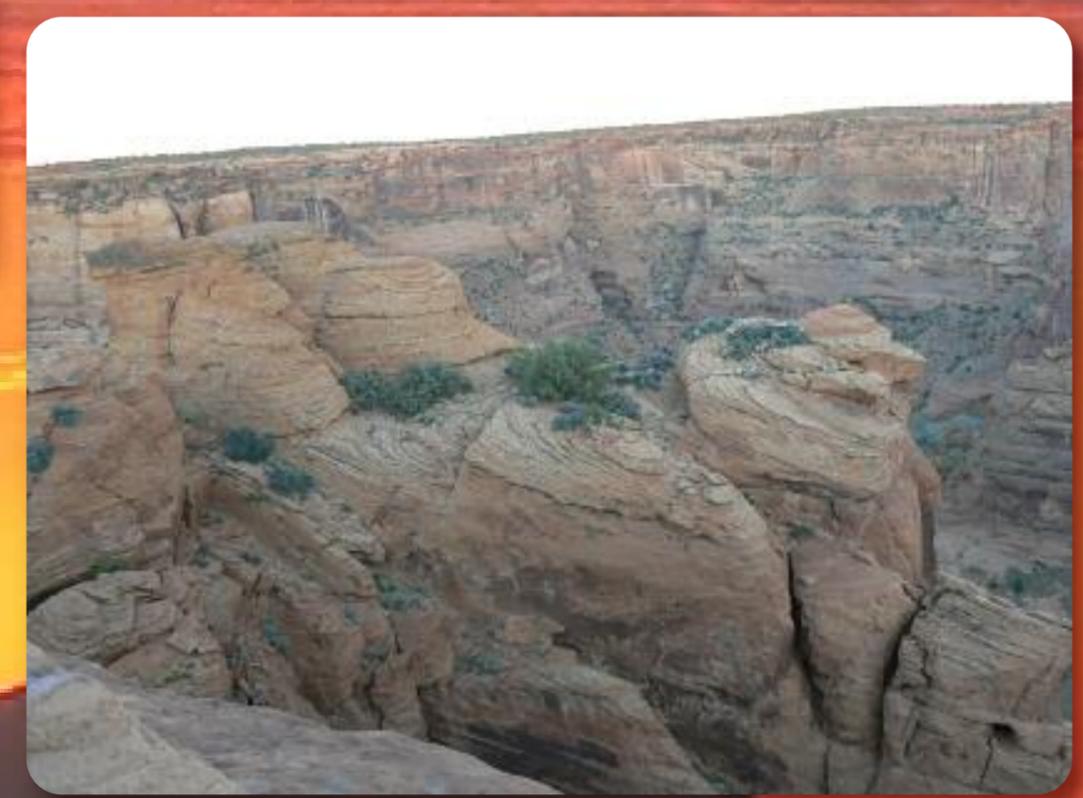
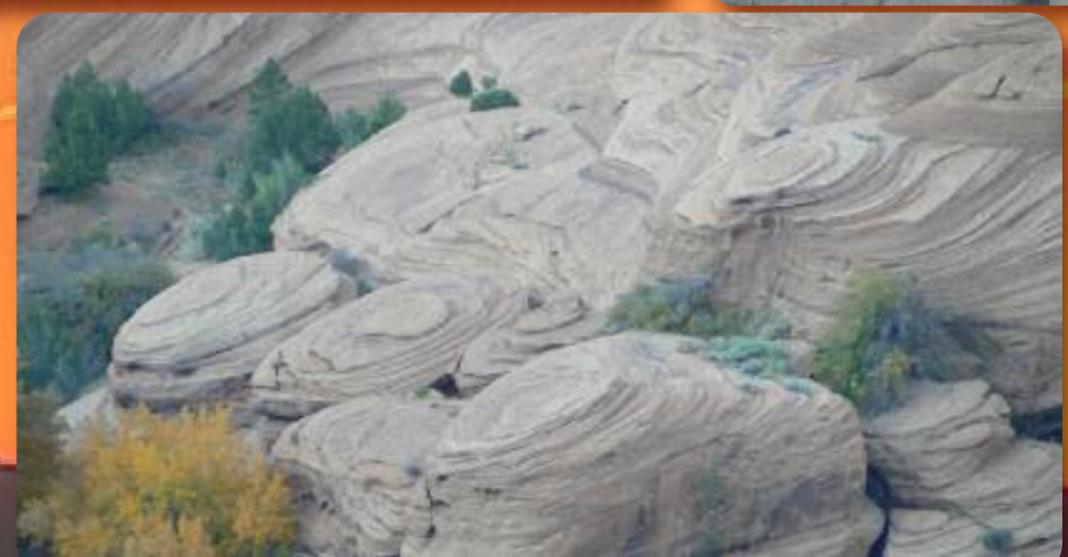


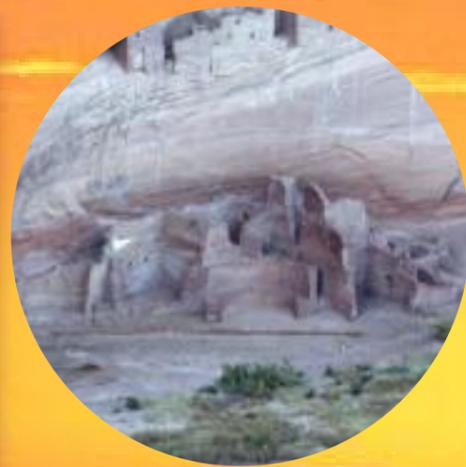
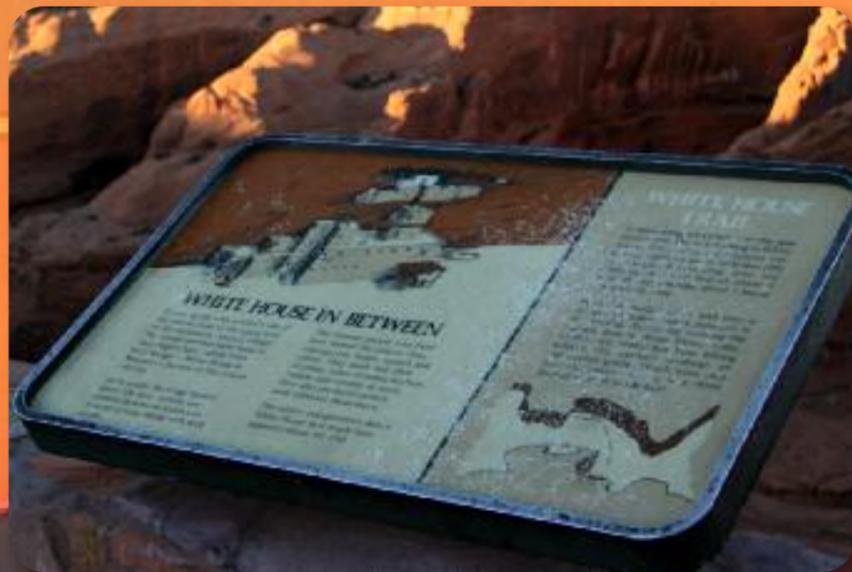


qualche burlone ha scolpito nell'argilla dei volti che fanno le bocacce



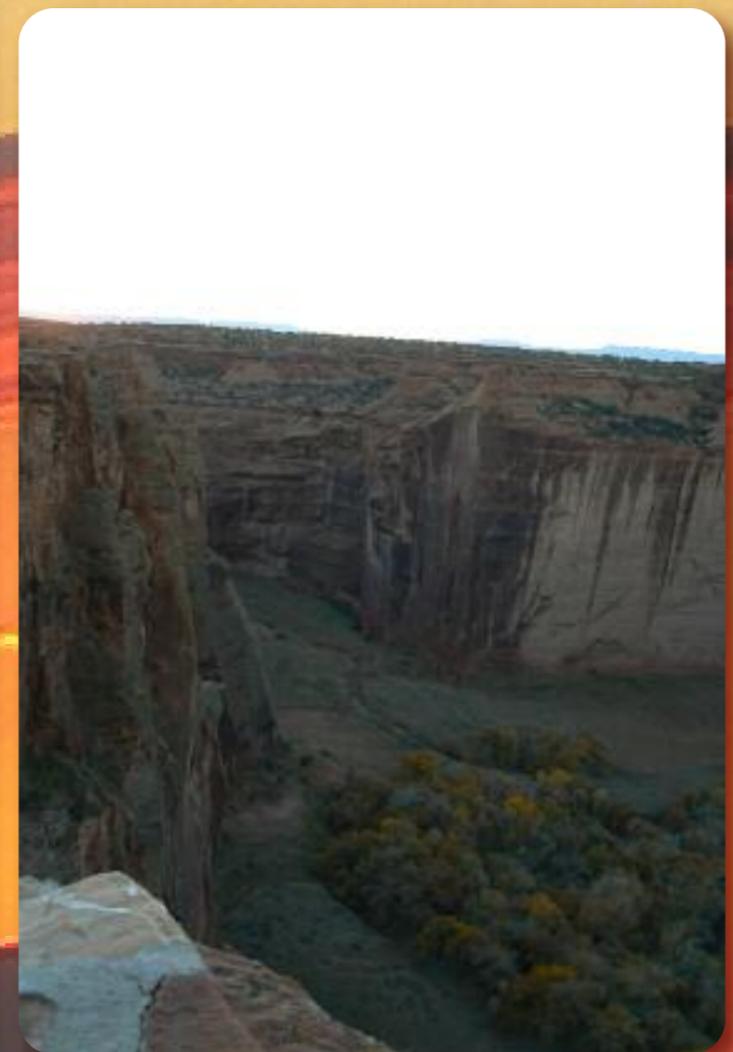
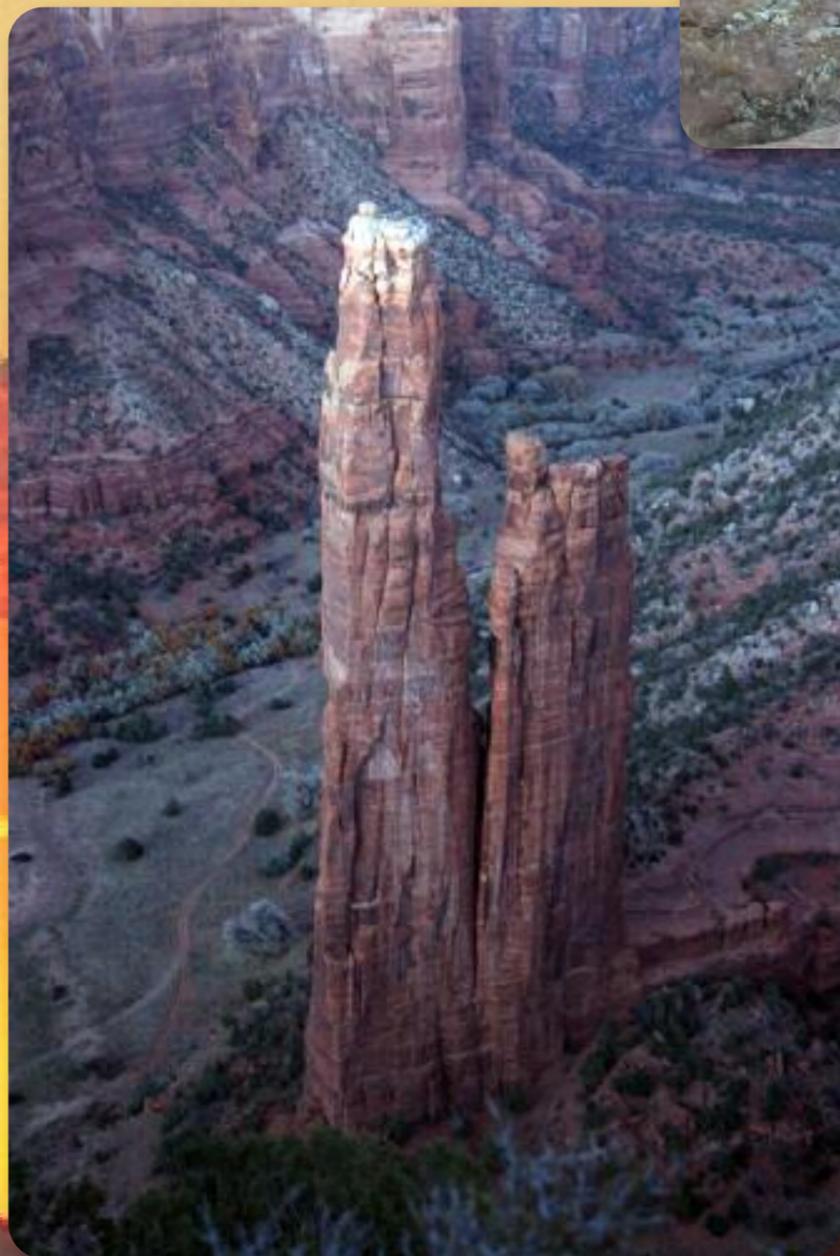
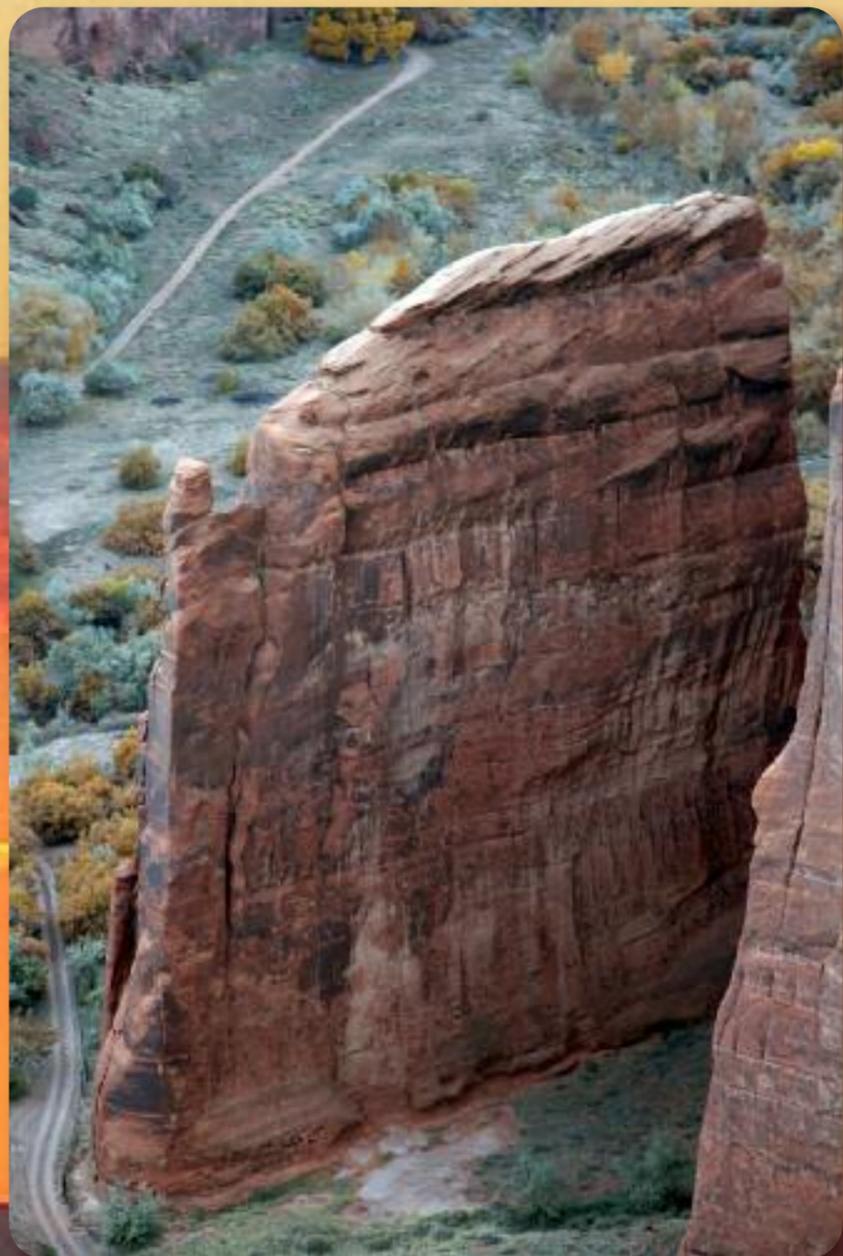
Il grande lavoro della natura nel Canyon de Chelly







Grotte naturali,
usate dagli Anasazi come abitazioni



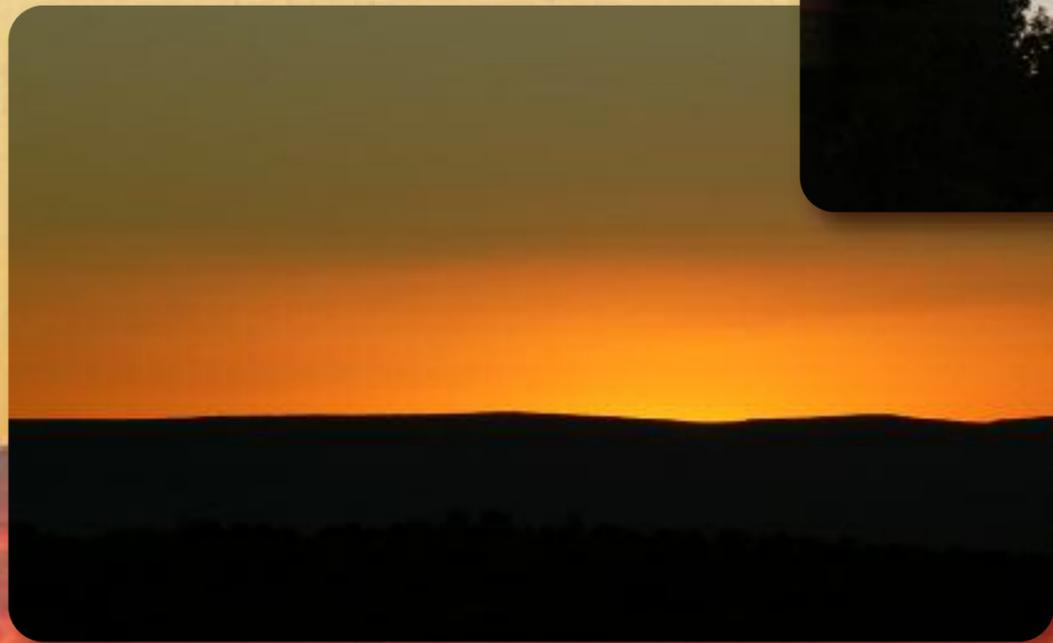
Non contento di vedere
il Canyon dall'alto,
Emilio, accompagnato
da Lucio, ha imboccato
un sentiero ed ha
scattato queste due
bellissime foto dal basso



Un altro magico tramonto



Una falce di luna sul
Canyon de Chelly



La luce del tramonto colora in modo magnifico il Canyon, esaltando tutti i colori.

E dopo questa giornata piena di emozioni per i magnifici luoghi visitati proseguiamo verso la destinazione di questa sera: Moab.