



**Astro 25 “Field
Astronomy in the
California
Mountains” –
Spring 2018:
Laguna Mountain
or Red Rock
Canyon**

First, let's see some images of past Laguna Mountain and Red Rock Canyon Trips...

- Then we'll discuss the logistics and planning

Orion and Taurus and the Winter Milky Way Way, from our hilltop campsite at Laguna Mountain, with fisheye lens



On the trail, looking towards Laguna Mtn and the gorge in front, where the waterfall is



The first Creek Crossing



Laguna Gorge Waterfall





In the Gorge,
carved in
marble and
other
metamorphic
rock

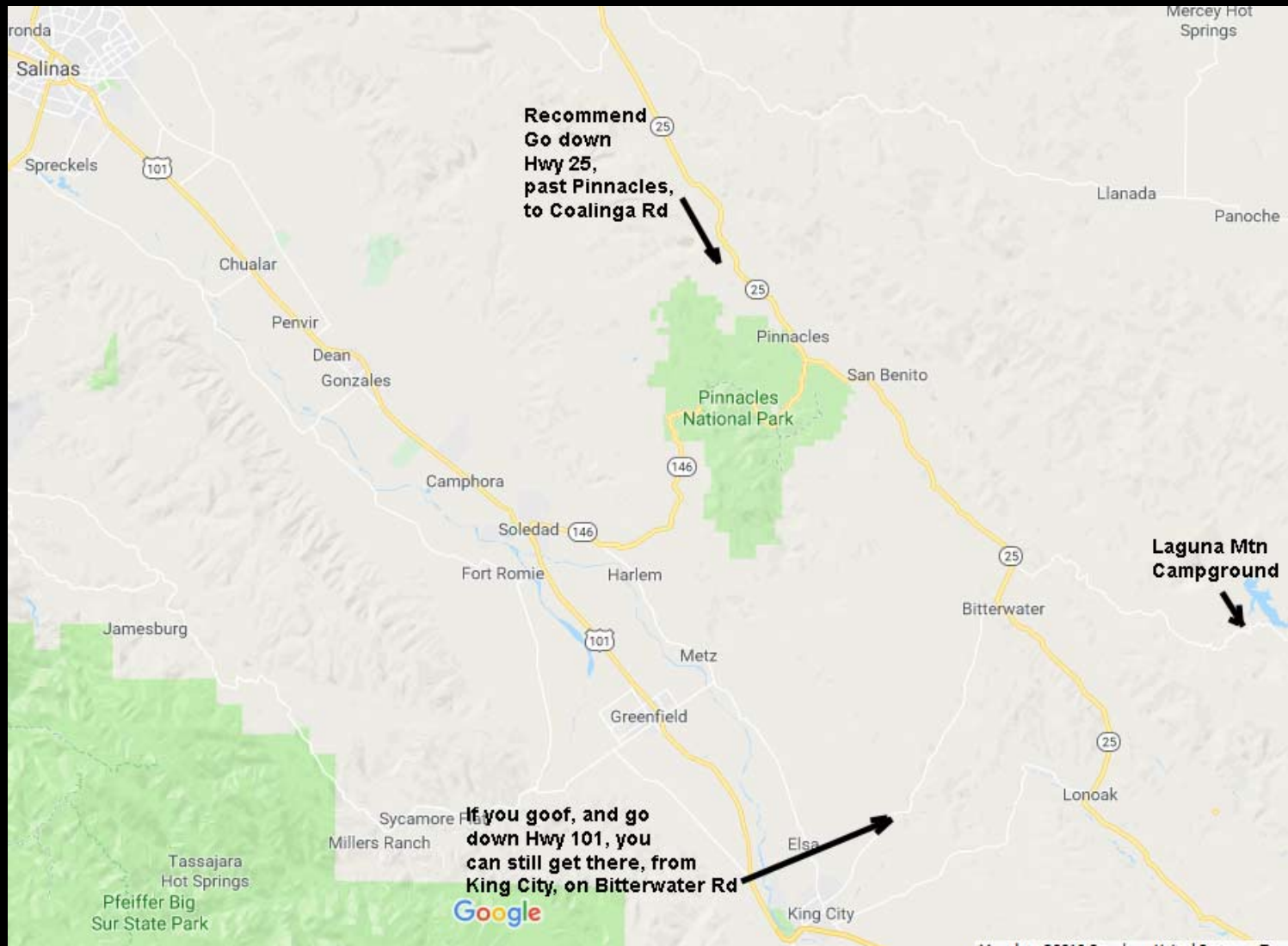
If clear, we'll have very dark skies – that's the Zodiacal Light; best seen in March evening skies



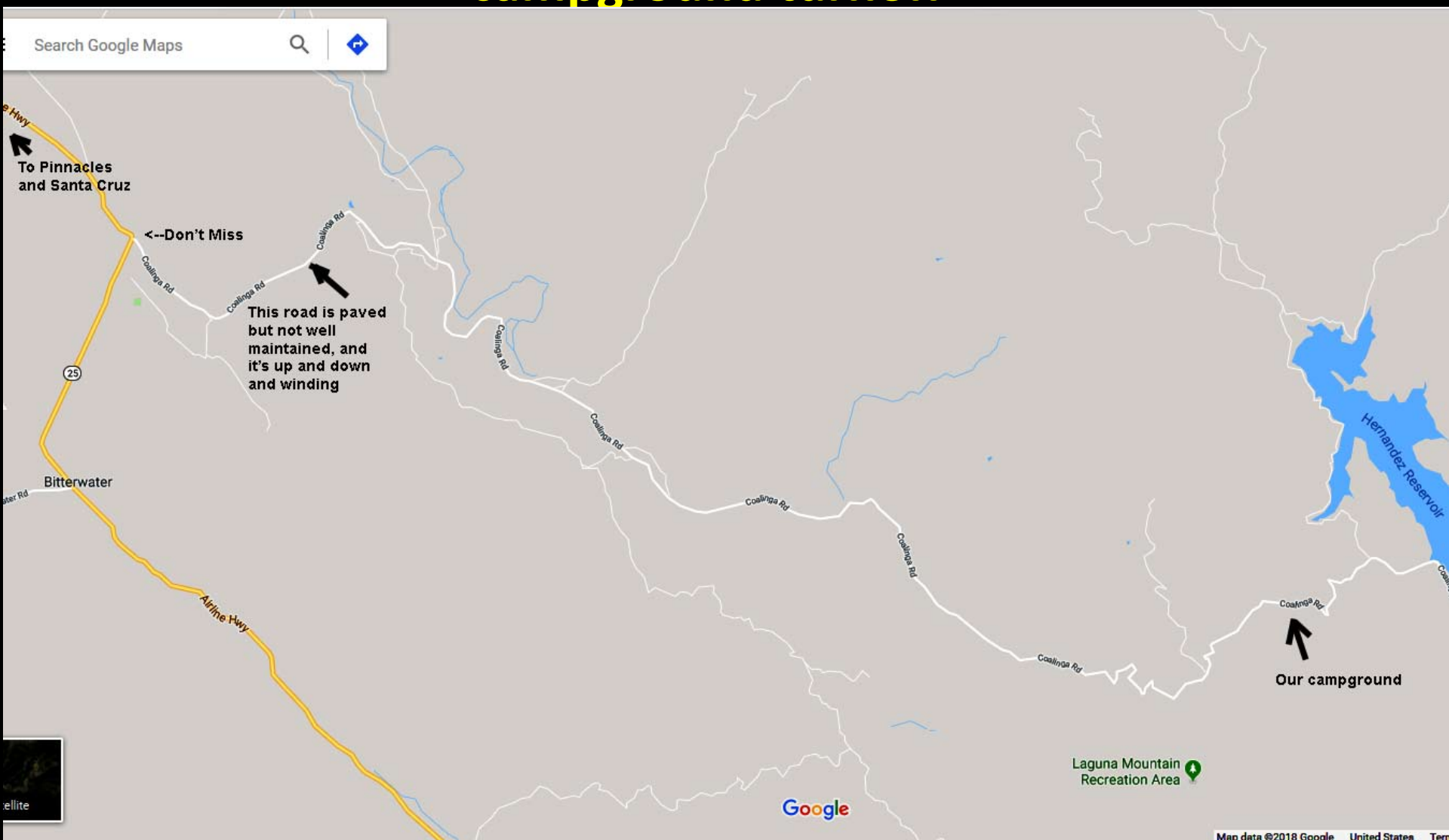
To Bring

- WARM clothes!!
- Personal camping gear (tent, sleeping bag etc)
- Personal water
- Red headlamp (EverReady at Outdoor World works great, \$20 or so)
- Binoculars if you have them.
- 3-ring binder notebook for notes, maps
- TP for hike, towel for swimming if you dare
- Camp chair for around the campfire

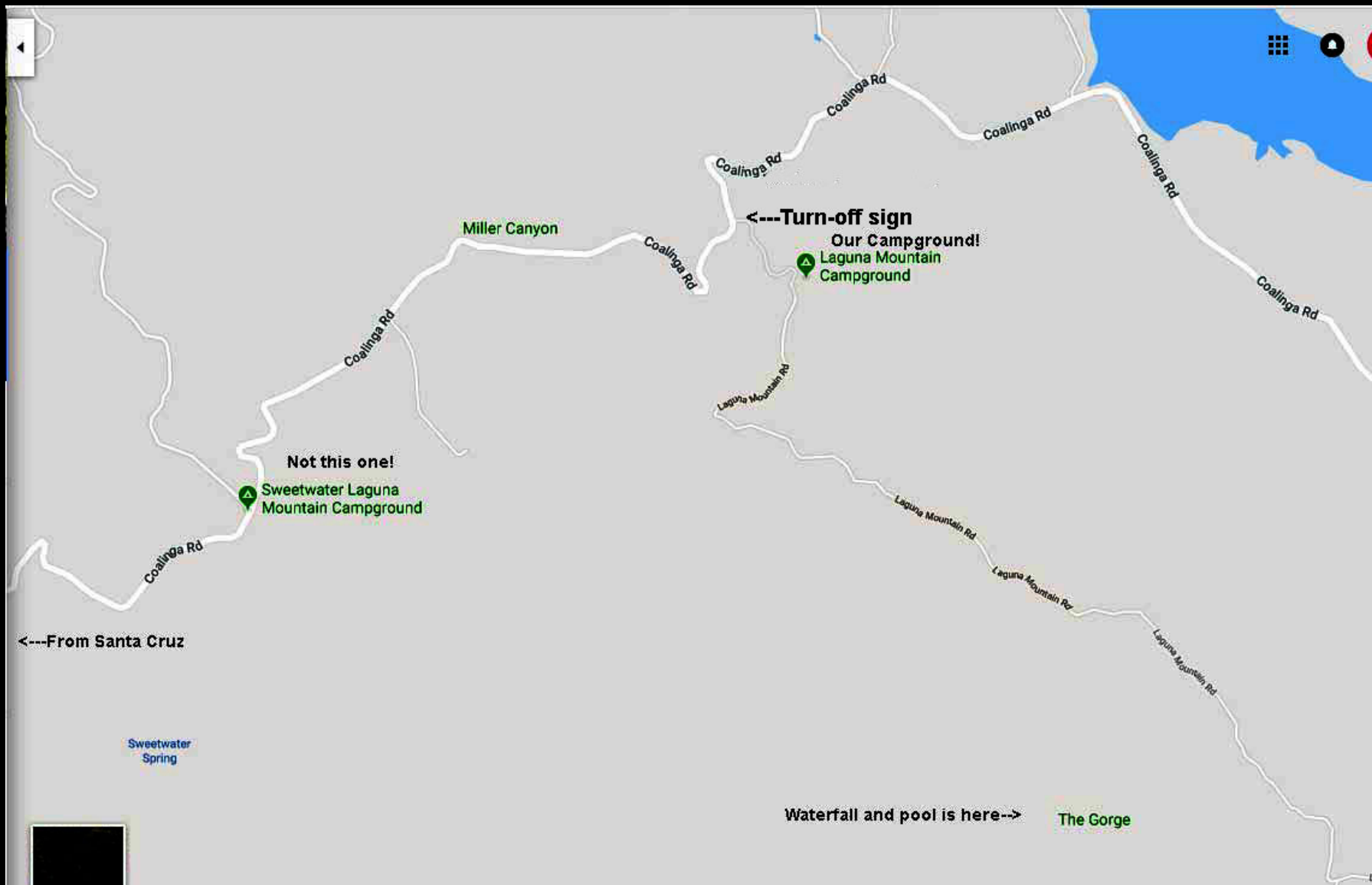
How to Get There... take Hwy 129 to San Juan Bautista, then Union Rd to route around Hollister, down Hwy 25 about 12 miles past Pinnacles, to Coalinga Road, then another 10 miles or so...



Coalinga Rd is paved, but narrow, winding, has some bumpy patches. Make sure you keep going PAST the Laguna Mountain trailhead, PAST Sweetwater, and to our campground turnoff



If you pass a lake on your left, you went too far



Here's the turnoff onto the short dirt road to our campground. Once on it, go all the way to the end, where the bathroom is, and we'll be camping on the tiny hill to your right, is Plan A.



Most sites look like this; we should try to grab one of these too, but our main site will be the little hilltop, which has a great view of the sky, and where we can set up tents anywhere along the dirt path towards the mountains



CAMPING

Campgrounds:

There are campgrounds at Laguna Mountain and Upper Sweetwater. Each campground features several campsites which are equipped with level RV pads, fire rings, shade structures, picnic benches, vault toilets, and a kiosk providing an interpretive panel, a map, and information about the area.

Although no reservations or fees are required, there is a 14 day camping limit within any 28-day period. There is no electricity, running water, or trash collection at the campsites. Please utilize good camping ethics, and remember to pack out your garbage when you leave.

Dispersed Camping:

Dispersed camping is also available, although there is no camping within 200 yards of any wildlife watering improvement. You must park within 15 feet (roughly one vehicle length) of any roadway when camping or leaving a vehicle unattended to minimize habitat and vegetation impacts. Please remember to bring a shovel with you for both personal sanitation and fire prevention purposes.

Laguna Mtn. Camping

Schedule on Friday – Mar 16

- Plan to arrive at camp hopefully before dark. I expect to get there in late afternoon if all goes well. I know you may have work or class or may otherwise come in a bit later, but try to arrive before dark (7 pm) if you can.
-
- Ann and I will work on dinner as soon as twilight approaches and we have set out our camping gear.
- **Bring firewood and kindling** and newspapers! We may well have campfire talks during cloudy periods. Fire danger should be minimal.

Friday Night Telescope Adventures

- We'll use the 8" Celestron 8SE "Go-To" scope, and Kirk's 12" Dobsonian to explore the Winter Milky Way, the star forming regions of Orion, the exploded remnants of a supernova in Taurus, and all variety of stars, with micro-lectures along the way.
- Bring you camera to get nice shots of the sky, and Mercury and Venus in conjunction setting in the West in twilight.
- Bring you warm clothes, it'll get into the 40's at night. It can get cold there; we'll be at about 2,000 ft elevation, at either location.

**Venus and Mercury will be in Conjunction, just as they
were on this January '15 trip**





Our camp area
lit by red
headlamps

Saturday Morning

- I'll get up early and begin preparing the batter for your French Crepes Breakfast!

My famous French Crepes Breakfast on Saturday morning about 8:45am





My famous
French Crepes
batter, given an
extra bit of
attention for
the photo by
one of my Astro
28K students

Focus! Concentration is required for good crepes!





Becky enjoying her
crepe, sweetened
with lemon curd!

TRAILS

There are three trailheads, one each at Laguna Mountain, Sweetwater, and Short Fence.

From the Laguna Mountain Campground and Trailhead, a 2.5 mile out and back hike will reward hikers, mountain bikers, and equestrians with a view of a series of waterfalls flowing from Laguna Creek. Begin your adventure by following the fire break road for half of a mile to the brown fiberglass trail marker. After turning right onto the trail at the marker, continue on the trail as it follows the gentle contours of the chaparral covered slope until you cross the creek at the bottom of Miller Canyon. Use caution as you cross Laguna Creek and take time to observe the changes in your surroundings. The trail will take you above the creek through oak forest and grassy meadows as you slowly climb to the falls overlook. From the overlook, a short scramble will take you to the base of the falls. To return to the trailhead, there are two options. A short scramble back to the trail will take you directly back to the trailhead. For those seeking more adventure, explore Laguna Creek on your way back to the trail. This will involve off-trail travel, often over slippery rocks. Be mindful of snakes, ticks, and poison oak.

I'll hand out your "Planetary Processes" lectures notes handout as we start our hike. I like to do "micro-lectures" along the way on our day hikes!



We'll talk about the origin of elements making up the rocks, and water on our planet, created in the cores of stars



Laguna Creek



04.08.2006



The Laguna Gorge Waterfall is quite nice. The water is pretty chilly this time of year, but if you're game... it's certainly big and deep enough

We'll all carve together, come dinner time Saturday!





We'll stoke up a
campfire to eat
dinner around,
and listen to plans
for Saturday nights
special events

Star Clusters of the Milky Way





My Saturday night cosmology lecture. Here, I'm trying in vain to demonstrate how BIG the universe is. Arms can't quite reach...



Some Important Points

- **We're camping on BLM Land at Laguna Mountain. It's free, and there are nice bathrooms, but...**
- **There's no water at our campsite.** Bring any water you'll need for personal use. I'll bring water for cooking the group meals and dish cleanup.
- If we end up at Red Rock Canyon, there are water spigots at the campsites, and bathrooms.
- We'll provide your Dinners and Breakfasts
- There's water in the creek we'll be hiking to, and at the waterfall, for more adventurous personal clean-up!

Sunday Plan

- We'll prep breakfast; fried veges in olive oil and scrambled eggs with tortillas
- Then we'll do a shorter hike with final micro-lectures on planetary science topics, either to Laguna Mountain itself, or drive a few miles to another creek nearer San Benito Mountain.
- Then I'll distribute the take-home final exams to you, and we'll bid adieu!
- Note that there is no final meeting on campus in later weeks, contrary to what it says in the Schedule of Classes – you'll do your final as a take-home.
- Your grade will be based on your attendance at each of the venues and roll-calls, and your final exam score

Logistics: Saturday March 10 Pre-Trip Meeting On Campus

- **Checklist:**
- 1. Get liability waivers signed and returned
- 2. Discuss weather, and alternate location at Red Rock Cyn State Park if rain ruins the coastal mountains here. Prediction for Red Rock Canyon is clear skies next weekend, as of now Mar 10.
- 2. Collect \$10 per person for camp meals. Ann and I will buy all your food (except lunch and snacks, which you should bring).
- 3. Distribute map packets
- 4. Get to know each other, decide on car pooling. Make list of who, when, what vehicles will arrive.
- 5. Get cell phone numbers on a common sheet which we can dup and give out to people who need them. I'll give you mine
- 6. Planets Presentation
- 7. Planetarium Stars

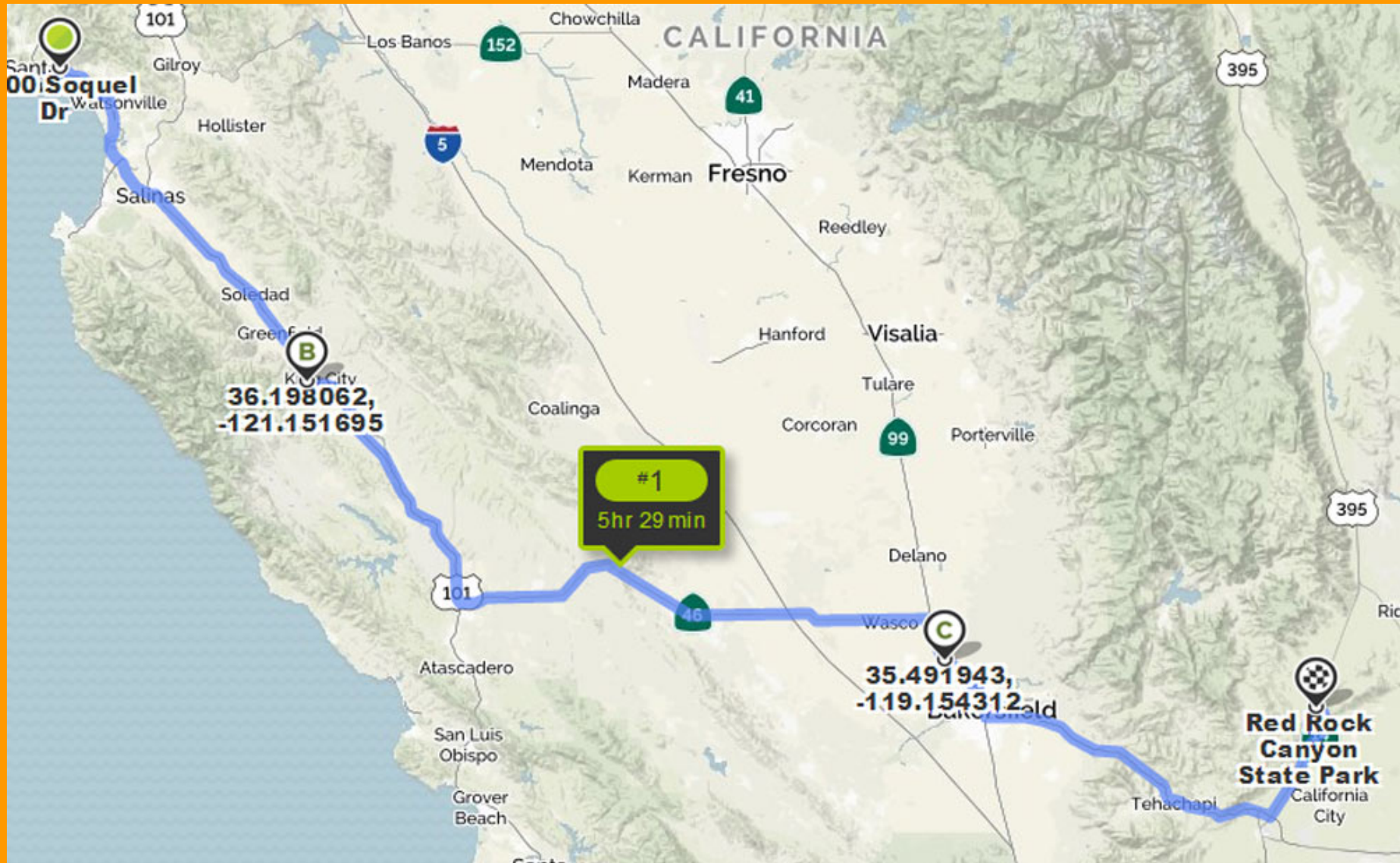
Your Meals

- I've been doing these field astro classes for 30 years now, and what works is to have a group togetherness which is best accomplished by shared meals.
- I love cooking and don't mind a bit! I'll prepare your two dinners and two breakfasts. Lunches, snacks, and any late night desserts are on your own. Bring some snack to share around the scopes if possible
- For an astonishingly low \$10 cash, I'll give you 4 great meals...
- **Fri dinner: pasta, salad with home-made dressing**
- **Sat morning: French crepes with fresh fruit, yogurt**
- **Sat eve: Asian Rice a'la Nolthenius, with Jasmine rice, asian spices, seasonal veges**
- **Sun morn: black beans and sauteed veges, with scrambled eggs and cowboy toast**
- **Ask Anne about gluten-free. Vegetarian fare – no meats cooked (you're welcome to bring some on your own, however)**

What if The Forecast by Mid-Week calls for Rain on Saturday, as is a distinct danger right now?

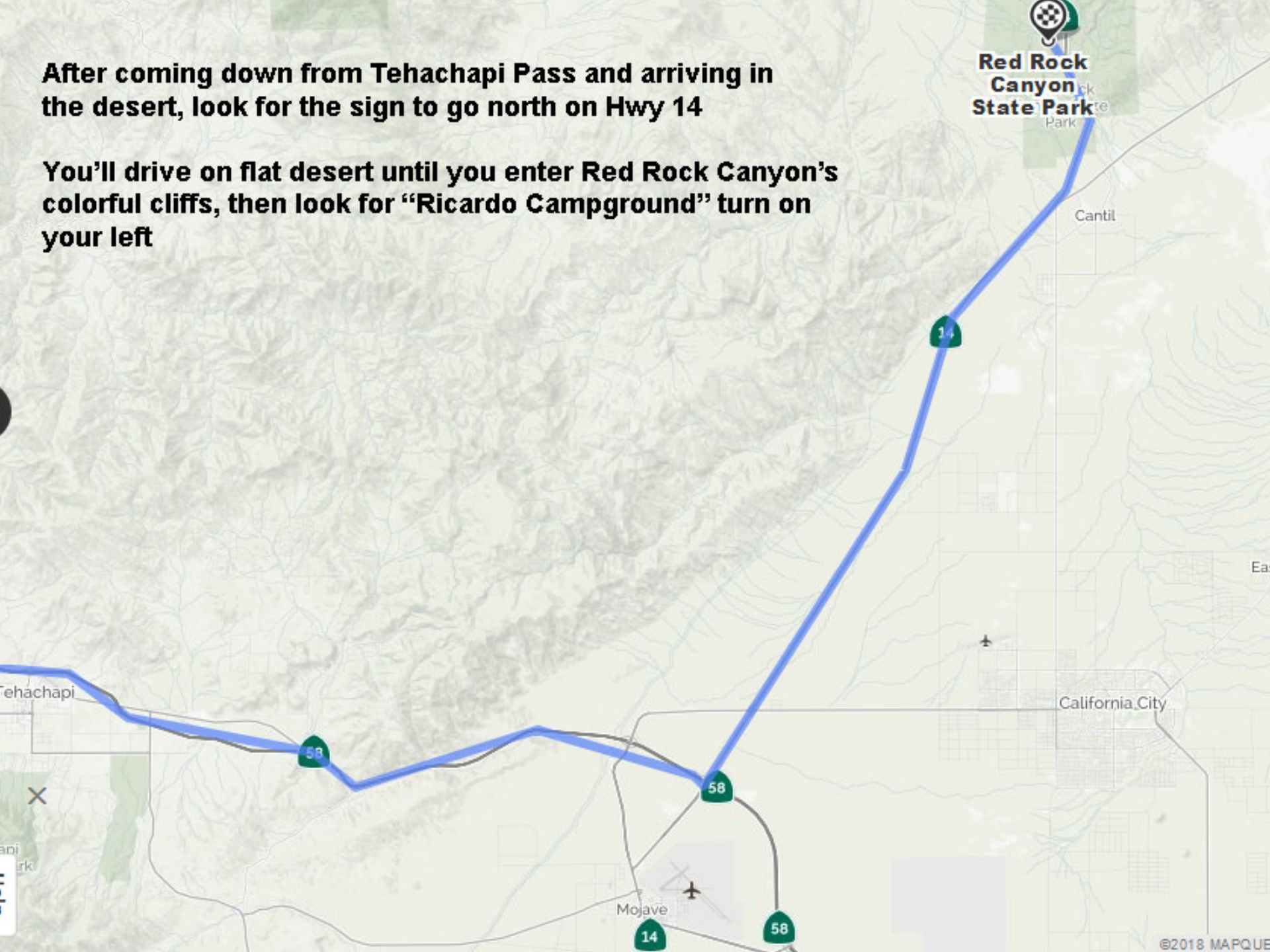
- Our campsite hilltop would not be good – it would be muddy and miserable!
- Our backup plan is to instead go to Red Rock Canyon State Park in the Mojave Desert; in the rain shadow of the southern Sierra, and where it is predicted to be dry and clear
- So, by midweek I'll make a final email to you all on where we'll meet up – Laguna Mtn, or Red Rock.
- Here's the Maps for Red Rock Canyon...

It's a longer drive, but worth it!



After coming down from Tehachapi Pass and arriving in the desert, look for the sign to go north on Hwy 14

You'll drive on flat desert until you enter Red Rock Canyon's colorful cliffs, then look for "Ricardo Campground" turn on your left



At the Visitor's Center, you'll see a dirt road branching to your right – one way – the camp loop. We want the last 2 sites on the far end, before you make a sharp left and go back towards the Visitor's Center. Sites are first come/first serve. We'll need 2 sites.



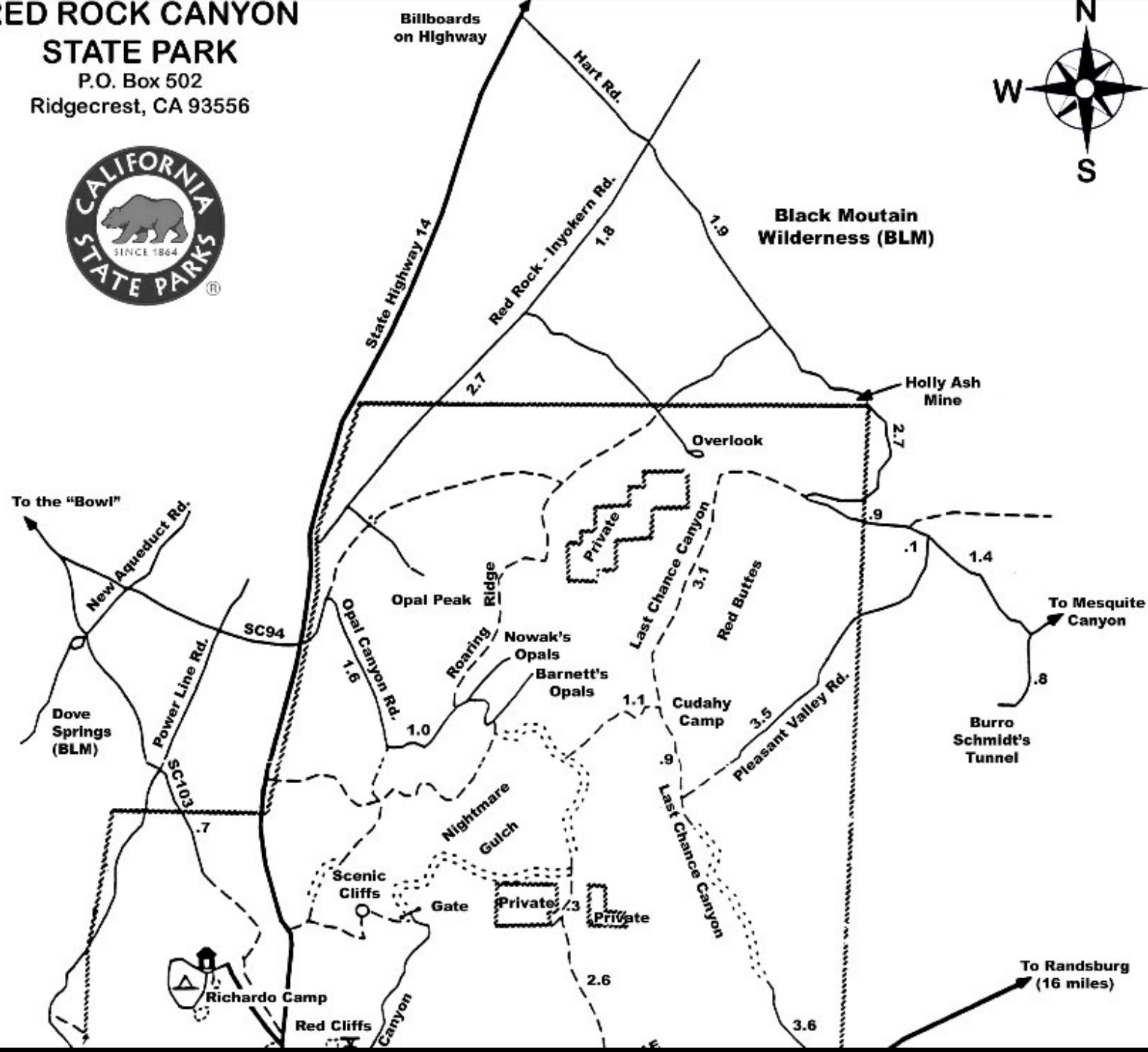


Start of the camp loop. Campsites are nestled in the cliffs in the distance



RED ROCK CANYON STATE PARK

P.O. Box 502
Ridgecrest, CA 93556



Fixing my Huel Howser - approved French Crepes Breakfast Saturday morning





At the old Holly Mine: In the early 20th Century, a lot of the U.S. kitchen sink cleanser was mined here!





More Holly Mine shennanigans, after my micro-lecture



The old Burro Schmidt encampment



Our Astro 28M Gang, at the entrance to the Burro Schmidt Tunnel

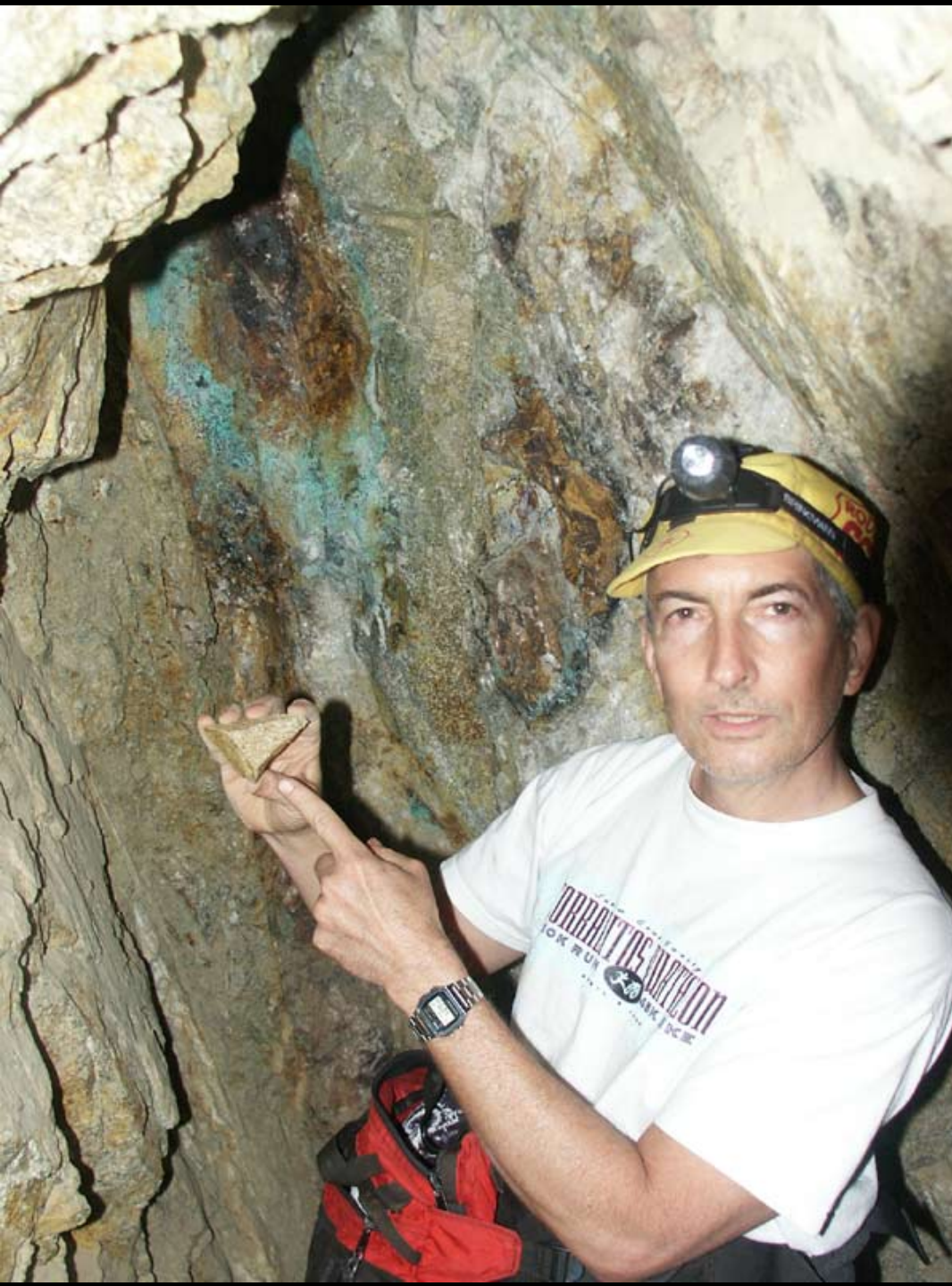


Gold and copper ore and other interesting minerals to examine





A bit of Gold
Ore. The
tunnel is a
quarter mile
long, and exits
at both ends.
Bring your
headlamps!



Copper and gold often found together; the blue copper oxide is the give-away, with the gold nearby. If I look younger – yeah – this is 2005!

Handing out the “Planetary Processes” study sheets at the Holly Mine



At the far end of Burro Schmidt Tunnel is a spectacular view of the Garlock fault and Koehn Dry Lake; great place for more lunch and mico-lecturing



There will be wildflowers amid the
desert creosote and Joshua Trees.
Indian Paintbrush here



Bring your camera – beautiful views of
the late Winter skies above the camp-
lit cliffs



Primal fun – exploring an old mining tunnel!



At the overlook above camp; site of
our final lecture on Sunday after
breakfast



Sunday morning Micro-Lecture



Solar viewing and sun/climate lecture



Local Fauna: Horned Lizard



Saturday afternoon down-time (or is it up-time?)



Joshua Trees dot the landscape at camp





**Astro 28M:
student water
carrier!**



Fire-dance,
performed
by one of
our Astro
28M
students at
camp



Happy
student
studying
the stars!

We drove at night to a location to see
a lunar grazing occultation



The Big Dob, operated by Kirk B



- **We'll do Pasta Friday eve,**
- **We'll do French Crepes on Saturday morning. Then caravan a few miles up Hwy 14 to a turnoff and explore the old mines, and Burro Schmidt Tunnel, and the spectacular vista on the other side, looking out over the Garlock Fault and Garlock Dry Lake.**

● Camper's Checklist for Field Astronomy Classes

- Tent
- Sleeping bag + soft insulated pad to keep you off the ground, pillow, ear plugs
- Portable table(s), especially if we're in the wilds like Carrizo Plain or Laguna Mountain
- Saturday & Sunday lunches and snacks are on you. (However Saturday breakfast+dinner, Sunday breakfast: I'll cook for you if prepay \$10)
- Pot luck dessert (always nice around the scope's)
- WARM clothes! Like, every jacket, scarf, wool cap, and inner or outer pants you own!
- Wool cap, gloves, long sleeves
- Rain gear, in case we're not lucky.
- Plenty of water, if we're at a dry camp like Carrizo Plain or Laguna Mountain. At Carrizo, the nearest water may not be drink-able and it's a mile away. At Laguna Mountain, there's no water (except the creek, 1.5 miles from camp) within 35 miles, at Pinnacles National Park.
- Firewood, if you have any, and old newspapers
- Toiletries (toothbrush, soap, towel, TP)
- A cup, bring your own mug or camp cup
- Red flashlight or better yet - a red headlamp. Best bet is to go to Outdoor World (41st Ave or River St downtown) and buy a LED headlamp. Both red and white lights and only \$19!
- **Beach chair**, for listening to campground lectures in comfort
- Binoculars, if you have some.
- Collecting bag for cool rocks, gold ore, various flotsam, jetsam, knick-knacks, and souvenirs
- Bathing gear, if we're at a lake or hot springs
- ID, cash

At the End

- I'll pass out the Final Exams, which are “take home” and are due 2 weeks after the end of the trip.
- You can return them in the brown envelope outside my door, or snail-mail them to me.
- Do NOT email them! I need hard-copy to mark on.
- You should word-edit your essay answers, print them, and staple them to the Mult Choice part of your exam before handing it all in
- These trips are always a lot of fun and new friends! Glad you are joining me on this adventure!

Logistics: Final Checklist

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