

Carlsbad Caverns NP

September 25, 2022



Outline

- Announcements
 - Cave dig
 - Powells
 - TCR
 - Vert
 - Schedule
- Jenna puts the bad in Carlsbad



Announcements





Jemma! (mommy) is back :)

—

We did a Cave dig!

—



september 30th - october 2nd

POWELL'S TRIP

GLITTERFY.COM



- ★ led by izzy & patty quinn YASS
- ★ menard county tx
- ★ four cars, twenty cavers



notable features :
underwater river, lots o'
cave crickets, cave maze

- ★ glowstick challenge ?
- ★ floaties ?
- ★ NO BURN BAN ?



sign up
here !




ALSO JOIN ASS ULTIMATE

TCR (Texas Cavers Reunion)

- Camp Sol Meyer in Menard County
- Cave sim
- Big party
- Get gear
 - *Spicy calendar*
- Speleolympics







We just got a letter!
We just got a letter!



We just got a letter!



Wonder who it's from...



Dear Caww,
The Aggie Grotto would like to formally
request your presence at our 21st annual vertical twining
this coming Sunday Septemberen twenty-fifth in the two
thousandeth and twenty-second year anno domini at 6:28
post-meridien .
Sincerely,
Aggie Grotto

Since
The

Dear Caver,

The Aggie Grotto would like to formally request your presence at our 21st annual vertical training this coming Sunday September twenty-fifth in the two thousandth and twenty-second year anno domini at 5:57 post-meridiem in Stephen C Beachy Central Park, College Station, TX USA.

Sincerely,
The Aggie Grotto

12 Jakob's real silly little birthda	13	14	15 First Day of Hispanic Heritag ● 8pm ASS & Aggie Grotto Me	16 Cave Dig	17 Football Game	18
19	20	21	22 ● 8pm ASS & Aggie Grotto Me	23	24 Jenna ring dunk weekend	25 Vert Training Day
MON 26	TUE 27	WED 28	THU 29 ● 8pm ASS & Aggie Grotto Me	FRI 30 Powells	SAT Oct 1	SUN 2
3	4	5	6 ● 8pm ASS & Aggie Grotto Me	7	8 Fall Break	9
10 Fall Break Columbus Day Indigenous Peoples' Day	11	12	13 Texas Cavers Reunion ● 8pm ASS & Aggie Grotto Me	14	15	16

Carlsbad Caverns NP

Also known as CACA or CAVE

est.

May 19, 1930



CAVE


- Features over 100 caves within the National Park
- Carlsbad Caverns boasts the largest accessible cave chamber in North America
- Lechguilla Cave is the 8th longest cave in the world
 - Bacteria have been found in the cave that are resistant to all medicine we have on Earth
- “Active” research and survey site
- World Heritage Site
- self-guided trails into the cavern
 - Main Corridor
 - Big Room
- Ranger-led tours/programs
 - King’s Palace
 - Bat Flight
 - Spider Cave- suspended
 - Left Hand Tunnel- suspended
 - Hall of the White Giant- suspended
 - Slaughter Canyon Cave- suspended

Research within CAVE

- Radon Monitoring
- Carbon Dioxide Monitoring
- Air Quality Monitoring
- Bat Monitoring
- Night Sky Monitoring



Radon Monitoring

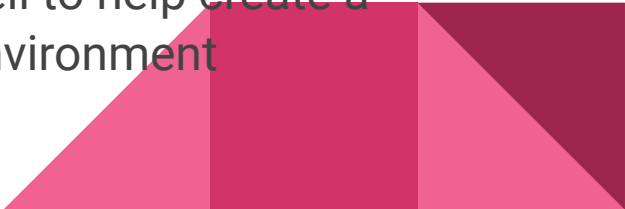
- Radon: odorless, tasteless, colorless, and invisible gas that results from decay of Uranium series isotopes
 - Exists in most caves at various levels
 - Impacts to human health, such as radiation poisoning
 - Safe at lower levels
 - Allows the Resources Division at CAVE to set safe levels of exposure time for employees, visitors, and volunteers
 - Conducted in the Visitor Center, Carlsbad Cavern, Spider Cave, Chimney Cave, Slaughter Canyon Cave, Wen Cave, Corkscrew Cave, Christmas Tree Cave, and Helen's Cave
- 

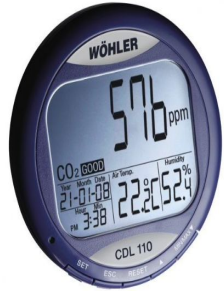






Carbon Dioxide Monitoring

- Air within Carlsbad Cavern takes 36 hours to recycle and replace itself
 - Carbon Dioxide builds up within the cave over time and an adequate air flow is needed to remove it from the cavern
 - Resources division monitors this to ensure healthy air quality within the cave for employees and visitors
 - Spikes in CO₂ are seen with high visitation and midday when most people are inside the cave
 - Tracking CO₂ is useful for research into CO₂ impacts in a cave environment
 - Not much is known
 - Our devices monitor temperature and humidity as well to help create a comprehensive understanding of our current cave environment
- 



WOHLER CDL 110 CO2-MONITOR

CO₂, HUMIDITY AND TEMPERATURE

DELIVERY TIME 1-3 WORKING DAYS, NEW GOODS
ITEM NO. 1007

The Wöhler CDL 210 CO₂ data logger and the Wöhler CDL 110 CO₂ data monitor are CO₂-measuring devices (colloquially also called **CO₂ traffic light**) for continuous monitoring of the carbon dioxide concentration (in ppm) and other air quality factors.

Determination of the indoor air quality through combination of measurement and identification of:

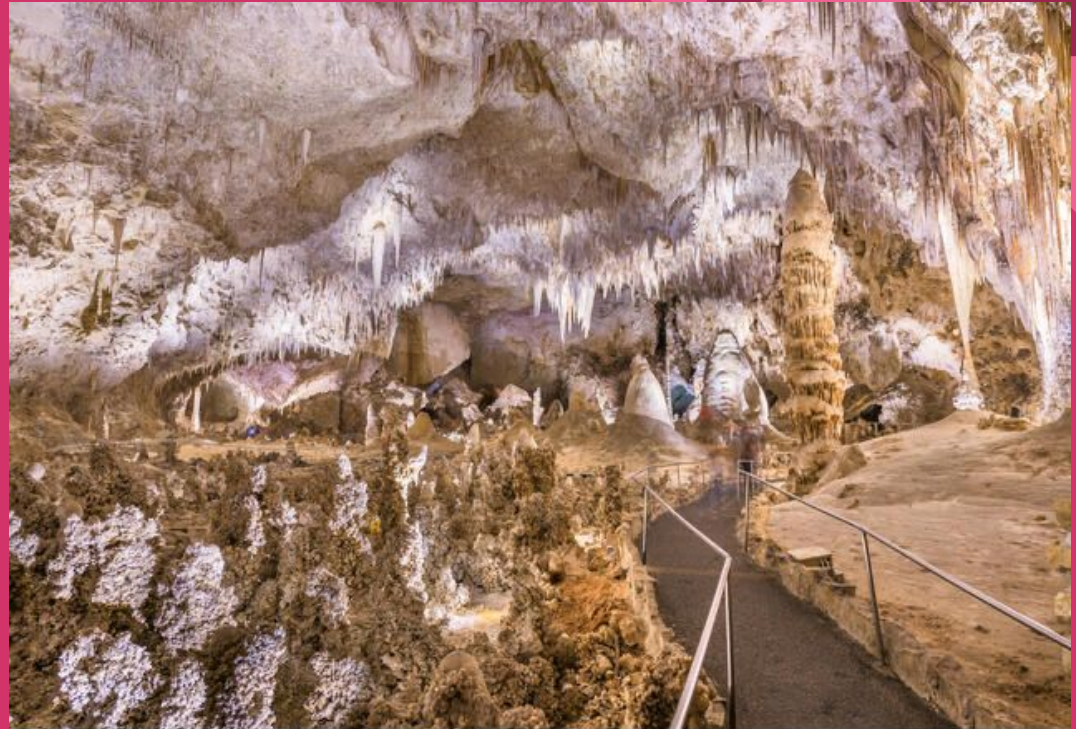
- The CO₂-concentration
- The air temperature
- The air humidity

For CO₂-monitoring of:

- Housing spaces (comfortableness, humidity problems, etc.)
- Conference rooms and lounges (e.g. schools)

\$219.00

Discover more about this device



alamy - WAF8DJ



Bat Monitoring

- 3 main bat species within Carlsbad Cavern
 - Brazilian Free-Tailed Bat, Cave Myotis Bat, and Fringed Cave Myotis Bat
- 17 bat species present within the park
- Audio monitoring picks up individual bat chirps from echolocation
- Each bat has a unique sound and thus we can differentiate different bat chirps
- Helps us estimate bat populations within the cavern









Night Sky Monitoring

- Sky Quality Meter
 - Sensors determine the darkness of the night sky on a scale of 1-23
 - CAVE average SQM reading is a 21.45
- Estimated Sky Glow Photometry
 - Taken with a ccd camera mounted on a telescope that is computer controlled to take 40 pictures of the night sky. Which is used to create a mosaic of the entire night sky that is post-computer processed to remove all natural lighting such as stars, in order to produce Estimated Sky Glow Photos.
- Point Source Light Pollution Photos
 - Taken of the oil field located in the Permian Basin
- Visual Observations
 - Bortle Class Scale, Eye-Limiting Magnitude, Milky Way observations, Transparency, Seeing
- Taken from 6 strategic geographic points throughout the park to create a comprehensive understanding of the visitor and wildlife experience
- Bordered by:
 - Permian Basin, Guadalupe Mountain National Park, Lincoln National Forest
- Featured on docuseries “Inside Parks, Outside Science”
 - Soon to be released

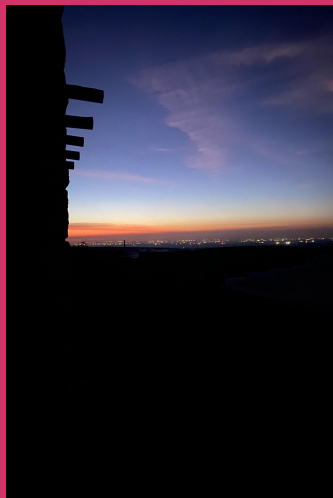


Protecting the Dark Sky

What do we need to learn to keep the night dark?

Friday, July 29
1:00 pm

Join our new Carlsbad Caverns National Park Night Skies Assistant in our visitor center theater for a short presentation and learn about the work being done to help our park protect this valuable resource. The dark night sky!



Carlsbad Cavern- Lower Cave

- Lowest portion of the cave
- Restricted access



Carlsbad Cavern- Left Hand Tunnel

- Restricted access
- Cave Myotis and Fringed Myotis live at Lake of the Clouds during the summer months



Carlsbad Cavern- Hall of the White Giant

- Restricted access



Carlsbad Cavern- Big Room

- Largest accessible cave chamber in North America





Carlsbad Cavern- Main Corridor

- The natural entrance to Carlsbad that descends roughly 750 feet to the Big Room over 1.2 miles

