

**Southwestern Region – NSS**  
**Summer 2016 Regional Meeting and Activities**  
**May 21-22, 2016**  
**El Malpais National Monument, Cibola County, NM**  
Hosted by the Pajarito Grotto

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El Malpais National Monument (ELMA) was created in 1987 to protect and conserve 179 mi<sup>2</sup> of natural and cultural resources within of the Zuni-Bandera volcanic field, the second largest volcanic field in the Basin and Range Province. The El Malpais, (Spanish meaning "badlands") is a high elevation, lightly forested grassland surrounded by typical southwestern mesa topography. Elevations range from 6500 to 8372 ft within the monument. The oldest and youngest flows of the El Malpais region have been dated at 1.5 to 3.3 million years old and from 3,000 to 700,000 years old, respectively. In the major cave area of ELMA, several kilometer-wide volcanoes have disgorged basalt flows containing lava tubes in varying states of preservation. There are over 400 documented lava tube caves within ELMA, several of which are open to public visitation by permit.

### **Camping**

We'll be camping in Bonita Canyon, east of the ELMA visitor center in Cibola National Forest (see map). There's plenty of space and lots of trees along the small valley that we will be using. Be careful where you build a fire, and use the existing fire rings if available. There are no current fire restrictions in the national forest (as of late April). It has been raining in the past weeks, so the road up Bonita Canyon may be sloppy if still wet.

### **Activities**

The SWR meeting **will be at 9 am Saturday at the campground.** The main focus of the weekend activities will be conducting surveys and photo monitoring of the various moss gardens in the lava tubes within ELMA. We'll assemble and be briefed on the day's agenda and caves at the campground right after the SWR meeting. After that, participants will be caravanning to the Big Tubes area of ELMA to start the surveys. This will be a good introduction for those that have not caved in the Malpais before, and a chance to visit several lava tubes that don't receive much visitation. A handout with descriptions and directions will be available at the campground briefing. Navigating in the Malpais can be quite challenging, and bringing a GPS unit and sturdy hiking boots is recommended.

There are approximately 80 caves in ELMA which are thought to contain significant moss gardens. The vast majority of these caves are not publicly accessible without a research permit. These gardens are often associated with caves containing perennial ice and have been noted to contain alpine species. Climate change is fueling our need to monitor and document these gardens before the ice that sustains them melts away.

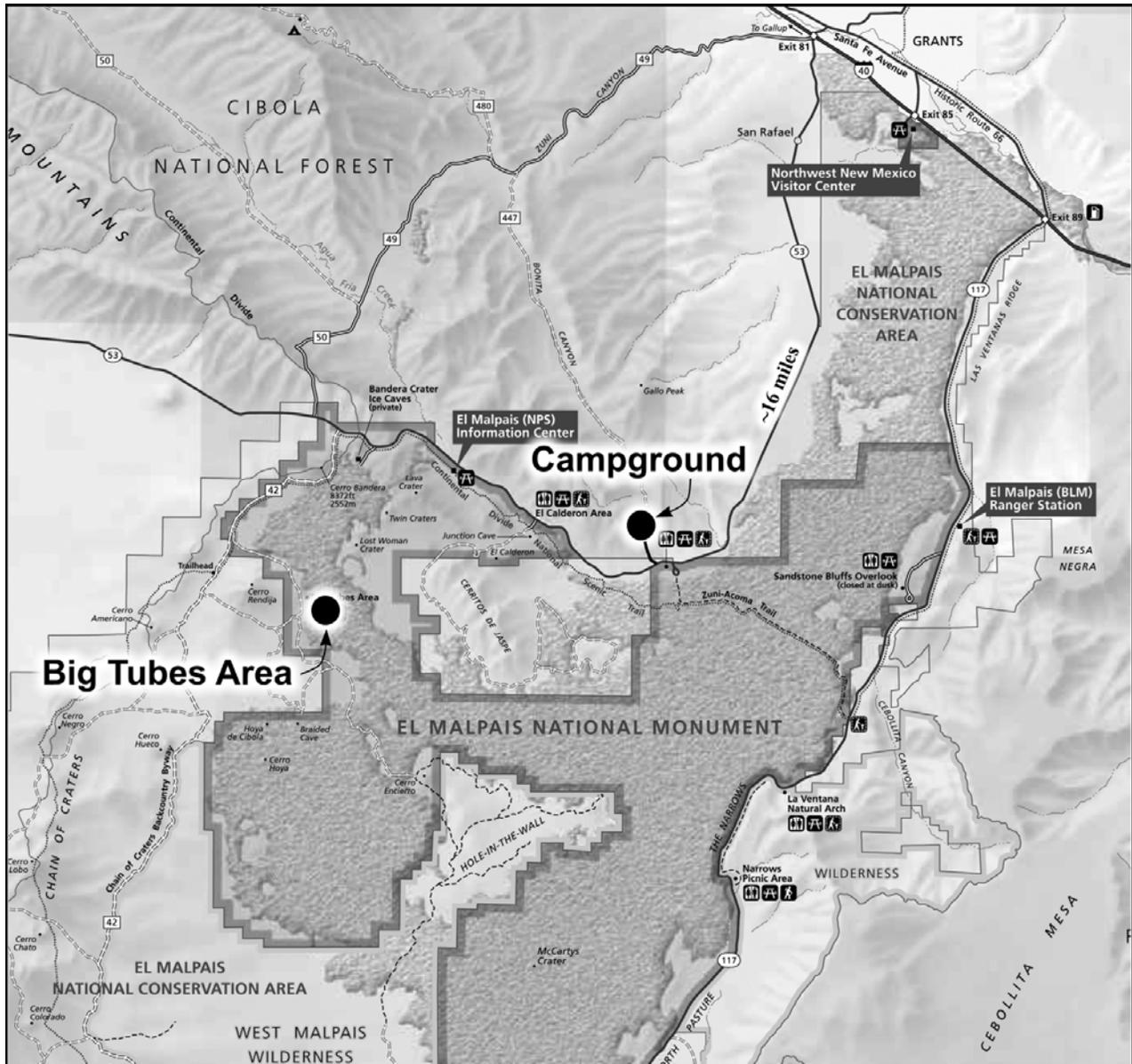
We will be surveying the areas around the moss, creating maps, and setting permanent photo-monitoring stations. Most of the gardens are located in the cave entrances, but they also occur in skylights deeper into the caves. At least 5 caves require vertical gear to enter. Very few caves are adjacent to roads so be prepared to hike.

### **WNS Considerations**

As usual, do not bring caving gear from a known WNS region to the monument. Follow the latest WNS decontamination protocols available at:  
<https://www.whitenosesyndrome.org/topics/decontamination>

### Directions from Albuquerque:

- From Albuquerque, go west on I-40 to exit 81 in Grants (the intersection of I-40 and Hwy 53). Good place to pick up last minute supplies and gas.
- Go south (left) on Hwy 53 for approximately **16 miles to the turnoff onto FR 447** on your right (Bonita Canyon Rd). This is just past a quarry on the right and the parking area for the Zuni-Acoma and Continental Divide trails on the left.
- Continue north on FR 447 (dirt road) for about **0.75 miles to a turnoff on your left** that goes up a small valley. Hopefully there will be SWR signs. Camp anywhere along this road which goes about ¼ mile up the valley (see map).



GPS coordinates for campground: 230419 E, 3873217 N, WGS84, zone 13S