



University of Wisconsin-Madison

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Annual Report for 2001

Visitors

Our exhibits and programs proved to be as popular as ever in 2001. About 18,000 visitors from 47 states and 34 countries toured the facility. Our dedicated guides introduced 10,000 students (kindergarten to high school) from across Wisconsin, to plate tectonics, the world of minerals and rocks, and fossils.

A planned museum expansion

A major building-addition is being planned that will provide the museum with an additional 2,550 square feet of new exhibits, offices, storage, and an activities center. Construction is expected to begin within the year.



Museum director Klaus Westphal (left) and assistant director Richard Slaughter (right) reviewing the floor plans for the future museum addition.

A new face

We welcome Dr. Richard Slaughter as the museum's assistant director. His appointment was made possible by a three-year grant from the College of Letters and Science. Richard recently received his doctorate in paleontology from the University of Iowa. His main responsibilities are to oversee and expand the museum's educational outreach program and to assist with the design of new exhibits.

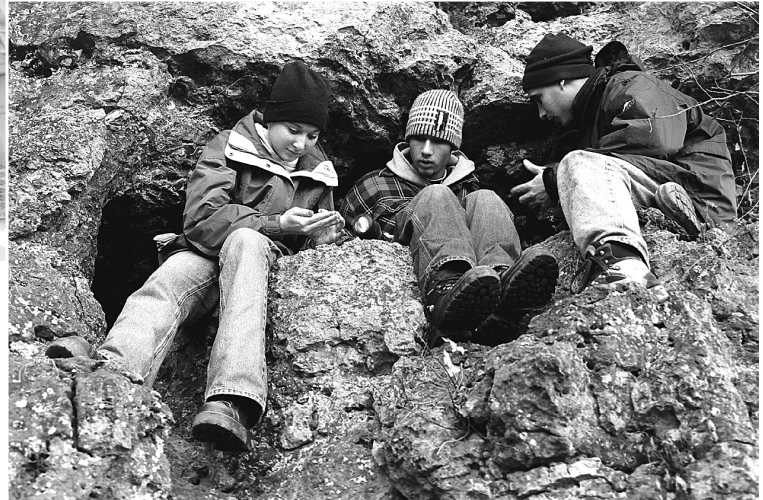
Outreach to the community

The museum's educational outreach-program continued to thrive this year. Museum staff presented slide lectures at local libraries and provided exhibits for area mineral shows. Staff members also participated in the Wisconsin Alumni Association-sponsored "On the Road Program."



Above: Joe Skulan (left) helps two Waunakee High School students search for fossils by sifting sediment gathered from the floor of a cave in southwestern Wisconsin.

Below: Richard Slaughter (right) and two Waunakee High School students look at fossils from a cave in southwestern Wisconsin.



Klaus Westphal set up a one-day dinosaur event at the Neville Public Museum in Green Bay. Richard Slaughter traveled to the Science Museum of Minnesota, in St. Paul, to talk with visiting school groups and University of Wisconsin alumni about fossils from the Midwest.

In October, the museum joined forces with the Westside Family Science Club to host an earth science night at Muir Elementary School in Madison. Attendees followed life-size dinosaur tracks around the gymnasium, stopping at stations along the way to hear presentations on groundwater, the Baraboo Hills, and other geological topics. Guest exhibitors included the Cave of the Mounds, Yahara Materials Quarry, the State of Wisconsin Department of Natural Resources, and the Wisconsin Geological and Natural History Survey. Museum employees, as well as geology faculty and graduate students, staffed our four exhibits. The journal *Geotimes* covered this successful event. The museum also presented hands-on geology workshops at many

events around the state including the “Big Dig” at the Fox Ridge gravel pit in Baraboo. This fundraiser for the Boys and Girls Club was sponsored by D.L. Gasser and Milestone Materials. Other noteworthy outreach activities included Richard Slaughter’s day-long caving adventure with 13 troops of Middleton girl scouts. The 100 girls learned about the origin and the paleontology of Wisconsin’s limestone caves. Richard also participated in the “Adult Role Models in Science Program,” a Madison-based initiative to enhance science education at high-needs elementary schools.

In the fall, the museum staff launched a new outreach program. Joseph Skulan and Richard Slaughter began working with high school students and their teachers to find, excavate, and study fossils—some dating back to the Ice Age—from caves and fissures in Southwest Wisconsin. To date, participants have collected thousands of tiny bones and teeth. *The Wisconsin State Journal*, and University’s *Wisconsin Week* ran stories about this innovative program.

The October Exhibit

The Special October Exhibit for 2001 featured the Byron Buckeridge Collection of Lake Superior Clay Concretions. These mineral nodules ranged from perfect spheres to amazingly ornate sculptures of natural beauty. The most popular exhibit brought scores of visitors to the museum, and generated extensive news coverage.

Hosting the Madison Gem and Mineral Club

The museum staff has always enjoyed collaborating with amateur geologists and hobby enthusiasts. Beginning this past fall, the museum became the host for the monthly meetings of the Madison Gem and Mineral Club. The club arranges lectures on a wide variety of geology-related topics and invited Chris Ott and Lisa Buckley to give a slide presentation on their Montana dinosaur expeditions and research.

The Open House

The Open House attracted many families with young children. The program included slide presentations on earthquakes (Steve Bower, Waunakee High School), and on Wisconsin and the Great Ice Age (Dr. David M. Mickelson, UW Department of Geology and Geophysics). UW geology students

Christopher Ott and Lisa Buckley presented the latest results of their dinosaur research. Jim Lattis (UW Space Lab) made paper sun dials with the children; and Elizabeth Leslie, Matt Kuchta, and other graduate students identified fossil and mineral specimens that the visitors had brought to the Open House. Another highlight was the traditional free rock pile for kids, with plenty of free samples for every child. The staff wishes to thank Azotic Coating Technology, Rochester, Minnesota; Carnival Company, Needham, Massachusetts; and Burnie's Rock Shop, Madison; for generously donating colorful mineral and rock specimens for this popular event.



The free rock pile for kids, one of the highlights of the museum's Open House.

Left: Klaus Westphal getting ready to scatter the rocks.

Below: children



Expeditions

Our three-week expedition to the Cretaceous Hell Creek Formation of eastern Montana, led by Chris Ott and Lisa Buckley, was one of the most successful field seasons we have ever experienced. Despite stormy weather, the 12 participants retrieved dinosaur bones, and the partial remains of fishes, reptiles, mammals, and possibly even a bird claw. The prospectors also found more than a dozen sites containing bones of the three-horned dinosaur *Triceratops*. Ian Sweeney is preparing the bones of the sheep-sized mammal *Oreodon* for display. The bones were recovered from the Oligocene deposits of South Dakota in the late 1970's. Chris Ott has spent much time cataloguing the museum's entire Collection of fossil vertebrates, numbering over 4,000 specimens.

Research and conferences

The work of many summer expeditions to the Cretaceous formations in Kansas and Montana has resulted in the presentation of several scholarly posters. Topics include the description of the first protoceratopsian dinosaur remains from the Hell Creek Formation (Master's thesis, Chris Ott). Lisa Buckley is researching small theropod dinosaurs, and has discovered the third specimen of a mononykine dinosaur from North America. Lisa and Chris presented posters on these topics at the Society of Vertebrate Paleontology conference in Bozeman, Montana. Lisa and Chris also gave slide presentations on their research at the Burpee Museum's "Paleofest" in Rockford, Illinois. Adam Behlke, Kurt Spearing, and Chris Ott are studying a new species of mosasaur. Julie Hill is beginning a senior thesis on the genus *Oreodon*, and Lisa Buckley is researching small vertebrate remains from the Hell Creek Formation. Chris Ott is working on a description of our *Torosaurus* specimen. It is the second-most complete



The museum's Montana field crew retrieving the skeleton of a fossil gar fish.

skeleton of this genus ever recovered. All of this research, based on the museum's extensive vertebrate collections, has been initiated independently by the students. We expect to produce several publications during the course of the next two years.

The teacher training program

In June, museum staff under the guidance of Joe Skulan conducted the fourth and final session of "Paleontological Experiences for Teachers," a Wisconsin K-12 science teacher training program. After three days of introduction and hands-on instruction, 14 teachers and five support staff traveled to the chalk beds of Logan County, Kansas. For five days, they excavated the remains of mosasaurs, pterosaurs, and fishes, measured detailed stratigraphic sections, and scoured chalk exposures for clues about the paleoecology of the great sea that once covered the middle of North America.

From Kansas, the group traveled to Colorado in search of dinosaur bones and trackways. Here the team also took samples of living microbial communities that inhabit wet and shaded canyon faces. Frozen samples have been sent to the NASA Jet Propulsion Laboratory where the species composition will be determined through DNA analysis. The final week was spent back in Madison where teachers prepared some of the fossils they collected, and developed lab activities and lessons for use in their classroom. Results of "Paleontological Experiences" have been presented at numerous regional and national science teacher conventions. We intend to remain in contact with all of the participating teachers, as we see teacher training as a permanent part of the museum's mission.



The Friends of the Geology Museum

The museum's progress would not have been possible without substantial assistance from the *Friends of the Geology Museum, Inc.* In 2001, this non-profit organization donated \$10,000, and also provided the funds for the purchase of a large sandblaster to help us speed up the preparation of dinosaur bones and other fossil specimens. The *Friends* also facilitated the acquisition of a fossil rabbit skull from South Dakota, and a replica of the skull of the carnivorous dinosaur *Deinonychus*. *Friends'* funds also made it possible for Chris Ott and Lisa Buckley to attend the Society of Vertebrate Paleontology meeting in Bozeman, Montana.

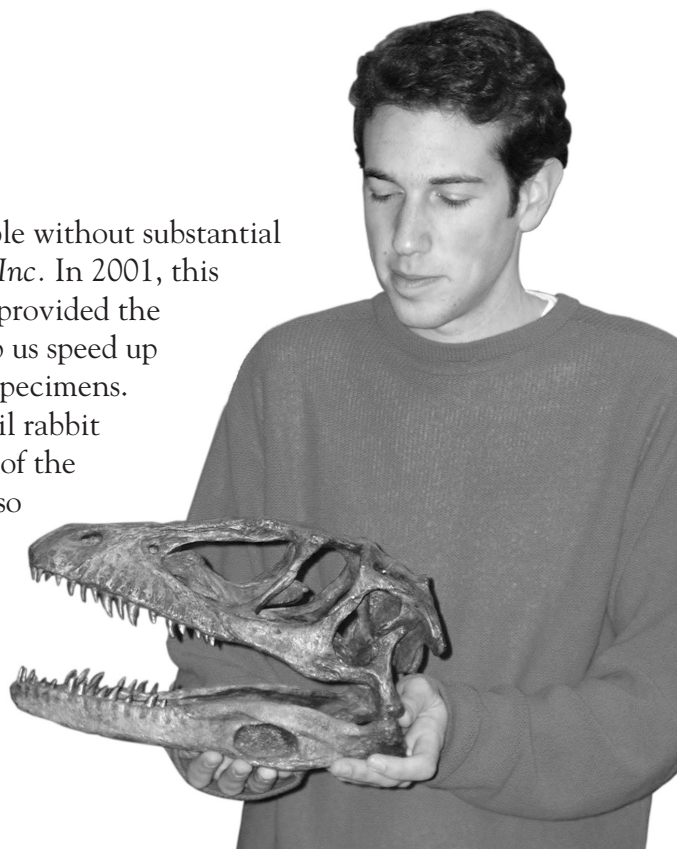
Museum volunteer David Suls holds a skull of the theropod dinosaur Deinonychus. This replica was donated by the Friends of the Geology Museum

The museum and the web

The museum's website organized by our webmaster Matt Kuchta, continues to get more than 1,000 hits each month. With the addition of an online map, the site has helped guide many visitors from the virtual to the real museum. The year concluded with the College of Letters and Science generously providing funds to develop and teach a web-based distance learning course on dinosaurs and other Mesozoic vertebrates. The "Age of the Dinosaurs" will be offered in the fall of 2002. The course is expected to attract hundreds of students.

Collections management

The museum's collections of minerals and rocks are undergoing a major reorganization. The museum's project assistant, Elizabeth Leslie, is entering specimen information into our data bank in an effort to eventually make the information available through the internet.





Donors

In 2001, the museum received several donations of fossils and minerals. They included a specimen of the ammonite *Lytoceras* from France, donated by Dr. Maury D. Bramson, St. Paul, Minnesota. Laura L. Linden, Madison, most generously provided the funds for the purchase of a spectacular, large, smoky quartz specimen from Romania. TQ Diamonds, Madison, donated a small display case designed to highlight one or two specimens at a time.

*Project assistant Elizabeth Leslie showing off a new acquisition. The ammonite *Lytoceras* was donated to the museum by Maury Bramson.*

The Geology Museum thanks its staff and its many dedicated volunteers

Andy Arntz, volunteer, fossil preparator, expedition member
Adam Behlke, volunteer, fossil preparator, expedition member
Steven Bower, Teacher Training Program
Clint Boyd, volunteer, fossil preparator, expedition member
Lisa Buckley, student assistant, fossil preparator, expedition member
Leslie Dundore, tour guide, volunteer fossil preparator, expedition member
Adam Eisenach, tour guide
Maja Frost, tour guide
Lou Goodman, volunteer, fossil preparator, Saturday museum host, expedition member
Marilyn F. Hanson, Teacher Training Program
Julie Hill, tour guide
Keith Hennings, tour guide
Reuben Johnson, tour guide
Blake Kellogg, volunteer, newsletter editor
Lynnette Kleinsasser, tour guide
Matt Kuchta, student assistant, webmaster
Carrie Larson, tour guide
Elizabeth Leslie, project assistant

Ed Mathein*, volunteer, fossil preparator
Shasta McGee, volunteer, fossil preparator, expedition member
Christopher Ott, student assistant, preparation lab supervisor, expedition leader
Christine Pagelsdorf, tour guide, volunteer fossil preparator, expedition member
D. Lyle Setwyn*, tour guide
Joseph L. Skulan, instructor in the Teacher Training Program
Kurt Spearing, volunteer, fossil preparator, expedition member
David Suls, volunteer, fossil preparator
Ian Sweeney, volunteer, fossil preparator, expedition member
Stephen Vihel*, tour guide
Susan Werther, volunteer, newsletter editor

*individuals no longer with the Museum

...and the Friends of the Geology Museum

John R. Rettig, President
Richard Emerson, Vice President
John Evans, Treasurer

Thank you!

Dr. Klaus W. Westphal, Director

Dr. Richard Slaughter, Museum Assistant Director