



## Late August 2011



*Pacific Giant Salamander inside Oregon Caves*

### This month on the Monument

Free ranger programs will be offered each day. Check the blackboard in the Visitor Center for fascinating topics. Explore the cave in the old style - candlelight tours take place on Friday and Saturday evenings.

Want to get muddy? Make your reservations now for the Off-Trail Adventure tour.

Be sure to stroll through the historic Chateau at the Oregon Caves. Lodging, fine dining, gift gallery, 1930's era coffee shop, a relaxing lobby, and more are just across from the cave entrance. Inquire at The Chateau or visit their website for information about entertainment and events: <http://www.oregoncaveschateau.com/>

### Pacific Giant Salamander (*Dicamptodon tenebrosus*)

The Pacific Giant Salamander is a troglaxene, an animal which visits the cave during different life stages. This native amphibian can grow to 13 inches in length! The juvenile has external gills to breathe underwater; the brown and black mottled adult spends most of its time near streams or beneath logs and rocks where it is moist. The constant dampness of the cave environment is one reason it uses Oregon Caves as a temporary home, particularly during the hot, dry summer.

Since Pacific Giant Salamanders are thought to be territorial, smaller salamanders we see moving in and around the cave in summer are likely to be juveniles (2-3 years old) who have newly metamorphosed from larvae to adult stage and are exploring the moist cave environment.

One of the few vocal salamanders, this cave visitor can make a croaking or barking sound when in danger.

### Bushy-tailed Woodrat (*Neotoma cinerea*)



*Woodrat in Oregon Caves*

The Bushy-tailed Woodrat is a nocturnal, forest-dwelling rodent who visits the cave and sometimes builds a nest inside. It is a true packrat: it collects objects and is known to drop what it is carrying if a preferred object is found. The debris pile of objects it leaves in its nest is known as a midden. Held together like glue with the woodrat's urine, middens can provide scientists with data on climate, plant, and animal changes over thousands of years because of the woodrat's desire to stash animal bones and plants. The midden will keep growing and be used by generations of woodrats.

The woodrat eats many different plants, seeds, and fruits. Since it does not hibernate it will store food for the winter. It has no need to drink water because plants provide all the hydration this animal needs!

Since eyes are useless in a dark cave, the Bushy-tailed Woodrat, a troglaxene, leaves scent markings in the cave to find its way back out to the forest!

## Pseudoscorpion

Oregon Caves has many natural ecosystem niches for extraordinary life to call home. The Pseudoscorpion occupies the cave niche as one



Close-up of Pseudoscorpion (left)  
Actual size of Pseudoscorpion (right)

of its troglobites, which must live their entire life underground. Pseudoscorpions look like tiny scorpions but lack the prominent tail. They live off of springtails and other small cave life.

Pseudoscorpions arrived initially in the cave environment by hitchhiking on the legs of flies, spiders, and other insects. In order to survive underground, they made special adaptations for the dark surroundings and have developed into one of the cave's endemics, species found nowhere else in the world. Oregon Caves' endemics intrigue scientists as living evidence of evolutionary processes.

## Springtail (subclass Collembola)



brown slender springtail in Oregon Caves  
(note ruler for scale)

The springtail is a tiny, wingless, segmented animal that can be found almost anywhere on Earth where soil is found. Springtails are not insects – they are Hexapods, a subphylum of Arthropods. These soil-dwelling critters have a forked, tail-like appendage that can be used to propel the animal many times its body length in a fraction of a second!

There are around 7,000 known springtail species in the world and likely many more yet unclassified. Springtails probably entered Oregon Caves thousands of years ago and a variety now exist as troglobites scattered throughout the cave: white, silver, brown, and orange. Since food is scarce in the cave the springtail conserves energy by moving very little. Available food includes decaying organic matter, bacteria, and other microbes. It is possible some of the springtail species of Oregon Caves are endemics.



silver springtail in Oregon Caves  
(photo enlarged)

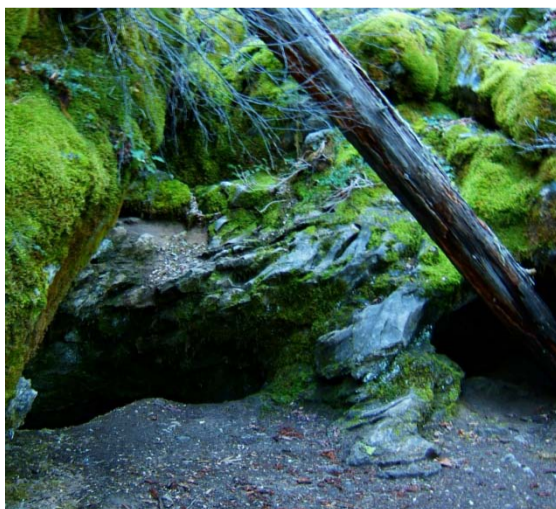
Our cave-dwelling springtails are few and far between, but in your backyard you might find up to 100,000 springtails in a square yard of soil!



white springtail (photo enlarged)

## The "Blind Leads"

Crawl through the marble like a cave critter



All ages can explore the "Blind Leads"

Want to explore the marble of the Monument like a critter? Crawl on your hands and knees through the "Blind Leads" on the Cliff Nature Trail. They may look like cave openings, but they do not connect to the main cave system. You might even see some insects up close!

These pockets in the marble rock were once dissolved by carbonic acid underground and erosion has since exposed them to the surface.

**Directions:** Start the Cliff Nature Trail at the trailhead behind the Visitor Center. Bear right.

**Time:** 20-30 minutes

**Distance:** 900 foot walk to "Blind Leads"