

THE CAVE CONSERVATIONIST

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The Cave Conservation and Management Section of the NSS

SERA Announces 2012 Winter Business Meeting

The 2012 SERA Winter Business Meeting is set to be held Saturday, February 11th, 2012 at the Lake Guntersville State Park Lodge in Alabama. Hosted by the Huntsville Grotto, the event will include a number of components, including map and photo salons, and awards presentations.

Jewel Cave Announces Off-Season Wild Caving Tours

In order to better accommodate folks that may have more time during the off-season, Jewel Cave National Monument has announced it will be offering a number of Wild Cave Tours this winter.

The Wild Caving Tour at Jewel Cave is a three to four-hour adventure that takes participants off the manicured trails of the cave and into areas where they must scramble over breakdown, chimney between cave walls and crawl through tight passages.

Off Season Wild Cave Tour Dates

- December 31st
- January 14th
- February 11th
- March 10th and 17th
- April 14th

Jewel Cave Announces New Restoration Project; Cavers Needed

Jewel Cave National Monument is looking for experienced cavers to help with the undertaking of a new project that promises to provide opportunities to visit diverse areas of what is currently the world's second longest cave.

The project, which begins in January 2012, involves restoring of the extensive trail system within the cave by replacing, labelling, and moving

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navigational flagging used through trade routes, recreation routes, and the common exploration travel corridors. Volunteers are also being sought to get involved in the continued exploration of Jewel Cave which currently stands at 155 miles long. For more information, please contact Lee-Gray Boze via email at Lee-Gray_Boze@nps.gov or by telephone at 605-673-8312.

Section Highlights from Meeting at the 2011 NSS Convention

The Cave Conservation and Management Section meet during the 2011 NSS Convention on Monday, July 18. Highlights from that meeting include the following:

- ◆ A new chairman, secretary, and three new directors were elected (see page 5).
- ◆ The section decided to keep the amount of the conservation cash award the same.
- ◆ John Wilson will set up a facebook page for the section.
- ◆ The Section will be much more proactive about making sure that speleothems are not being sold on E-Bay. We will develop a template that can be sent to those selling speleothems and the website will be scanned once a month. We will also use our new social media outlet and website to post information about this issue.

The Section's New Social Media Pages

By John Wilson

Google Groups is a Web-based discussion group from Google that lets people create a group discussion with their own group e-mail address. Users can also search Usenet newsgroups, but since Google Groups is text based, Usenet images and videos are not accessible.

Facebook Groups are pages that you create within the Facebook social networking site that are based around a real-life interest or group or to declare an affiliation or association with people and things. With a Facebook Group, you are creating a community of people and friends to promote, share, and discuss relevant topics. I recently set up accounts for the Conservation and Management Section using both of these social media outlets.

The Google Group name is: "Cave Conservation and Management Section – NSS." To see this page, go to Google Groups (which you can reach by searching in your browser for Google Groups). Once in the Google Groups page put "Cave Conservation and Management Section – NSS" in the search box and click "search groups"

The Facebook name is: "Cave Conservation and Management Section of the NSS." To see this page go to Facebook and type "Cave Conservation and Management Section of the NSS" in the search box, the group will appear below the box, click on it. Both of these sites are public and anyone can join and make comments.

This is the official Facebook description of groups: "Facebook Groups are the place for small group communication and for people to share their common interests and express their opinion. Groups allow people to come together around a common cause, issue or activity to organize, express objectives, discuss issues, post photos and share related content. When you create a group, you can decide whether to make it publicly available for anyone to join, require administrator approval for members to join, or keep it private and by invitation only. New posts by a group are included in the News Feeds of its members and

members can interact and share with one another from the group." This is a partial account of the Facebook description of the Section –

Who We Are: The Cave Conservation and Management Section of the National Speleological Society was formed to provide a central clearinghouse for research, expertise, and information in the fields of cave conservation and management.

What We Do:

The Section publishes a newsletter, The Cave Conservationist, several times a year to facilitate communication on cave conservation issues and keep members up to date on the latest cave conservation happenings. The Section cosponsors cave management symposia at national and regional levels and assists the NSS Cave Ownership and Management Committee in managing the Society's caves. Some of the symposia proceedings have been published and are available from the NSS Bookstore.

The Section provides grants for vital cave conservation projects, such as the Contemporary Cave Use Study. The Section holds an annual meeting each year at the NSS Convention to conduct business and discuss cave conservation problems and issues. The Section also conducts a session on cave management and conservation at the NSS Convention, with papers presented on a variety of topics.

The Section sponsors individual Seminars and Symposia on a variety of cave conservation related issues. The Section presents two annual awards to a group affiliated with the NSS and an NSS grotto for contributions to cave conservation. Additional projects include development of literature for specific use of cave managers and people directly involved with management of caves, and assistance to the NSS Conservation Committee in developing guidelines for the NSS Board of Governors to assist in decisions regarding cave acquisition and conservation issues."

Update on the Development of the NPS Cave Visitor Impact Protocol

By Rod Horrocks, Wind Cave National Park

It has been demonstrated many times using photomonitoring techniques, that in low-energy cave environments, gradual change is almost imperceptible to humans (Figures 1 & 2). Because of this, long-term monitoring methods have been developed for caves. These changes, which have cumulative impact, are usually caused by cave visitation. Although, monitoring cave visitor impact has been a priority of the cave management community within the National Park Service (NPS) for a long time, these efforts were only developed for single caves or groups of parks on a regional level. No attempt was made to develop national cave vital signs until the Mammoth Cave Ecosystem Modeling Workshop of 2003.

The 2003 meeting was primarily held to start the long-term ecological monitoring program in the Mammoth Cave area, because the park had been chosen as the prototype for NPS cave and karst parks. At the 2003 workshop, which was held at the Cave Research Foundation's Hamilton Valley facility near Mammoth Cave National Park in Kentucky, NPS cave management specialists identified twelve major threats to cave and karst resources and the national vital signs that should be monitored. Some of the vital signs identified at that workshop were: trends of biotic communities, water quality, air quality, energy inputs, mineralogical and geological resources, and land use. However, cave visitor impact was not one of the six vital signs identified. No nationally-applicable protocols were developed for any of those vital signs as a result of this workshop.

The second attempt to develop national protocols was initiated at the NPS Cave Vital Signs Workshop held in Lakewood, Colorado in November of 2008, under the direction of Denis Davis, then the Superintendent of Timpanogos Cave National Monument. Thirty three people representing three groups, including: various National Park Service sites



Figure 1. Buffalo Gap before 1997.



Figure 2. Buffalo Gap after 1997.

with cave and karst resources, NPS programs that could potentially monitor cave and karst resources, or groups working on contracts to monitor cave and karst resources at NPS sites gathered for this workshop (Figure 3). This workshop was convened because the 32 Inventory and Monitoring Networks of the National Park Service, for the most part, did not fund protocol development for cave and karst vital signs, except in a couple of individual cases. Unfortunately, those two protocols were not for parameters that were applicable to all caves across the country, but geared towards regional concerns. The Lakewood workshop began by revisiting the vital signs from the Mammoth Cave Workshop and identifying the vital signs that were common to all

Visitor Impact Protocol (Cont.)

cave and karst sites were: cave visitor impacts, hydrology, cave meteorology, and cultural/paleontological resources. It was decided that standard operating protocols would be developed for inventory, ecology, and cultural/paleontology while monitoring protocols would be developed for cave visitor impact, hydrology, and cave climatology. A volunteer working group, headed up by Rod Horrocks from Wind Cave National Park, was then formulated to begin work on the cave visitor impact protocol. Rod was joined by Elizabeth Hale from Oregon Caves National Monument and then later on by Lee-Gray Boze, from Jewel Cave National Monument and Shane Fryer, from Lava Beds National Monument.



Figure 3. Vital Signs Workshop Participants, Lakewood Colorado 2008.

Experimental infection of bats with *Geomyces destructans* causes white-nose syndrome

(Highlights from Nature 2011)

“Here we demonstrate that exposure of healthy little brown bats (*Myotis lucifugus*) to pure cultures of *G. destructans* causes WNS. Live *G. destructans* was subsequently cultured from diseased bats, successfully fulfilling established criteria for the determination of *G. destructans* as a primary pathogen. We also confirmed that WNS can be transmitted from infected bats to healthy bats through direct contact. Our results provide the first direct evidence that *G. destructans* is the causal agent of WNS and that the recent emergence of WNS in North America may represent translocation of the fungus to a region with a naive population of animals.”

Findings:

1. Incubation period (between initial exposure and lesions) was between 83-102 days).
2. In a bat-to-bat (direct) contact, 89% of “clean” bats showed WNS lesions after 102 days.
3. In a direct application of G.d. to “clean” bats, 100% showed WNS lesions after 102 days.
4. In a test where infected bats were separated from non-infected bats by as little as 1.3 cm, 0% of the non-infected bats showed WNS lesions after 102 days.

Read more online at:

<http://www.nature.com/nature/journal/vaop/ncurrent/full/nature10590.html>

The 8 minute film, “The Battle for Bats - The Story of White Nose Syndrome” produced by the U.S. Forest Service, Ravenswood Media, and the U.S. Fish and Wildlife Service, has been recently translated to Spanish. The Spanish version of the film, “La Batalla por los Murciélagos - El Síndrome de la Nariz Blanca” is available on-line at <http://vimeo.com/31254027>. The English version is still available on-line at http://www.caves.org/WNS/battle_for_bats.htm. We encourage you to share the film with your grotto, other cavers, cave owners, youth groups, schools, agencies, and others who visit or are interested in caves.

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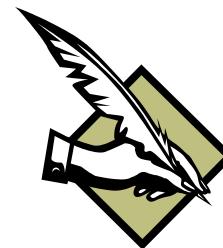


Cave Conservation and Management Section of the National Speleological Society



<http://www.caves.org/committee/conservation/>

Please contribute to The Cave Conservationist. You can send articles, news, photos, ideas, etc. to ccmsandeno@fs.fed.us



Story of Interest – Albion castle and its underground caverns for sale! It's not every day that you find a home for sale with underwater stone caverns, but this home built by London beer brewer, John Burnell, features underground tunnels and springs.

Available Online at:

http://lifeinc.today.msnbc.msn.com/_news/2011/09/30/8063825-listing-of-the-week-albion-castle-and-its-underground-caverns

Crocodile Fossil Found in a Cave in the Dominican Republic

A cave located within La Altagracia, the easternmost province of the Dominican Republic, was explored by a team of cave divers from the Dominican Republic Speleological Society (DRSS) and the Museo del Hombre Dominicano. The project was funded by the National Geographic Waitt Foundation. Inside the cave, fossils from at least three crocodiles, as well as the remains of sloths, bats, birds, and other creatures were found lining the floors of the flooded cave. Video of the exploration can be viewed at:

<http://video.nationalgeographic.com/video/player/news/animals-news/dominican-republic-cave-diving-vin.html>

The toothy jaw belongs to a nearly complete crocodile skeleton found buried in the silt. Scientists are still working to determine the animal's exact age and species, but the team thinks it's been lying in the cave's cold water for millennia and may belong to a group that's now extinct.

Photograph by Phillip Lehman - A fossil crocodile snout juts from the bottom of a freshwater cave—one of many incredibly well-preserved fossils recently discovered in the Dominican Republic.



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We're on the Web!

Visit us at:

<http://www.caves.org/committee/conservation>
