The Sierra Pelonagram

April 2016

... Member of the California Federation of Mineralogical Society Inc. ...

The Sierra Pelona Rock Club is a non-profit organization founded in 1959 with the objective to sponsor activities and promote interest and education in: mineralogy, lapidary, geology, paleontology and related subjects.

Birthdays

Lynne Alexander	April 23
Norma Holt	April 8
Sarita Hyde	April 9
Greg Mazourek	April 12
Yolanda Resnick	April 12
Akiko Strathmann	April 11

Extra Extra
Read All About It!

I have been the publisher/editor of the Pelonagram for over seven years now and would like to move on to other business in the club. I know there must be someone out there that would love to take over the Pelonagram position. It isn't that difficult, a working knowledge of Desktop Publishing would come in really handy. So come on and step right on up to the plate.

Heidi Webber

Officers:

President – Ron Rackliffe
Vice-President – Trina Aeen
Secretary: Tina White
Treasurer –Sandy White
Federation Director (CFMS/AFMS) --Evelyn Velie

Chairpersons:

Claim--Mike Serino
Donation Rock Table--Ron and Akiko Strathmann
Equipment--Bill Webber
Field Trips – Greg Langwisch
Historian -Open
Hospitality – Tina White
Membership – Heidi Webber
On-Line Presence (website)-- Larry Holt
Pelonagram Publisher, Editor – Heidi Webber
Programs –Open
Publicity –Bruce Velie
Sunshine--Brigitte Mazourek

The Sierra Pelona Rock Club, is a member of the California and American Federation of Mineralogical Societies, Inc. (CFMS/AFMS). The general club meetings (Open to the public) are at 7:30 PM, on the 3rd Tuesday of each month at:

The Clubhouse of the Greenbrier
Mobile Estates EAST
21301 Soledad Canyon Rd
Canyon Country, CA 91351

Contact the Club or the Sierra Pelonagram Editor at:
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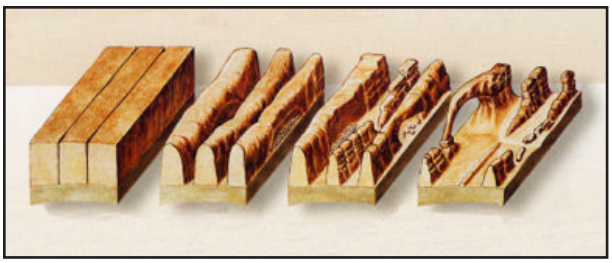

Stages of arch formation: Rainwater dissolves sandstone, widening cracks to form fins. An alcove eroded in the base of a fin might grow to form an arch before finally collapsing.

Why are there so many arches at Arches?

Arches National Park has the densest concentration of natural stone arches in the world. There are over 2,000 documented arches in the park, ranging from sliver-thin cracks to spans greater than 300 feet (97 m). How did so many arches form?

First, you need the right kinds of rock.

Sandstone is made of grains of sand cemented together by minerals, but not all sandstone is the same. The Entrada Sandstone was once a massive desert, full of shifting dunes of fine-grained sand. The grains are nearly spherical so, when packed together, they formed a rock that is very porous (full of tiny spaces).

In contrast, the Carmel layer just beneath the Entrada contains a mix of sand and clay. Clay particles are much smaller than sand grains; a lot of them can pack together and fill in gaps between the sand grains, making the rock denser and less porous than a purer sandstone.

Crack it into parallel lines.

Deep beneath the surface lies a thick layer of salts. Squeezed by the tons of rock above it, the salt flowed and bulged upward, creating long domes. The rock layers covering these domes were forced to crack, like the surface of freshly-baked bread, into a series of more-or-less parallel lines.

Next, add the right amount of rain.

On average, the park receives 8-10 inches (18-23 cm) of precipitation a year. That might not sound like much, but it's enough to keep the engines of erosion working 24 hours a day, 365 days a year.

Drops of rainwater soak into the porous Entrada sandstone easily and then slowly dissolve the calcite bonding the sand together – in other words, rotting the rock from the inside out. Water puddles just above the denser Carmel layer where it erodes a cavity, like food trapped between your teeth. In winter, water trapped between the two layers expands when it freezes and pries the rock apart.

If the park received too much precipitation, the sandstone could erode so quickly that arches might not have time to form. If it never rained here, the engines of erosion would stop.

Make sure your rocks don't rock & roll.

Luckily, earthquakes are rare in this area. If the ground shook often, these massive outdoor rock sculptures would splinter and collapse. The fact that over 2,000 still stand, waiting for visitors to discover them, tells us this area has been rather geologically stable for at least 50,000 years.

Lastly, pick the right time to visit.

The rock layers visible in the park today were once buried by over a mile of other rock that had to erode first to expose what lied beneath. Visitors one million years ago might have seen an endless flat plain dotted with vegetation. Imagine a visit 100,000 years in the future, when the Entrada and Carmel layers have fully worn away. What new rock shapes might you discover then?

Reference: Wikipedia

Delicate Arch with background of La Sal Mountains

The Three Gossips

The Organ is an impressive sandstone tower.