

# The Western Cave Conservancy

Protecting the West's Last Frontier

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## Cave Management Planning

### Introducing the WCC's Stewardship Committee

by Joel Despain

While buying caves is a very complex and time-consuming process, good stewardship of caves that we own or manage will be the long-term goal for the Western Cave Conservancy. This work will last indefinitely. It is the task of the newly active Stewardship Committee to take on planning and preparation for the management of caves.

Luckily, we do not have to reinvent the wheel. Rather, we can borrow from those who have gone before us in both the private and public sectors. Consistently, cave managers and management organizations have turned to written plans for organizing the stewardship of a cave or preserve. Such plans provide many advantages: the planning process encourages careful consideration of how a property should be managed, responsibilities are clearly defined—important in a volunteer organization—and written policies are clear and available for everyone to see.

In general, most plans will include a few key sections, such as:

- + A background introduction (brief accounts of the property's geography, the native vegetation, the history of a cave and property including caver use, the site's key or unusual resources).
- + Management policies for the cave and above ground areas of a preserve (designation of closed areas or boots-off sections in the cave, burn bans on the surface, trails in the cave and on the surface).
- + An access policy for the cave and surface of the preserve (who gets to go there, when, and how do they do so—keys, paperwork, etc).



Photo: Marianne Russo



Photo: Matthew Leissring



Photo: Marianne Russo



Photo: Rich Sundquist

- + Infrastructure (information board, cave gates, outhouses or restrooms, demolition of derelict structures).
- + Provisions for special concerns and needs (bat colonies, endemic life, rare plants, neighbor relations).
- + Emergency and safety plans.
- + Responsibilities (providing for regular property visitation by stewards for purposes of maintenance and security, such as fence and road upkeep).
- + Procedures for changing the plan in the future or for reviewing its provisions (it may be that each property will have an annual planning meeting to review the success of ongoing management).

Creating a final written plan for a cave and preserve will take time—likely as long as a year. An

interim plan will have to be put into place as soon as the WCC acquires a cave to allow for immediate access and use. Other actions on a property that the WCC may need to undertake immediately before a plan is completed may include overlooked maintenance, such as trash removal, building maintenance, and culvert repair.

Creating the final plan will include several phases:

- 1) Initial identification of issues, key resources, historic caver use, and other concerns will be completed by the Stewardship Committee staff and involved cavers who know the particular cave and property.
- 2) WCC members, neighbors,

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# Holey Dung!

## Can you find Niptus?

by Rolf Aalbu

photos by Rolf Aalbu and Fred Andrews

As we wander and crawl through cave passages here in the West, on the ground we often see small, compact, elongate pellets of about 1/2 inch long by 1/8 inch in diameter. Most of us know that these are the droppings or dung of the packrat (*Neotoma* spp.), which regularly lives and nests in caves. But how many of you have ever seen these pellets where most are riddled with tiny holes? Could this be the dung of introduced Swiss packrats? Do these particular packrats have gas? The answer is neither of these: the holes in the pellets have nothing to do with the packrats. Rather, they are created by an unusual beetle's immatures (larvae) that feed on the dung. This tunneling coprophagy (dung feeding) habit seems to be restricted to this type of spider beetle. The beetle lays its eggs on the dung, and the larvae hatch and feed on it, making the tunnels. (Figure 1) The adults probably feed on the dung as well, along with other organic material.

Although epigeal (non cave dwelling) species of these beetles are found throughout the Western United States, cave endemics (species restricted to particular caves) are known only from a few caves in California and Utah. If you are lucky enough to actually spot one wandering around in a cave, you might think you have lost your mind! The round yellow-orange adult beetles, about the size of a BB, look much like a small walking cave pearl!



**Figure 2: *Niptus ventriculus*, an epigeal spider beetle.**



**Figure 1: Packrat pellets that have been fed on by the larvae of the spider beetle, *Niptus* genus.**

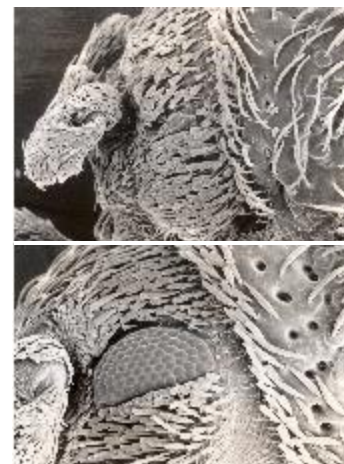
Unlike their epigeal relatives, (Figure 2) these cave endemics have very reduced eyes as well as

other morphological characteristics associated with cave life. (Figures 3a and 3b)

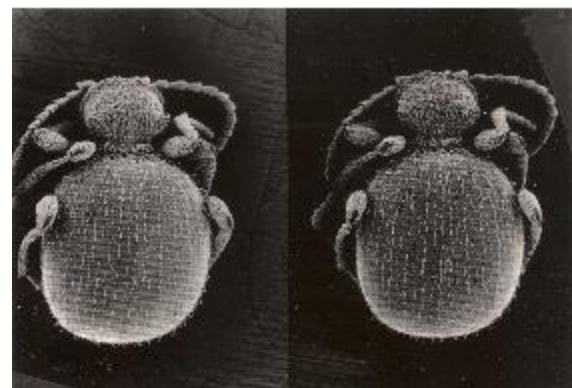
Back in 1995, a colleague and I revised this genus of spider beetle (family Ptinidae) of the genus *Niptus*<sup>1</sup>. One of the cave endemics we described, *Niptus arcanus*, (Figure 4) is known only from Mitchell Caverns, San Bernardino County, California.

Mitchell Caverns Natural Preserve is part of the Providence Mountains State Recreation Area.

As most of you who have visited this cave already know, Mitchell Caverns is really two caves: El Pakiva and Tecopa. In 1970, a tunnel was dug connecting these caves in order to facilitate tours. These



**Here the eye of a cave-endemic *Niptus* species (Figure 3a, top) is compared with that of an epigeal species (Figure 3b, bottom). Note the cave endemic's reduced eye.**



**Figure 4: *Niptus arcanus*, a spider beetle endemic to Mitchell Caverns. This figure is known as a stereo pair. You can see the beetle in three dimensions simply by first defocusing your eyes. You will now see four blurry beetles. Try putting the middle two together. If you are lucky, the middle will come in focus and in three dimensions!**

endemic spider beetles were discovered during a preliminary biological survey of the caves in 1979<sup>2</sup>. Despite the tunnel connecting the two caves, which by then had been in place for nine years, and despite the abundant packrat nests in both caves, these beetles were found only on the El Pakiva side. Furthermore, the deeper into El Pakiva Cave one looked, the more abundant the beetles became! In 1991, I was asked to re-study these beetles to provide baseline data that could be used in establishing man-

agement policies for the Caverns. During this 1991 study<sup>3</sup>, live traps were placed throughout Mitchell Caverns to determine the abundance of these beetles and other endemics. Specimens were counted from each trap and released. Surprisingly, even though by this time the two caves had been connected for 21 years, these beetles were still found only on the El Pakiva side and still were the most abundant in the deepest part of the cave.

So if next time you are crawling in a cave that you know has packrats, take some time to look at these interesting pellets carefully for signs of burrowing. If you find some, please drop us (the WCC) a note. Who knows, you may have discovered a completely new species of *Niptus*. Holey dung! Can you see it now? A scientific publication describing *Niptus* \_\_\_\_\_ (insert your name here): a new species—with wonderful eating habits—named after you!

#### References

- <sup>1</sup> Aalbu, R. L. & F. G. Andrews. 1992. Revision of the spider beetle genus *Niptus* in North America including new cave and pholeophile species (Coleoptera: Ptinidae). *Pan-Pacific Entomologist* 68(2):73-96.
- <sup>2</sup> Aalbu, R. L. 1990. An Analysis of the Coleoptera of Mitchell Caverns, San Bernardino County, California. *National Speleological Society Bulletin* 51:1-10.
- <sup>3</sup> Aalbu, R. L. & F. G. Andrews. 1991. The Endemic Arthropods of Mitchell Caverns. Pub. report from California State Dept. Parks Contract 4-400-1144. Scarab. Assoc. 1991(1)1-27.

#### Be sure to check out the Western Cave Conservancy website:

<http://www.westerncaves.org>.

It's the place to go for all the latest information about WCC acquisitions, activities, and history, and it boasts a gallery of photographs of threatened, protected, or otherwise interesting caves.

Our thanks to webmaster Matt Bowers, [matt66@thirdmedia.com](mailto:matt66@thirdmedia.com), for both hosting and managing the site, and Peri Frantz, [peri@frantzfamily.us](mailto:peri@frantzfamily.us), for content coordination.

Photo: Kathy Greaves



## Letter from the President

Dear Friends of the WCC:

I hope this finds you well and looking forward to spring. I've noticed the first new leaves on the buck-eyes and some of my bulbs are already up and blooming. This time of year fills me with anticipation of the coming warmer temperatures and longer days. With some good luck, I can spend some of these days out in the field, working on one of the WCC projects. In anticipation of the acquisition of Rippled Cave we will be visiting local grottos and other interested groups to solicit input on the management plan for this cave and hopefully we will be able to start actual property improvements soon. Let's all keep our fingers crossed!

On Sunday, the 23rd of January, the WCC held its Annual Public Board Meeting. This year the Stanislaus Grotto of the National Speleological Society (NSS) facilitated the use of their monthly meeting place for us. I would like to take this opportunity to thank them all for their willingness to help us and to recognize Matt Bowers for doing all the legwork. THANKS TO YOU ALL! There was an enthusiastic turn-out of WCC volunteers along with several members of the Stanislaus Grotto. We were able to share some of our current issues and get input and fresh ideas from those in attendance. Several people came up to me after the meeting and said they were very pleased by what they heard and were enthusiastic about getting more involved. This was very gratifying feedback and much appreciated.

#### WOULD YOU LIKE TO HOST NEXT YEAR'S WCC ANNUAL MEETING?

If your grotto or group would like to get more involved or just have a chance to hear, first hand, about our activities, please consider helping us find a venue for next year's Annual Meeting. They are always held in January, on a Saturday or Sunday. The board is willing to travel and we would very much like to get around to as many places "in the west" as we can. Please call or email me or any other director or officer you know, if you have an idea for next year. We would love to hear from you.

With best regards,

Marianne Russo

President, Western Cave Conservancy

# CAVE CONSERVATION HERO

**Ben Robinson**

**We simply could not have done it without him!**

*-Joel Despain*

*Ben Robinson volunteered ten days of his time in early November to assist Sequoia and Kings Canyon National Parks with the installation of four new cave gates and the removal of three existing gates on park caves that have seen significant vandalism over the years.*

Through rain storms, back and forth along steep muddy trails, and through thickets of poison oak Ben carried numerous heavy loads of metal and concrete that were being taken either back to the vehicles for disposal or to the cave for new gate installation.

Ben also supplied equipment for the project—buckets, various tools and a garden cart—that were helpful and thoughtful.

Throughout the gate building, Ben kept a positive demeanor and a can-do attitude that

inspired all of us to keep working. Even the park animals were impressed—The plastic cover for Ben's RV propane tanks was given a little "thank you" nip by one of our park bruins at South Fork Campground one night.

Clough, Soldiers, and Crystal caves are all much safer and much more secure thanks to the work of Ben and all of our volunteers who worked on the project. Thank you Ben! You have made a difference and are a true cave conservationist.



*Photo:Shane Fryer*

**Ben Robinson gets ready to take another heavy load from Clough Cave to the parking lot.**

## Five Kinds of Perspiration Working Hard at Crystal Cave

by **Martin Haye**

As a computer programmer, I spend my days staring at a glowing sheet of plastic. The 2004 Crystal Cave Restoration project gave me a chance to meet people and break my back with them, while perspiring in five interesting ways.

The first kind of sweat was figurative: "sweating bullets." My Toyota Camry isn't cut out for the Crystal Cave road in winter. The ridge of snow in the middle of the road crunched and scraped the bottom of the car, setting up a constant racket that set my nerves on edge. Finally, the road descended below the snowline to a nice dry parking lot.

It was cold. I bundled up and set off down the trail looking for the action. At the base of two stairways sat parked a line of blue steel wheelbarrows, each full of rock and bricks. I joined a crew and learned the routine: two people grab the front axle, another grabs the rear handles, and on a count, all three pound up the steps. A few seconds rest, then it's back down and do it again.

Soon I'd discarded jacket and scarf. I've

heard of "dripping with sweat," but never thought I'd experience it myself. On those stairs I learned the strange power of group testosterone. We seldom spoke, even as we traded roles to balance the workload. The silent camaraderie buoyed my spirits even as my muscles burned. Sweat poured from my body as it has never poured before.

During breaks the chill would quickly turn all that perspiration to an icy "cold sweat." Soon we'd be back at hauling just to warm up again.



*Photo:Shane Fryer*

**After bringing a wheelbarrow of rubble halfway up the trail, Martin fills buckets with debris to load onto Rod Neuber's ATV for the last leg of the trip.**

Part of the day it rained, and I discovered that sweat mixed with rainwater is still just as wet. Might as well keep working.

At quittin' time I helped drag the final loads up the hill, then flopped into a chair near a roaring fire. Dinner smells wafted, and soon a hearty feast lay before us. I ate enough and more to replace all the calories I had spent.

The next day, though my muscles started stiff and sore, I soon got back into the rhythm and joy of a simple job well done. By the third day, I learned the fragrant meaning of that other staple of novelists:

"stale sweat." I said my goodbyes and took a long hot shower to wash it all away.

*Stewardship, continued from page 1*

cavers, and members of National Speleological Society (NSS) grottos will then be consulted for their opinions on management concerns and issues. This may be done through WCC presentations at Grotto meetings.

- 3) The final plan will be written by a person or group of people assigned by the Stewardship Committee. It is likely that multiple authors will be used, with, for example, one person writing the history of the cave, another developing the access policy based upon caver comments, while a third develops policies for taking care of buildings and fences. The Committee will strive to find plan authors who know their respective discipline and/or the cave. The plan will likely go through multiple revisions.
- 4) The WCC Board of Directors will approve than plan.
- 5) The plan will be implemented.

The planning process will be time consuming, particularly for our first properties. However, patience will pay off with a good plan that most everyone can at least tolerate and that hopefully most Western cavers will fully support. Within a few years the difficult decision making process will be behind us and WCC staff and cavers will fall into a routine of good cave and property management that will allow for caving fun and resource protection for generations to come.