

NATURAL SCIENCE COLLECTIONS ALLIANCE
2008 ANNUAL MEETING

&

THE 23RD ANNUAL MEETING OF
THE SOCIETY FOR THE PRESERVATION OF
NATURAL HISTORY COLLECTIONS

Skirvin Hilton Hotel • Oklahoma City, Oklahoma • May 13–17, 2008



PROGRAM & ABSTRACTS

hosted by:

the SAM Noble
OKLAHOMA MUSEUM
of NATURAL HISTORY





NATURAL SCIENCE COLLECTIONS ALLIANCE (NSC ALLIANCE)

The Natural Science Collections Alliance is a Washington, D.C.-based nonprofit association that supports natural science collections, their human resources, the institutions that house them, and their research activities for the benefit of science and society. NSC Alliance members are part of an international community of museums, botanical gardens, herbariums, universities and other institutions that house natural science collections and utilize them in research, exhibitions, academic and informal science education, and outreach activities. The NSC Alliance provides a network for institutions, scientists and other professionals in North America to share news, information and common concerns—and help shape the future of the natural science community.

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



THE SOCIETY FOR THE PRESERVATION OF NATURAL HISTORY COLLECTIONS (SPNHC)

The Society for the Preservation of Natural History Collections is a multidisciplinary organization composed of individuals who are interested in the development and preservation of natural history collections. The Society was formed in 1985 to foster the exchange of information about natural history collections and to promote research on the requirements of their preservation, storage, and use. SPNHC has made a sustained, strategic effort to import the level of care provided to these collections and actively encourages participation of individuals involved in all aspects of natural history collections.

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



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NSCA & SPNHC
COLLECTION STEWARDSHIP:
CHALLENGES IN A CHANGING WORLD

THE UNIVERSITY OF OKLAHOMA A NATIONAL FLAGSHIP OF EXCELLENCE

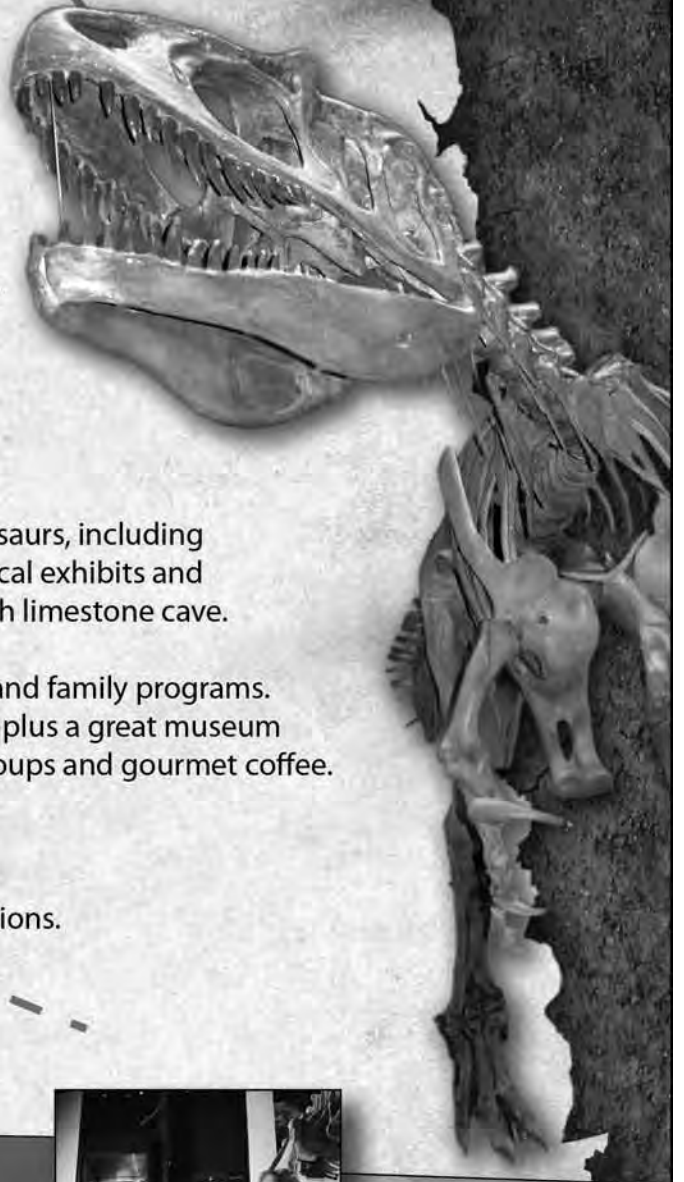


- OU is home to one of the two largest natural history museums in the world associated with a university. The Sam Noble Oklahoma Museum of Natural History has more than 7 million artifacts and contains 195,000 square feet on 40 acres of land. The museum exhibits include the largest *Apatosaurus* on display in the world and the oldest work of art ever found in North America — a lightning bolt painted on an extinct bison skull.
- The Sam Noble Oklahoma Museum of Natural History was designated as the state's official natural history museum by the state legislature in 1987.
- OU's first paleontologist unearthed many of the artifacts on display in the Sam Noble Oklahoma Museum of Natural History, including *Apatosaurus*, *Sauropaganax*, the Columbian Mammoth and *Pentaceratops*.
- The Sam Noble Oklahoma Museum of Natural History is a state-of-the-art facility that enables curators to pursue their mission of research and discovery.
- The Princeton Review ranks OU among the best in the nation in terms of academic excellence and cost for students.
- OU is among the top universities in the nation in Goldwater Scholarship winners, with 12 in the past four years, and OU student Andrea DenHoed was just named OU's 27th Rhodes Scholar.
- OU is one of the few public universities in the nation to cap the class size of first-year English composition courses at no more than 19 students.
- The University has created an Honors College with one of the largest honors programs among public universities in the United States. More than 2,600 students participate in small classes of 19 or less.
- OU's Campaign for Scholarships has passed the \$125 million mark, allowing the university to double new scholarships for students in just four years.
- OU ranks number one per capita among all public universities in the number of National Merit Scholars enrolled.

The University of Oklahoma is an equal opportunity institution.

OU - THE IMPACT OF EXCELLENCE

YOUR QUEST BEGINS HERE



A family adventure featuring awesome dinosaurs, including the world's largest *Apatosaurus*; archaeological exhibits and realistic nature dioramas with a walk-through limestone cave.

The museum also offers special exhibitions and family programs. There's a hands-on Discovery Room for kids, plus a great museum store and café featuring fresh sandwiches, soups and gourmet coffee.

A family of four can visit for under \$20.

Go online for schedule of events and exhibitions.
www.snomnh.ou.edu

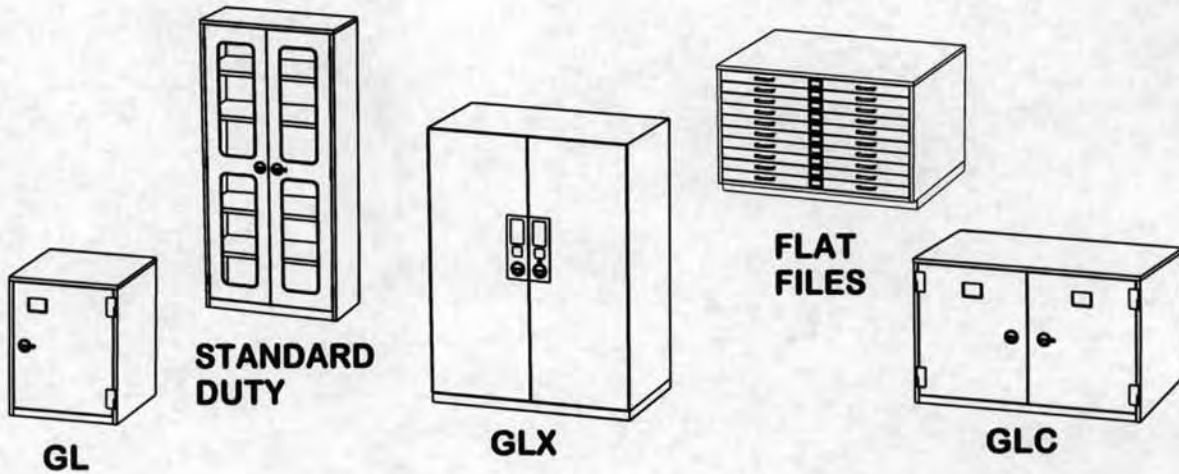


**Sam Noble Oklahoma
Museum of Natural History**
The University of Oklahoma
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SN MNH

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Managing your collections electronically starts with ***Data Integrity***. Quality Data then is the basis of ***Information***. Quality Data plus Information delivers ***Knowledge!***

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Brad Lickman
KE Software Inc
Brad.Lickman@kesoftware.com
T: +1 416 238 5032



Precious little
survived the
**Impact
of 2058.**



But once a great city thrived here.

And a museum. Shattered columns, fractured statues and fragmentary artifacts tell us so. Not much to go on.

But what's this?

"We've discovered another!" we cheer. Eagerly we unseal it, confident marvelous treasures await. Securely nestled inside.

Butterflies. Brilliantly beautiful. Fearfully fragile. And wholly intact. Imagine!

We know little of the culture that produced this safe-guarding wonder. But we know the maker's name.

Delta Designs.

If only everyone had used these ...



Exceptional Museum Storage Equipment

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WELCOME

LOCAL COMMITTEE WELCOME

On behalf of the Sam Noble Oklahoma Museum of Natural History, the local organizing committee would like to welcome you to the 3rd joint annual meeting of the Natural Science Collections Alliance and the Society for the Preservation of Natural History Collections. This meeting was a vision sought out by the presidents of both societies and is a reflection of the common goals we share.

Our theme this year, *Collection Stewardship: Challenges in a Changing World*, focuses on subjects and topics dealing with the challenges faced by natural history collections, museums, and the museum community in fulfilling their mission. We have selected a program that covers issues relevant to our theme and we hope you will find them informative. Five workshops encompass a broad scope of topics related to best practices.

We are excited to present over 35 businesses and organizations supporting this year's meeting. We encourage all of you to visit the trade show during the meeting and let all of the sponsors and vendors know we appreciate their support!

Local tours offer the opportunity to see many of Oklahoma's treasures at the Sam Noble Oklahoma Museum of Natural History, the Robert Bebb Herbarium, the University of Oklahoma's Western History Collections, and the Fred Jones Jr. Museum of Art. Field trips to the Wichita Mountains Wildlife Refuge and the Arbuckle Mountains will introduce you to some of the beautiful and scenic areas of the state.

The historic Skirvin Hilton Hotel provides an outstanding venue for the meeting. Located in Bricktown in downtown Oklahoma City, the hotel is just a short walk or cab ride away from other museums including the OKC National Memorial and Museum, the Oklahoma History Center, the Myriad Botanical Gardens, and the Oklahoma City Museum of Art, as well as a wide variety of restaurants and other entertainment venues. Take advantage of the many opportunities to appreciate Oklahoma's unique history and spirit!

We hope you will enjoy the meeting and will be inspired to meet the many challenges facing the museum community. We welcome you to Oklahoma!

Janet K. Braun
Marcia (Marcy) A. Revelez
Michael A. Mares
Elizabeth (Liz) A. Leith
Terri M. Jordan
Joan Harrel



The University of Oklahoma

OFFICE OF THE PRESIDENT

May 10, 2008

Dear Museum and Collections Professionals:

Welcome to the beautiful State of Oklahoma and to the University of Oklahoma. I know your visit will be an exciting journey of professional development at your conference and personal enjoyment of the museums and culture of Oklahoma. *We are very proud of our museums and collections.*

The story of any great university is the story of its collections, for these were developed for teaching, research, and public education. The University of Oklahoma's collections include scientific materials developed in academic departments and precious objects and artwork donated by alumni and friends of the university. In our incomparable History of Science Collection, one can study Galileo's or Copernicus's personally edited copies of their own works that changed the world, and the unmatched Western History Collection includes a magnificent archive of Native American manuscripts and more than a quarter million photo negatives and prints of early western America.

The Fred Jones Jr. Museum of Art has received some of the most valuable donations of art ever made to a public university. When you tour its galleries you will meet Cezanne, Degas, van Gogh, Monet, Gauguin, Renoir, Toulouse-Lautrec, Calder, Henning, and many others. Our Native American art and Southwestern art collections are extensive, diverse and valuable. Indeed, the University of Oklahoma was a leader in the development of Native American artists, when the first art museum director, Oscar Jacobson, trained the Kiowa Five, a tradition continued to this day.

Oklahoma is a young state and its natural history collections were developed to study the natural resources of this new land. These collections have grown enormously and it is a tribute to the faculty curators and directors of long ago that these objects were protected so that they could enrich our lives today. The Sam Noble Oklahoma Museum of Natural History that is hosting your conference is especially dear to my heart. This is one of the finest university natural history museums in the world and its collections of more than 6 million specimens and objects are now preserved, exhibited and studied in a museum building that has few peers. Some of the greatest dinosaurs ever seen were found in Oklahoma and are now finally able to be exhibited 75 years after being discovered. The extraordinary collections of birds, mammals, reptiles, amphibians, fish, invertebrates and fossil organisms are the largest in the state and vital scientific resources for researchers worldwide.

The museum has a very special place in the heart of all Oklahomans, who rallied together to make a long-ago director's dream of a new museum a reality. I cannot think of a university that has done more to protect, preserve and interpret its treasures than the University of Oklahoma. We are committed to excellence and I think you will agree that our great collections and outstanding facilities speak to this fact.

I am so pleased that Dr. Michael Mares, acting in his capacity as President of the Natural Science Collections Alliance and former director of the Sam Noble Museum, and Dr. Ellen Censky, current museum director, invited your two important organizations to Oklahoma to exchange ideas. Your topic, *Collection Stewardship—Challenges in a Changing World*, is very timely. The University of Oklahoma has experienced great challenges over its first 100 years and we are proud of how we have worked together with alumni, friends, faculty, students, and the citizens of Oklahoma to meet those challenges in ways that you will find instructive and uplifting.

I know your time here will be well spent and may you learn from one another to better manage the natural heritage that is represented in the museums and collections of our nation.

Sincerely,

David L. Boren
President

WELCOME

THE SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY WELCOME

As the 21st Century dawned, natural history collections were facing major challenges that many had never faced before. Across the country, administrators, saddled with rising costs of caring for their collections, were making decisions that would have repercussions that would have lasting impacts for the future of science. Many of those decisions had negative impacts such as the closing of collection doors and the dispersing of collections. Others, one in particular, would have positive implications. In 2000, the Sam Noble Oklahoma Museum of Natural History opened the doors to its state-of-the-art facility – a facility designed to provide the best possible care of natural history collections.

Because of this, we feel we are uniquely positioned to host a meeting that focuses on collection stewardship and the challenges that are faced in this changing world. Having overcome significant collection care issues, we stand as an example for the community. Rising to the challenge is something that collection staff from across the country have done with ingenuity and dedication. This meeting provides a venue to showcase those achievements and discuss the issues still left to overcome.

We are pleased to have you join us in Oklahoma and we hope your experience here is both enjoyable and enlightening.

Ellen J. Censky

DIRECTOR, SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY

SPNHC WELCOME

On behalf of the Society for the Preservation of Natural History Collections it gives me great pleasure to welcome you to the 23rd annual meeting of the Society. I would also like to welcome our friends and colleagues from the Natural Science Collections Alliance, the University of Oklahoma and the Sam Noble Oklahoma Museum of Natural History. The theme of this meeting, *Collections Stewardship: Challenges in a Changing World*, is timely and very much appropriate as SPNHC and NSCA meet for a third time. There are many challenges facing museums in the 21st century and this meeting will give us an opportunity to examine a variety of the issues that will challenge natural history museums for years to come.

Our host, the Sam Noble Oklahoma Museum of Natural History, has developed an interesting schedule with several key presentations, panel discussions and activities. The SNOMNH has enjoyed a renaissance and brought distinction to the University of Oklahoma with their new facility and a dynamic collections staff. It is an honor to be having our annual meeting here in Oklahoma.

And it wouldn't be a SPNHC meeting without an active social schedule so I hope you brought your dancing shoes!

Tim White

PRESIDENT, SOCIETY FOR THE PRESERVATION OF NATURAL HISTORY COLLECTIONS

WELCOME

NSC ALLIANCE WELCOME

It is a pleasure to welcome you to Oklahoma for this joint meeting of these two important societies that are dedicated to bettering the status of natural science collections and natural science museums throughout the world. This is our third joint meeting and we have seen great progress in the activities and influence of our societies on museums and collections—from technical improvements in the handling and protection of objects to lobbying and helping influence policies related to collections at the national level.

This particular gathering is especially close to my heart as I have been a curator at Oklahoma's natural history museum for 27 years. During 20 of those years it was my privilege to direct the natural history museum and to lead the effort to build a new state-of-the-art natural history building for the University of Oklahoma and for the State of Oklahoma. It was a difficult undertaking that consumed 17 years, but with the help of the people of Oklahoma, OU Alumni, President David Boren, as well as many other donors and supporters, we were able to succeed in building a remarkable facility. I think you will agree that the Sam Noble Oklahoma Museum of Natural History is an ideal building that meets the highest standards of the museum mission for the challenges of this century.

When the museum was completed, the very fact that such an outstanding building could be developed in a small college town stimulated other museum development in the region. During this meeting you will have the opportunity to visit the Fred Jones Jr. Museum of Art on the OU campus, as well as the Oklahoma Museum of History in Oklahoma City. The development of these museums, as well as others, was stimulated and informed by the new natural history museum in Norman.

Oklahoma is a leader in the field of museum collection preservation, interpretation, research and service. All of us here in Oklahoma have a great deal to learn from all of you during this meeting. Please do not be shy about expressing your opinions, pro or con, about our buildings or operations. We look forward to an exciting intellectual exchange with each of you. And while you are here, please enjoy our beautiful buildings, outstanding collections, and highly trained staff members. We are proud of our museums and are honored to be hosting this joint meeting. By working together, we can help our discipline move forward and see real change occur in collection preservation and museum operations throughout the nation.

Michael A. Mares

PRESIDENT, NATURAL SCIENCE COLLECTIONS ALLIANCE

ACKNOWLEDGEMENTS

The Local Organizing Committee (Janet Braun, Marcy Revelez, Liz Leith, Terri Jordan, and Joan Harrel) would like to thank the following individuals, departments, and organizations for helping make the NSCA/SPNHC 2008 meeting a success.

FIRST AND FOREMOST...

Michael Mares, NSC Alliance President and Tim White, SPNHC President

... for your support, words of encouragement, and guidance. It has been a pleasure working with you.

Lori Strong, Sue Burk, and others at Burk & Associates

... for your patience, guidance, and assistance in the planning and organization of the meeting.

Amanda Burks, Ashley Angleton, Shaunda Hart, and others at the Skirvin Hilton Hotel

...for everything that you did to help make this meeting a beautiful experience. It has been an absolute pleasure working with you.

TO ALL OF OUR SPONSORS, VENDORS, AND ADVERTISERS...

... for your continued support, without it this meeting would not be possible.

TO THE SNOMNH ADMINISTRATION AND STAFF...

Ellen Censky

...for your support and encouragement.

Andrew Campbell, Patrick Fisher, and Terri Jordan

...for your assistance in organizing the conference web site.

Cathryn Rowe

...for all of your creativity and input in developing the meeting logo, signs, and meeting program.

Julie Droke, Amanda Person, and Chris Wolfe

...for your valuable input in the early stages of planning.

David Dagg and Security Staff, Chris McKee and Custodial Staff

...for your assistance with preparations for the tours and banquet.

Division of Collections and Research:

Archaeology, Conservation, Dermestid Facility, Ethnology, Genomic Resources, Herpetology, Ichthyology, Invertebrate Paleontology, Isolation, Mammalogy, Native American Languages, Ornithology, Paleobotany and Micropaleontology and Minerals, and Vertebrate Paleontology

...for your eager participation in the museum tours.

Joe Baalke, Amy Bishop, Joe Grzybowski, Nick Plata (Wichita Mountains Wildlife Refuge), Gary Schnell, and Steve Westrop

...for leading the field trips and university tours.

Patrick Fisher, Paul King, and Houston Spittler

...for technical assistance and support.

SNOMNH Volunteers

...for helping out whenever and wherever it was needed, you are in our hearts.

Dejah Kennedy

...for helping make the banquet beautiful.

Kate Barr, Amy Bishop, Roger Burkhalter, Sara Cartwright, Margaret Landis, and Jeff Person

...for your assistance in organizing the tours, field trips, and conference tote bags.

TO THE FOLLOWING INDIVIDUALS AT THE UNIVERSITY OF OKLAHOMA...

President David Boren

...for your support and encouragement toward the success of this meeting and for your strong support of our museums and collections.

Gail Anderson and Susan Baley, Fred Jones Jr. Museum of Art, Wayne Elisens, Robert Bebb Herbarium, and John Lovett, Western History Collections

...for your organization and eager participation with the OU museums tours.

Annette Schwiebert and OU Information Technology

...for technical assistance and computer support.

TO THE WORKSHOP COORDINATORS AND PRESENTERS...

Helen Alten, Gretchen Anderson, Gordon Anson, Andrew Bentley, Carol Butler, Scott Jones, Yvonne Lever, Elizabeth Merritt, Frank Nerli, Rebecca Newberry, Terry Poland, John Simmons, and Steven Weintraub

...for your creativity, organization, and input in making these education and training opportunities a reality for the museum community.

TO THE DANGEROUS GOODS ROUNDTABLE ORGANIZERS AND PARTICIPANTS...

Andrew Bentley, James Boone, Carol Butler, Brad Cook, Linda Ford, Robert Gropp, Shane Kelley, Vivian Montgomery, Frank Nerli, Terry Poland, Mary Anne Rogers, Barry Szczesny, and Brendan Sullivan

...for your participation and valuable input in discussing an issue important to the museum community.

TO THE SPECIAL INTEREST GROUP (SIGs) MODERATORS...

Gretchen Anderson, Andrew Bentley, Carol Butler, Linda Ford, Terri Jordan, Liz Leith, Richard McCourt, Rebecca Newberry, Christopher Norris, Richard Rabeler, Jeff Stephenson, W. Carl Taylor, and Tim White

...for your participation as leaders in this year's topic discussions.

TO THE SESSION MODERATORS...

Wayne Elisens, Heath Garner, Lynda Loucks, James Macklin, Michael Mares, Alan Prather, John Simmons, Peter Tirrell, and Tim White

...for helping the oral presentations run smoothly.

PROGRAM AT-A-GLANCE

TUESDAY 13 MAY 2008

3:00PM–5:00PM

REGISTRATION

PRE-FUNCTION AREA

9:00AM–5:00PM

SPNHC COMMITTEE MEETINGS

SEE DETAILED PROGRAM

9:00AM–3:00PM

NSC ALLIANCE BOARD MEETING

FOUNDER'S ROOM

7:00PM–10:30PM

SPNHC FIRST COUNCIL MEETING

CRYSTAL ROOM

WEDNESDAY 14 MAY 2008

3:00PM–7:00PM

REGISTRATION

PRE-FUNCTION AREA

7:45AM–5:30PM

PRE-CONFERENCE FIELD TRIPS
AND MUSEUM TOURS

SEE DETAILED PROGRAM

Arbuckle Mountains Geology
and White Mound

Wichita Mountains Wildlife
Refuge

Sam Noble Oklahoma Museum
of Natural History

University of Oklahoma Museums

3:00PM–5:00PM

TRADE SHOW SET-UP

PRE-FUNCTION AREA

6:30PM–8:30PM

ICEBREAKER RECEPTION

VENETIAN ROOM, SKIRVIN HILTON HOTEL

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PROGRAM AT-A-GLANCE

THURSDAY 15 MAY 2008

7:30AM–5:00PM
REGISTRATION
PRE-FUNCTION AREA

SPEAKER READY ROOM
HENRY OVERHOLSER SUITE

7:30AM–8:30AM
CONTINENTAL BREAKFAST
CENTENNIAL BALLROOM 1–2

POSTER SET-UP
GRAND BALLROOM A–C

7:45AM–8:15AM
SPECIFY 6.0 DEMO
CENTENNIAL BALLROOM 3

8:00AM–5:00PM
TRADE SHOW
PRE-FUNCTION AREA

8:30AM–5:00PM
SPECIFY USABILITY
INTERVIEWS
PERLE MESTA SUITE

POSTER DISPLAYS
GRAND BALLROOM A–C

8:30AM–9:00AM
WELCOME AND
OPENING REMARKS
GRAND BALLROOM D–F

9:00AM–10:00AM
KEYNOTE SPEAKER
GRAND BALLROOM D–F

10:00AM–10:30AM
REFRESHMENT BREAK
CENTENNIAL BALLROOM 1–3

10:30AM–12:00PM
PLENARY SESSION
GRAND BALLROOM D–F

12:00PM–1:30PM
LUNCH
ON YOUR OWN

VENDOR'S LUNCHEON
VENETIAN ROOM

1:30PM–3:00PM
SPECIAL SESSION 1
GRAND BALLROOM D–E

2:30PM–3:30PM
POSTER DISCUSSIONS
GRAND BALLROOM A–C

3:00PM–3:30PM
REFRESHMENT BREAK
CENTENNIAL BALLROOM 1–3

3:30PM–5:00PM
CONCURRENT SPECIAL
SESSION 2
GRAND BALLROOM D–E

**CONCURRENT GENERAL
SESSION 2**
GRAND BALLROOM F

5:45PM
BUSES BEGIN LEAVING HOTEL
SKIRVIN BALLROOM ENTRANCE

6:30PM–7:30PM
SOCIAL
SAM NOBLE OKLAHOMA MUSEUM OF
NATURAL HISTORY

7:30PM–12:00AM
BANQUET, ENTERTAINMENT,
& DANCING
SAM NOBLE OKLAHOMA MUSEUM OF
NATURAL HISTORY

9:30PM
BUSES WILL BEGIN
DEPARTING FOR HOTEL
(every 30 minutes)
SAM NOBLE OKLAHOMA MUSEUM OF
NATURAL HISTORY

12:00AM
LAST BUS DEPARTS FOR HOTEL
SAM NOBLE OKLAHOMA MUSEUM OF
NATURAL HISTORY

PROGRAM AT-A-GLANCE

FRIDAY 16 MAY 2008

7:30AM–5:00PM

REGISTRATION

PRE-FUNCTION AREA

SPEAKER READY ROOM

HENRY OVERHOLSER SUITE

7:30AM–8:30AM

CONTINENTAL BREAKFAST

CENTENNIAL BALLROOM 1–3

8:00AM–3:30PM

TRADE SHOW

PRE-FUNCTION AREA

8:30AM–5:00PM

**SPECIFY USABILITY
INTERVIEWS**

PERLE MESTA SUITE

POSTER DISPLAYS

GRAND BALLROOM A–C

8:30AM–10:00AM

**CONCURRENT SPECIAL
SESSION 3**

GRAND BALLROOM D–E

**CONCURRENT GENERAL
SESSION 3**

GRAND BALLROOM F

10:00AM–10:30AM

REFRESHMENT BREAK

CENTENNIAL BALLROOM 1–3

10:30AM–11:30AM

**SPNHC ANNUAL BUSINESS
MEETING**

GRAND BALLROOM D–E

**NSC ALLIANCE ANNUAL
BUSINESS MEETING**

GRAND BALLROOM F

11:30AM–1:00PM

LUNCH

ON YOUR OWN

**SPECIAL INTEREST GROUPS
(SIGs) LUNCHEON**

CENTENNIAL BALLROOM 1–3

1:00PM–5:00PM

**ROUNDTABLE—Shipping
Natural History Specimens in
Dangerous Goods**

W.B. SKIRVIN SUITE

1:00PM–3:00PM

**CONCURRENT SPECIAL
SESSION 4**

GRAND BALLROOM D–E

**CONCURRENT GENERAL
SESSION 4**

GRAND BALLROOM F

3:00PM–3:30PM

REFRESHMENT BREAK

CENTENNIAL BALLROOM 1–3

3:30PM–5:00PM

**CONCURRENT SPECIAL
SESSION 5**

GRAND BALLROOM D–E

**CONCURRENT GENERAL
SESSION 5**

GRAND BALLROOM F

TRADE SHOW MOVE-OUT

PRE-FUNCTION AREA

7:00PM–10:30PM

**SPNHC SECOND COUNCIL
MEETING**

FOUNDER'S ROOM

PROGRAM AT-A-GLANCE

SATURDAY 17 MAY 2008

7:30AM–10:00AM

REGISTRATION

PRE-FUNCTION AREA

10:00AM–10:30AM

REFRESHMENT BREAK

CRYSTAL ROOM

12:00PM–1:00PM

LUNCH (PROVIDED)

CRYSTAL ROOM

3:00PM–3:30PM

REFRESHMENT BREAK

TO BE ANNOUNCED

8:00AM–5:00PM

**WORKSHOP 1—Best Practices
in Collections Stewardship:**

**Writing a Collections
Management Policy**

VENETIAN ROOM

**WORKSHOP 2—Hazardous
Materials Specimen Shipping**

FOUNDER'S ROOM

**WORKSHOP 3—Lighting
in Museums: Challenges
of Balancing Collection
Stewardship and Technology**

HHONORS LOUNGE

**WORKSHOP 4—Museum
Cleaning Basics in a Changing
World**

CENTENNIAL BALLROOM 1–3

**WORKSHOP 5—Making Sense
of Making Mounts**

GRAND BALLROOM A–C

9:00AM–12:00PM

**MEETING OF HERBARIUM
CURATORS AND THE TEXAS
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DETAILED PROGRAM

TUESDAY 13 MAY 2008

3:00PM–5:00PM
REGISTRATION

PRE-FUNCTION AREA

9:00AM–3:00PM
NSC ALLIANCE BOARD
MEETING

FOUNDER'S ROOM

9:00AM–11:30AM
SPNHC COMMITTEE
MEETINGS

In addition to the suites listed, the W.B. Skirvin Suite and Billiard's Room also are available

9:00AM – 10:00AM
BEST PRACTICES COMMITTEE

W.B. SKIRVIN SUITE

10:00AM – 11:30AM
MEMBERSHIP COMMITTEE

HENRY OVERHOLSER SUITE

DOCUMENTATION
COMMITTEE

PERLE MESTA SUITE

11:30AM–1:00PM
LUNCH

ON YOUR OWN

1:00PM–5:00PM
SPNHC COMMITTEE
MEETINGS, CONT.

1:00PM – 2:00PM
CONFERENCE COMMITTEE

HENRY OVERHOLSER SUITE

PUBLICATION COMMITTEE

PERLE MESTA SUITE

2:00PM–3:00PM
CONSERVATION COMMITTEE

HENRY OVERHOLSER SUITE

2:00PM–3:30PM
EDUCATION & TRAINING
COMMITTEE

PERLE MESTA SUITE

3:00PM–4:00PM
WEB COMMITTEE

HENRY OVERHOLSER SUITE

3:30PM–5:00PM
FINANCE COMMITTEE

PERLE MESTA SUITE

4:00PM–5:00PM
LONG RANGE PLANNING
COMMITTEE

HENRY OVERHOLSER SUITE

7:00PM–10:30PM
SPNHC FIRST COUNCIL
MEETING

CRYSTAL ROOM

WEDNESDAY 14 MAY 2008

3:00PM–7:00PM
REGISTRATION

PRE-FUNCTION AREA

7:45AM–5:30PM
PRE-CONFERENCE FIELD TRIPS
AND MUSEUM TOURS

All buses and vans leave promptly from the hotel so please arrive at the designated meeting place at least 20 minutes prior to scheduled departure.

7:45AM–5:30PM
MUSEUM TOURS—Sam Noble
Oklahoma Museum of Natural
History

DEPARTS: SKIRVIN BALLROOM ENTRANCE

8:30AM–11:30AM
LIFE SCIENCES/SERVICES TOUR
EARTH/SOCIAL SCIENCES TOUR
FILM/Q&A/PARTIAL TOUR

11:30AM–1:15PM

LUNCH

ON YOUR OWN - CAMPUS CORNER

1:30PM–4:30PM
LIFE SCIENCES/SERVICES TOUR
EARTH/SOCIAL SCIENCES TOUR

The Sam Noble Oklahoma Museum of Natural History is a state-of-the-art 195,000 square foot facility with 50,000 square feet devoted to exhibit space. The museum, which opened its doors in 2000 and brought together collections that had once been scattered throughout the University of Oklahoma campus in basements, attics, barns, and various departmental buildings, now houses 13 different collections and more than 7 million objects under one roof. On this behind-the-scenes

DETAILED PROGRAM

tour of collections, labs, and service areas you will see the collection areas and learn about current research of curators, collection managers, and graduate students. Beverages and snacks will be provided during a scheduled break.

EARTH/SOCIAL SCIENCES TOUR

Tour the collection areas related to Invertebrate Paleontology, Vertebrate Paleontology, Paleobotany & Micropaleontology, Ethnology, Archaeology, and Native American Languages.

LIFE SCIENCES/SERVICES TOUR

Tour the collection areas related to Ornithology, Mammalogy, Herpetology, Ichthyology, and Genomic Resources. In addition, see our support network including our Isolation/CO₂ Bubble, Osteology Preparation Facility, and Conservation Lab.

FILM, Q&A, AND PARTIAL TOUR

A viewing of *Behind the Rain* will be offered in our auditorium. This film takes a look at the design and construction process of our building, followed by a short question and answer session with the former director and NSC Alliance President, Dr. Michael Mares. This replaces the first half of one of the tours. After the film, there will be a tour of public and collection areas.

8:00AM–5:30PM

FIELD TRIP—Wichita Mountains Wildlife Refuge

DEPARTS: SKIRVIN BALLROOM ENTRANCE
TRIP LEADERS: DR. GARY D. SCHNELL AND JOE GRZYBOWSKI

Established in 1901, the Wichita Mountains Wildlife Refuge was established to protect wildlife species then in grave danger of extinction

and to restore those species that had been eliminated from the area. The 59,020-acre Refuge hosts a rare piece of the past—a remnant mixed grass prairie, an island where the natural grasslands escaped destruction because the rocks underfoot defeated the plow. The Refuge provides habitat for large native grazing animals such as American bison, Rocky Mountain elk, and white-tailed deer. Texas longhorn cattle also share the Refuge rangelands as a cultural and historical legacy species. More than 50 mammal, 240 bird, 64 reptile and amphibian, 36 fish, and 806 plant species thrive on this important refuge. The wildflowers should be beautiful this time of year! This trip includes lunch, snacks, and beverages. For the trip, we recommend that you bring sunscreen, sunglasses, hat, hiking boots or other sturdy footwear, camera, and binoculars.

8:30AM–5:00PM

FIELD TRIP—Arbuckle Mountains Geology and White Mound

DEPARTS: SKIRVIN BALLROOM ENTRANCE
TRIP LEADERS: DR. STEVE WESTROP AND JOE BAAIKE

The Arbuckle Mountains in southern Oklahoma represent a unique vista into the early geologic history of Oklahoma and the southern Mid-Continent. The folded and faulted rocks exposed in road cuts range in age from 500,000,000 to 300,000,000 years ago. You will also be able to collect fossils from the White Mound locality, a richly fossiliferous Devonian outcrop that has been a popular collecting spot for over 100 years. These fossils are typically loose finds and include trilobites, brachiopods, corals,

snails, clams, and bryozoans. This trip includes lunch, snacks, and beverages. For the trip, we recommend that you bring sunscreen, sunglasses, hat, hiking boots or other sturdy footwear, camera, and binoculars. No public restrooms are available at this site.

1:00PM–5:30PM

MUSEUM TOURS—University of Oklahoma Museums

DEPARTS: SKIRVIN BALLROOM ENTRANCE

TOUR LEADER: AMY BISHOP

Join us in a tour of several museums and collections on the campus of the University of Oklahoma.

FRED JONES JR. MUSEUM OF ART HOST:

GAIL ANDERSON/SUSAN BAILEY

Don't miss the opportunity to take a behind-the-scenes tour of the Fred Jones Jr. Museum of Art. Tour participants will have an opportunity to see collection areas, as well as the premiere exhibition of the Adkins Collection, which is among the most important private collections in the nation of works by the Taos Society of Artists as well as Native American works of art. It includes more than 3,300 objects, including 1,100 two-dimensional works, 370 pieces of pottery, over 1,600 examples of jewelry and silverwork, and nearly 250 pieces of other Native arts. This extensive collection recently was acquired by the Fred Jones Jr. Museum of Art and the Philbrook Museum of Art in Tulsa, Oklahoma.

WESTERN HISTORY COLLECTIONS HOST:

JOHN LOVETT

The Western History Collections contain materials relating to the development of the Trans-Mississippi West and Native American cultures. The Library Division serves as the main reference center for both

DETAILED PROGRAM

published works and manuscript collections. Twelve collections are devoted to the history, ethnography and prehistory of Native Americans and the history of the Trans-Mississippi West. The Manuscripts Division holds more than 2,000 collections including the papers of early Cherokee Indian leaders; records of the Cherokee and Choctaw Nations; and records and memorabilia from the Miller Brothers 101 Ranch and G.W. "Pawnee Bill" Lillie Wild West Shows. Also preserved are more than 1,500 recordings that include the Doris Duke Indian Oral History Collection. The Photographic Archives include more than 800,000 items with an emphasis on the period 1870–1940 and include the works of individual frontier photographers.

ROBERT BEBB HERBARIUM HOST:

DR. WAYNE ELISENS

The Robert Bebb Herbarium is maintained jointly by the Oklahoma Biological Survey and the Department of Botany & Microbiology. The herbarium has a regional focus primarily, and maintains an active collections-based research program. The herbarium houses the largest collection of Oklahoma plants with 215,000 vascular plant specimens, less than 500 algal and fungal specimens, and 1,500 lichen and bryophyte specimens.

3:00PM–5:00PM

TRADE SHOW SET-UP

PRE-FUNCTION AREA

6:30PM–8:30PM

ICEBREAKER RECEPTION

VENETIAN ROOM, SKIRVIN HILTON

SPONSORED BY: UNIVERSITY PRODUCTS, INC.

AND NATURAL HISTORY MAGAZINE

Meet and greet other meeting attendees with drinks and hors d'oeuvres, while listening to music in the beautifully restored Venetian Room. Named for its Italian renaissance décor, the Venetian Room is an elegant former dinner and dance club on the hotel's 14th floor. The black mahogany wood paneling throughout and the Italian plaster moldings of its barrel ceiling have been carefully restored, and the more than 100 casement windows on all four sides of the room offer spectacular views of the Oklahoma City skyline.

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 American Institute
of Biological Sciences

DETAILED PROGRAM

THURSDAY 15 MAY 2008

7:30AM–5:00PM
REGISTRATION

PRE-FUNCTION AREA

SPEAKER READY ROOM
HENRY OVERHOLSER SUITE

7:30AM–8:30AM
CONTINENTAL BREAKFAST
CENTENNIAL BALLROOM 1-2

POSTER SET-UP
GRAND BALLROOM A-C

7:45AM–8:15AM
SPECIFY 6.0 DEMO
CENTENNIAL BALLROOM 3

8:00AM–5:00PM
TRADE SHOW
PRE-FUNCTION AREA

8:30AM–5:00PM
SPECIFY USABILITY
INTERVIEWS
PERLE MESTA SUITE

POSTER DISPLAYS
GRAND BALLROOM A-C

8:30AM–9:00AM
WELCOME AND OPENING
REMARKS

GRAND BALLROOM D-F

Janet K. Braun
CO-CHAIR, LOCAL ORGANIZING
COMMITTEE

David L. Boren
PRESIDENT, UNIVERSITY OF OKLAHOMA

Ellen J. Censky
DIRECTOR, SAM NOBLE OKLAHOMA
MUSEUM OF NATURAL HISTORY

Tim White
SPNHC PRESIDENT, YALE PEABODY MUSEUM
OF NATURAL HISTORY

Michael A. Mares
NSC ALLIANCE PRESIDENT, SAM NOBLE
OKLAHOMA MUSEUM OF NATURAL HISTORY

9:00AM–10:00AM
KEYNOTE SPEAKER
GRAND BALLROOM D-F

Why We Need Natural History
Collections
Don E. Wilson
NATIONAL MUSEUM OF NATURAL HISTORY,
SMITHSONIAN INSTITUTION

10:00AM–10:30AM
REFRESHMENT BREAK
CENTENNIAL BALLROOM 1-3

10:30AM–12:00PM
PLENARY SESSION—
Challenges Facing Museums
and Collections in a Changing
World

GRAND BALLROOM D-F
MODERATOR: JANET K. BRAUN
SAM NOBLE OKLAHOMA MUSEUM OF
NATURAL HISTORY

10:30AM–11:00AM
University Museums and the
Art of War
Michael A. Mares
NSC ALLIANCE PRESIDENT, SAM NOBLE
OKLAHOMA MUSEUM OF NATURAL HISTORY

11:00AM–11:30AM
Biodiversity, Global Change and
Museum Collections: Challenges
in Managing Natural History
Collections in the 21st Century
Tim White
SPNHC PRESIDENT, YALE PEABODY MUSEUM
OF NATURAL HISTORY

11:30AM–12:00PM
Going Green
Ellen J. Censky
DIRECTOR, SAM NOBLE OKLAHOMA
MUSEUM OF NATURAL HISTORY

12:00PM–1:30PM
LUNCH
ON YOUR OWN

VENDOR'S LUNCHEON
Pre-registration required
VENETIAN ROOM
Continuing with the tradition begun
in 2007! The vendor's luncheon
offers the opportunity to network,
share information and speak one-on-
one and in-depth with vendors about
products.

DETAILED PROGRAM

1:30PM–3:00PM

SPECIAL SESSION 1 — Museums and Collections: Challenges Posed by Policy, Politics and Funding

GRAND BALLROOM D-E

MODERATOR: MICHAEL A. MARES

SAM NOBLE OKLAHOMA MUSEUM OF
NATURAL HISTORY

1:30PM–2:00PM

The National Political and Policy
Environment: Opportunities and
Challenges for Collections
Robert Gropp

2:00PM–2:30PM

Collections Support from the
National Science Foundation
Richard McCourt and W. Carl
Taylor

2:30PM–3:00PM

NPS Biological Collections
Forum: To the “O” Word and
Beyond
Richard K. Rabeler

PARTICIPANTS: RICHARD K. RABELER, JAMES
SOLOMON, CAROL BUTLER, HANS-DIETER
SUES, GREG MCDONALD

2:30PM–3:30PM

POSTER DISCUSSIONS

GRAND BALLROOM A-C

Meet with Poster Presenters. Posters
are available for viewing 8:30am–
5:00pm Thursday and Friday.

A Symbiotic Relationship Between
Echinocorys and Bivalves in the
Late Cretaceous of North Alborz
Mountain Range, Iran
Balmaki, Behnaz and Behrouz
Darvishzad

Specify 6.0—A Well-supported,
Free, Open Source, Web 2.0,
Windows, MacOS X, Linux,
and State-of-the-art, Collections
Computing Platform
Beach, James and
Specify Software Project

Virtual Collections Access
for Research, Teaching
and Outreach: Challenges
and Solutions for Digitizing
Collections
Berg, Holly L., Tiffany S. Adrain,
and Juw Won Park

A Cloud of Butterflies, a
Kaleidoscope of Lepidopterists
Bryant, James M., and Vlasta
Radan

Mold Removal and Rehousing of
the Ichthyology and Herpetology
Skeletal Collections at The
Natural History Museum of Los
Angeles County (LACM)
Camacho, Neftali, Richard
Feeney, Christine Thacker, and
Jeff Seigel

Repatriation of Biodiversity
Information: A Case Study with
Ecuadorian Mammals Deposited
in Natural History Collections of
the World
Carrera, Juan P., and Robert J.
Baker

Digital Atlas of Oklahoma
Mammals: Data Capture and
Georeferencing for Museum
Records of Oklahoma Mammals
Hays, Kimberly A., Karen
McBee, William L. Fisher, and
Janet K. Braun

Digitalizing of Museum
Specimens: Building Library for
Worldwide Access
Marchán, M. Raquel, James C.
Cokendolpher, and Robert J. Baker

A Too Well-kept Secret: The
Collection of Vertebrates at
Oklahoma State University
McBee, Karen, Anthony A.
Echelle, Stanley F. Fox, Craig A.
Davis, and Ronald A. Van Den
Bussche

Beyond the Collection Room and
into the Grand Foyer
Omura, Kathy

Oklahoma Collection of Genomic
Resources: The Newest Collection
at the Sam Noble Oklahoma
Museum of Natural History
Revelez, Marcia A., and
Janet K. Braun

Integrating Pest Management: A
Model for Successful Teamwork for
Facilities of All Sizes
Sabo, Bridget, James Calder, and
Carol Radliff

Volunteer Management at Rancho
Santa Ana Botanic Gardens
Siedschlag, Sarah

Re-curation of the Malacology
Collection at the Sam Noble
Oklahoma Museum of Natural
History
Smith-Patten, Brenda D., Edie
Marsh-Matthews, Larissa Busch,
and Janet K. Braun

3:00PM–3:30PM

REFRESHMENT BREAK

CENTENNIAL BALLROOM 1-3

DETAILED PROGRAM

3:30PM–5:00PM

**CONCURRENT SPECIAL SESSION 2—
The CollectionsWeb RCN:
Building a Community of
Natural History Collections**

GRAND BALLROOM D–E
MODERATOR: ALAN PRATHER
MICHIGAN STATE UNIVERSITY

3:30PM–5:00PM

CONCURRENT GENERAL SESSION 2—Collection Stewardship: Environmental Challenges

GRAND BALLROOM F
MODERATOR: HEATH J. GARNER
MUSEUM OF TEXAS TECH UNIVERSITY

3:30PM–3:45PM

Incorporating Disaster Preparedness into Collections Stewardship: Planning Strategically for Internal and External Challenges
Lisa Kronthal Elkin and
Dieter Fenkart-Froeschl

3:45PM–4:15PM

NMNH—Smithsonian Institution MSC Cold and Ultracold Collections Facility Planning
Carol R. Butler and
Walter Crimm, AIA

4:15PM–4:30PM

Swimming Upstream: Moving the National Museum of Natural History's Fishes Collection
Kerry F. Button and
G. Jackson Tanner

4:30PM–4:45PM

Transferring to New Cabinets During a Rapid Move
Jean F. DeMouthe

4:45PM–5:00PM

The Great Migration—Integrating an Herbarium Move with Pest Management Efforts
Debra Trock

5:45PM

BUSES BEGIN LEAVING HOTEL
SKIRVIN BALLROOM ENTRANCE

6:30PM–7:30PM

SOCIAL

Excavations, the SNOMNH museum store, will be open for your shopping pleasure

SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY

7:30PM–12:00AM

BANQUET, ENTERTAINMENT, AND DANCING

SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY

9:30PM

BUSES WILL BEGIN DEPARTING FOR HOTEL (every 30 minutes)

SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY

12:00AM

LAST BUS DEPARTS FOR HOTEL

SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY

DETAILED PROGRAM

FRIDAY 16 MAY 2008

7:30AM–5:00PM

REGISTRATION

PRE-FUNCTION AREA

SPEAKER READY ROOM

HENRY OVERHOLSER SUITE

7:30AM–8:30AM

CONTINENTAL BREAKFAST

CENTENNIAL BALLROOM 1–3

8:00AM–3:30PM

TRADE SHOW

PRE-FUNCTION AREA

8:30AM–5:00PM

SPECIFY USABILITY

INTERVIEWS

PERLE MESTA SUITE

POSTER DISPLAYS

GRAND BALLROOM A–C

8:30AM–10:00AM

**CONCURRENT SPECIAL
SESSION 3—Professional
Development in a Changing
World**

GRAND BALLROOM D–E

MODERATOR: PETER B. TIRRELL

*SAM NOBLE OKLAHOMA MUSEUM OF
NATURAL HISTORY*

8:30AM–8:45AM

The 2007 Surveys and Future
Directions for SPNHC
Richard K. Rabeler and Laura
Abraczinskas

8:45AM–9:00AM

Oklahoma Museums Association
and Professional Development
Brenda Granger

9:00AM–9:15AM

Museum Staff Training
on the Internet Using
www.museumclasses.org
Helen Alten

9:15AM–9:30AM

Tied Down at Your Job but Need
a Professional Degree? Get
Online with the Museum Studies
Program from the University of
Oklahoma
Peter B. Tirrell

9:30AM–10:00AM

Panel Discussion

8:30AM–10:00AM

**CONCURRENT GENERAL
SESSION 3—Electronic
Stewardship: Challenges and
Solutions in Digitizing Collections**

GRAND BALLROOM F

MODERATOR: WAYNE ELISENS

*ROBERT BEBB HERBARIUM, UNIVERSITY OF
OKLAHOMA*

8:30AM–8:45AM

The WDC012 Committee and
Developing a Single Portal to
Information in US Herbaria
Mary E. Barkworth, Aaron Liston,
Jack E. Murrell, and Jennifer Pollack

8:45AM–9:00AM

PlantCollections—A Community
Solution

Boyce Tankersley, Min Henderson,
David Vieglaiss, Greg Riccardi,
Christopher Dunn, Pam Allenstein,
and Dan Stark

9:00AM–9:15AM

The Consortium of California
Herbaria—A Model for
Collections
Sula Vanderplank, Staci Markos,
and Richard L. Moe

9:15AM–9:30AM

Your Collection Database: Data
Fortress or Data Interchange?
Rod Spears and Specify Software
Project

9:30AM–9:45AM

Communicating Research
Collections: A Digital Approach
Ann Molineux and Angella Inzinga

9:45AM–10:00AM

Using Digital Initiatives to Promote
and Preserve the Kansas State
University Herbarium
Mark H. Mayfield, Susan J.
Rolfmeier, and Carolyn J. Ferguson

DETAILED PROGRAM

10:00AM–10:30AM
REFRESHMENT BREAK
CENTENNIAL BALLROOM 1–3

10:30AM–11:30AM
SPNHC ANNUAL BUSINESS MEETING
GRAND BALLROOM D–E

NSC ALLIANCE ANNUAL BUSINESS MEETING
GRAND BALLROOM F

11:30AM–1:00PM
LUNCH
ON YOUR OWN

SPECIAL INTEREST GROUPS (SIGs) LUNCHEON
Pre-registration required
CENTENNIAL BALLROOM 1–3

Funding Opportunities in Collections
Richard McCourt
NATIONAL SCIENCE FOUNDATION
W. Carl Taylor
NATIONAL SCIENCE FOUNDATION

Hazardous Materials Specimen Shipping
Andrew Bentley
UNIVERSITY OF KANSAS

Integrated Pest Management
Rebecca Newberry
SCIENCE MUSEUM OF MINNESOTA
Christopher Norris
AMERICAN MUSEUM OF NATURAL HISTORY

Permits, Regulations, and Legal Issues (Life and Earth Sciences)
Linda Ford
HARVARD UNIVERSITY
Tim White
YALE UNIVERSITY
Richard Rabeler
UNIVERSITY OF MICHIGAN

Permits, Regulations, and Legal Issues (Social Sciences)
Liz Leith
SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY
Terri Jordan
SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY

Student Member Roundtable
Jeff Stephenson
DENVER MUSEUM OF NATURE AND SCIENCE

Training, Education and Professional Development
Carol Butler
NATIONAL MUSEUM OF NATURAL HISTORY

Volunteers and Interns in Collections
Gretchen Anderson
SCIENCE MUSEUM OF MINNESOTA

1:00PM–5:00PM
ROUNDTABLE DISCUSSION—Shipping Natural History Specimens in Dangerous Goods
W.B. SKIRVIN SUITE
MODERATOR: ANDREW BENTLEY
UNIVERSITY OF KANSAS

1:00PM–3:00PM
CONCURRENT SPECIAL SESSION 4—Best Practices Symposium I
GRAND BALLROOM D–E
MODERATORS: JAMES A. MACKLIN
HARVARD HERBARIA
TIM WHITE
YALE PEABODY MUSEUM OF NATURAL HISTORY

1:00PM–1:05PM
Welcome
James A. Macklin and Tim White

1:05PM–1:35PM
Not Only Be Legal, But Be Ethical...Which Means What?
Elizabeth E. Merritt

1:35PM–2:05PM
Developing Best Practice Across Europe—The SYNTHESYS Project
Robert Huxley, Simon Owens, Chris Collins, and Lorraine Cornish

2:05PM–2:30PM
The American Society of Mammalogists' Mammal Collection Accreditation Program
Suzanne B. McLaren

2:30PM–3:00PM
Development of Best Practices in Integrated Pest Management
Lisa Elkin and Christopher A. Norris

DETAILED PROGRAM

1:00PM–3:00PM

CONCURRENT GENERAL SESSION 4—Collection Stewardship: New Approaches and Practical Solutions

GRAND BALLROOM F

MODERATOR: LYNDA LOUCKS

UNIVERSITY OF CENTRAL OKLAHOMA

1:00PM–1:15PM

Impact of Potential Emergent Diseases on Genetic Resources Tissue Collections, the Health Concerns of Museum Workers, and Natural History Museum Procedures and Policies
Kathryn A. MacDonald, Heath J. Garner, Robert J. Baker, and Robert D. Bradley

1:15PM–1:30PM

Protecting Endangered Collections: A Threatened Collections Toolkit
Tiffany S. Adrain and Paula T. Work

1:30PM–1:45PM

Benefits of a Brief Survey for a New Collections Manager
Paul Mayer

1:45PM–2:00PM

Rehousing of Fluid Specimens in the Collection of Mammals at the Sam Noble Oklahoma Museum of Natural History
Marcia A. Revelez, and Janet K. Braun

3:00PM–3:30PM

REFRESHMENT BREAK

CENTENNIAL BALLROOM 1–3

Last chance to see trade show!

3:30PM–5:00PM

CONCURRENT SPECIAL SESSION 5—Best Practices Symposium II

GRAND BALLROOM D–E

MODERATORS: JAMES A. MACKLIN

HARVARD HERBARIA

TIM WHITE

YALE PEABODY MUSEUM

3:30PM–3:45PM

Working Towards Standardization: A Survey of Curation Procedures in Invertebrate Paleontology Collections
Jessica D. Cundiff

3:45PM–4:00PM

Best Practices in the Worst Environment: Are They Relevant?
Ann Molineux and **Angella Inzinga**

4:00PM–4:15PM

Rapid Image Processing Using Voice Recognition
Susan H. Butts, **Jessica A. Bazeley**, **Lawrence F. Gall**, and **Derek E. G. Briggs**

4:15PM–4:30PM

Development of Best Practices and Standards for Plant Genebanks
Gayle M. Volk, **Christina Walters**, and **Christopher M. Richards**

4:30PM–4:45PM

Building an Endangered Language Collection in a Natural History Museum
Mary S. Linn

4:45PM–5:00PM

Overcoming the Digitization Bottleneck in Natural History Collections
James A. Macklin, **Reed Beaman**, **Michael Donoghue**, and **James Hanken**

3:30PM–5:00PM

CONCURRENT GENERAL SESSION 5—Challenges in Balancing Stewardship, Research, and Exhibition

GRAND BALLROOM F

MODERATOR: JOHN E. SIMMONS

MUSEOLOGICA AND PENN STATE

UNIVERSITY

3:30PM–3:45PM

Research Specimens on Display, How to Protect Valuable Specimens in a Building that “Breathes”
Maureen E. Flannery

3:45PM–4:00PM

The Role of Natural History Specimens in an Immersive and Interactive Museum
Karen J. Lloyd and **Pamela E. Munroe**

4:00PM–4:15PM

Collections Care Versus Customer Care: How Do You Provide Access for Visiting Researchers Without Compromising Curation?
Clare Valentine

4:15PM–4:30PM

The Problem with “Celebrity” Specimens: Balancing the Needs of Research and Exhibition
Richard C. Sabin

4:30PM–4:45PM

Conservation and Re-housing of the Human Body Slice Exhibit
John E. Simmons, **Kathleen McCarthy**, and **Patricia Ward**

4:45PM–5:00PM

Discussion

DETAILED PROGRAM

3:30PM–5:00PM

TRADE SHOW MOVE-OUT

PRE-FUNCTION AREA

7:00PM–10:30PM

SPNHC SECOND COUNCIL MEETING

FOUNDER'S ROOM

SATURDAY 17 MAY 2008

7:30AM–10:00AM

REGISTRATION

PRE-FUNCTION AREA

10:00AM–10:30AM

REFRESHMENT BREAK

CRYSTAL ROOM

12:00PM–1:00PM

LUNCH (provided)

CRYSTAL ROOM

3:00PM–3:30PM

REFRESHMENT BREAK

TO BE ANNOUNCED

8:00AM–5:00PM

WORKSHOPS

8:00AM–5:00PM

WORKSHOP 1—Best Practices in Collections Stewardship: Writing a Collections Management Policy

VENETIAN ROOM

ORGANIZERS/PRESENTERS:

JOHN E. SIMMONS

MUSEOLOGICA

ELIZABETH E. MERRITT

DIRECTOR, MUSEUM ADVANCEMENT & EXCELLENCE, AMERICAN ASSOCIATION OF MUSEUMS

This workshop will cover: The full range of the issues a collections management policy should address and the pros and cons of choosing one policy option over another. Expert advice on how various policy choices made by museums play out

in reality and which ones tend to be successful or problematic. Step-by-step instruction on who to involve in the policy development, writing, and review process as well as techniques for getting buy-in and ensuring a successful outcome. Sample policies and insight as to what makes each effective.

8:30AM–4:30PM

WORKSHOP 2—Hazardous Materials Specimen Shipping

FOUNDER'S ROOM

ORGANIZERS: ANDREW BENTLEY

NATURAL HISTORY MUSEUM & BIODIVERSITY RESEARCH CENTER, UNIVERSITY OF KANSAS

CAROL BUTLER

NATIONAL MUSEUM OF NATURAL HISTORY

PRESENTERS: FRANK NERLI

DGI TRAINING CENTER

TERRY POLAND

DGI TRAINING CENTER

Most collection-holding natural history institutions, as part of their daily operating procedures deal with the shipping of specimens, through loans and gifts of material to other institutions as well as the accepting of incoming material. A large number of these shipments contain flammable or hazardous solutions (e.g., ethanol, isopropanol or formaldehyde) in varying concentrations. Dangerous goods regulations, most in place long before September 11th, 2001, were brought sharply into focus after that tragic event. The shipping and handling of natural history specimens in wet collections has been affected by the more rigorous enforcement of these regulations, which has impacted the methods and frequency with which museums and other collection-holding institutions can send loans and gifts of materials to others. There is a great deal of confusion concerning the application

DETAILED PROGRAM

of these regulations that along with a lack of knowledge has resulted in serious misinterpretations of the regulations within the natural history community.

The workshop will aim to provide training in packing, shipping and handling of dangerous goods, and an outline of present legislation together with natural history museum specific solutions to various common shipping and packing issues. A round table discussion of pertinent issues will also take place with representatives of various agencies (IATA, DOT, FedEx, UPS, DHL, USFWS) involved in the shipping, packing, and permitting processes.

8:00AM–5:00PM

WORKSHOP 3—Lighting in Museums: Challenges of Balancing Collection Stewardship and Technology

HHONORS LOUNGE

ORGANIZERS/PRESENTERS:

STEVEN WEINTRAUB

ART PRESERVATION SERVICES

GORDON ANSON

NATIONAL GALLERY OF ART

The workshop will cover museum lighting issues such as risk assessment, preventive conservation, lighting design, current and emerging technologies in lighting, and the challenges of integrating conservation requirements with interpretive and aesthetic concerns, cost efficiency, and energy conservation.

8:00AM–5:00PM

WORKSHOP 4—Museum Cleaning Basics in a Changing World

CENTENNIAL BALLROOM 1–3

ORGANIZERS/PRESENTERS:

GRETCHEN ANDERSON

SCIENCE MUSEUM OF MINNESOTA

HELEN ALTEN

NORTHERN STATES CONSERVATION CENTER

REBECCA NEWBERRY

SCIENCE MUSEUM OF MINNESOTA

Museum Cleaning Basics explores everything you need to know about cleaning in your collections. Participants learn when to clean and when not to clean. They also learn how to make those decisions. Topics range from basic housekeeping to safe specific techniques for objects. You will learn why cleaning is important and how to prevent damage when cleaning. We will discuss when to call in a specialist, such as a conservator. Participants will receive samples of cleaning materials and a recommended outline for a housekeeping manual for their institution. Participants will have time to experiment with the cleaning materials that are provided.

8:00AM–12:00PM

WORKSHOP 5—Making Sense of Making Mounts

GRAND BALLROOM A–C

ORGANIZERS/PRESENTERS: SCOTT JONES

ATLAS FINE ART SERVICE

YVONNE LEVER

ATLAS FINE ART SERVICE

Museum staff may sometimes feel that object mounts are too expensive or complicated to use. However, these supports are not only practical, but they can enhance the beauty and drama of the objects and protect the objects on exhibit. This workshop will a) *demystify* mount making and b) suggest safe but inexpensive solutions for displaying objects. Each participant will receive material samples and discuss methods to create a mount. Each participant will have the opportunity to make supports from mount blanks or mat board and practice painting for mount finishing.

9:00AM–12:00PM

MEETING OF HERBARIUM CURATORS AND THE TEXAS OKLAHOMA CONSORTIUM OF HERBARIA (TORCH)

212 CROSS HALL, UNIVERSITY OF OKLAHOMA

A joint Herbarium Curators/TORCH meeting will be held in 212 Cross Hall on the University of Oklahoma campus in Norman, which is adjacent to the Robert Bebb Herbarium (OKL). Transportation will be available to pick up attendees from the host hotel and to return them to the hotel or the airport after lunch.

The afternoon is open for herbarium visitation, additional discussions among curators, or visits to the nearby (walking distance) Sam Noble Oklahoma Museum of Natural History.

There is no formal program for the joint Curatorial/TORCH meeting, but several speakers will address the group and several discussion topics have been identified that are of interest to the herbarium and collections communities .

Directions, parking, and additional information about the joint meeting will be available on the TORCH website:

www.biosurvey.ou.edu/torch/

For more information contact:

Wayne Elisens

(phone 405-325-5923,

Email elisens@ou.edu).

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ORAL PRESENTATION ABSTRACTS

PROTECTING ENDANGERED COLLECTIONS: A THREATENED COLLECTIONS TOOLKIT

Friday, 16 May—Concurrent General Session 4

As informatics technology advances, and funding competition increases, natural history collections managers face mounting challenges for keeping collections relevant and accessible. If collections get left behind, they run the risk of becoming inaccessible, neglected and unwanted. To assist the natural history collections community to prevent these “orphaned” collections, the authors have developed a Threatened Collections Toolkit.

Collections are threatened for a number of reasons including budget cuts, change in research or teaching focus of the parent institution, or loss of collection stewardship and expertise. Collections most at risk have no designated caretaker, undergo potential loss of documentation, or have a (perceived) lack of use, or loss of permanent storage space (removal to “temporary” accommodation). Collections staff can help prevent a collection from becoming orphaned by communicating the importance of natural history collections to parent institution administrators and potential advocates; justifying the cost of collections care and management; preserving and disseminating collection documentation to increase access and use; developing local support groups; joining community

database projects; formalizing the collection management policy and/or collections plan, and developing forward planning; continual monitoring of institutional support for the collections; along with continued training.

When collecting institutions are offered an orphaned collection they should consider not only the cost of incorporating the collection financially, but also the requirements for staff time and the impact on storage space in both the short-term and long-term. Any acquisition whether orphaned or not should be considered according to the collection policy and/or collection plan of the accepting organization, and the legal implications of accepting the orphaned collection should be recognized.

If an institution wishes to dispose of an orphaned collection, the deaccession must be carried out according to relevant codes of ethics and legal obligations. To prevent bad relations with collections shareholders, all parties should be consulted and the deaccession process should be open. Transfer of the collection to another public institution with similar or improved access is preferable to sale, break-up or destruction of the orphaned collection. Type specimens, which must be transferred to another museum or research collection, may not be recognized by the parent institution, so time must be allocated to research the significance of the collection. Transferring a collection to

another institution is not something that should be done in a hurry, yet many owners of orphaned collections do not take this into account.

The Toolkit provides information about how to prevent collections from becoming endangered or orphaned, what to consider when accepting an orphaned collection, and what to do if a collection has to be deaccessioned. Case Studies contributed by the collections community provide examples of both what to do and what not to do when facing these or similar issues!

Adrain, Tiffany S.

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Work, Paula T.

MAINE STATE MUSEUM, 83 STATE HOUSE STATION, AUGUSTA, ME 04333 USA

NOTES:

ORAL PRESENTATION ABSTRACTS

MUSEUM STAFF TRAINING ON THE INTERNET USING

www.museumclasses.org

Friday, 16 May—Concurrent Special Session 3

Northern States Conservation Center launched a new initiative in 2004 with its first on-line training class, Storage for Infinity. Since then, www.museumclasses.org has expanded to include nearly 50 different four to six week long workshop topics covering the museum field. Each year new courses are added to the rapidly expanding offerings. This year brings some museum fundamentals courses: Museum Management, Introduction to Museums, and Introduction to Volunteer Programs. There is a strong emphasis on preservation topics - Integrated Pest Management, Storage Materials, Preservation Environments, Care of Textiles, Care of Photographs, Introduction to Preservation, and Museum Artifacts. Fundamentals of Exhibits and Introduction to Security are the beginning of a rapidly expanding set of courses dealing with the public face of museums. In addition, short courses are offered that meet the requirements of the Virginia Association of Museum's new museum certificate program. Currently museumclasses.org has 15 instructors, all experts in their field, and two full-time support staff.

Alten, Helen

NORTHERN STATES CONSERVATION CENTER,
P.O. BOX 8081, ST. PAUL, MN 55108 USA

THE WDC012 COMMITTEE AND DEVELOPING A SINGLE PORTAL TO INFORMATION IN US HERBARIA

Friday, 16 May—Concurrent General Session 3

In fall 2007, the Western Association of Agricultural Experiment Station Directors Association authorized creation of the WDC012 committee to help develop integrated access to the information in US herbaria. The focus of the committee is on increasing participation in implementation of such a portal. The technology exists. The larger task is developing widespread engagement and support by those involved with herbaria. This requires aiding herbaria in providing high quality data to their regional nodes and ensuring that the portal presentation highlights the importance of contributing herbaria. Without widespread engagement, we shall lose an important opportunity. The committee will be meeting with various groups to identify those areas to which they are most able to contribute. The most important contribution must, however, come from those working in herbaria. We need your input to identify short and long-term goals and mechanisms for reaching these goals. The model that we propose relies on regional consortia. Consortia would be asked to assume responsibility for helping their members enter and regularly submit high quality data. Some resources would be developed at a national level, e.g., files of nomenclaturally acceptable names and of species of concern

and the states in which they are of concern. The most critical level of involvement is, however, the herbarium. If the national portal is to serve our interests, the whole herbarium community must be engaged in its development. Approaches being taken to encouraging engagement will be explained and suggestions solicited.

Barkworth, Mary E.

INTERMOUNTAIN HERBARIUM, DEPT. OF BIOLOGY, UTAH STATE UNIVERSITY, 5305 OLD MAIN HILL, LOGAN, UTAH 84322-5305 USA
Liston, Aaron

HERBARIUM, DEPT. OF BOTANY AND PLANT PATHOLOGY, OREGON STATE UNIVERSITY, 2082 CORDLEY HALL, CORVALLS, OR 97331-2902 USA

Murrell, Jack E.

HERBARIUM, DEPT. OF BIOLOGY, APPALACHIAN STATE UNIVERSITY, RANKIN SCIENCE BUILDING, BOONE, NC 28608 USA

Pollack, Jennifer

NATIONAL BIOLOGICAL INFORMATION INFRASTRUCTURE PROGRAM, USGS CENTER FOR BIOLOGICAL INFORMATICS, DENVER FEDERAL CENTER, PO BOX 25046, DENVER CO 80225 USA

NOTES:

ORAL PRESENTATION ABSTRACTS

NMNH-SMITHSONIAN INSTITUTION MSC COLD AND ULTRACOLD COLLECTIONS FACILITY PLANNING

Thursday, 15 May—Concurrent
General Session 2

NMNH has successfully completed design of a new special environments facility that includes ultra cold storage. Associated new policy, procedures and organization as well as the processes for gaining agreement and for identifying requirements will be discussed by the first presenter. The second presenter will focus on the design and engineering of the cold and ultracold environments, including establishing criteria for quantifying and specifying equipment, space for equipment, safety, energy efficiency, system redundancy, mitigation of risk due to equipment failure among other issues. The location of support space for collections management needs and research will be addressed.

Butler, Carol R.

NMNH, SMITHSONIAN INSTITUTION, 10TH ST. & CONSTITUTION AVE., WASHINGTON, DC 20560 USA

Crimm, Walter

AIA, EWINGCOLE, ARCHITECTS/ENGINEERS, 100 N 6TH ST., PHILADELPHIA, PA 19106 USA

NOTES:

SWIMMING UPSTREAM: MOVING THE NATIONAL MUSEUM OF NATURAL HISTORY'S FISHES COLLECTION

Thursday, 15 May—Concurrent
General Session 2

This presentation is an overview of how the Smithsonian's Museum Support Center—Collections Support Services worked with the Division of Fishes Collections Management staff to plan and carryout the move of the National Fish Collections to Pod 5, a newly constructed purpose built facility designed to house National Museum of Natural History alcohol preserved specimens.

Button, Kerry F.

SMITHSONIAN INSTITUTION, NATIONAL MUSEUM OF NATURAL HISTORY, MUSEUM SUPPORT CENTER, COLLECTIONS SUPPORT SERVICES, MRC 117, PO BOX 37012, WASHINGTON, DC 20013 USA

Tanner, G. Jackson

SMITHSONIAN INSTITUTION, NATIONAL MUSEUM OF NATURAL HISTORY, MUSEUM SUPPORT CENTER, COLLECTIONS SUPPORT SERVICES, MRC 117, PO BOX 37012, WASHINGTON, DC 20013 USA

NOTES:

RAPID IMAGE PROCESSING USING VOICE RECOGNITION

Friday, 16 May—Concurrent Special
Session 5

For nearly two years, the Yale Peabody Museum Invertebrate Paleontology Division has been incorporating portions of our Stratigraphic Collection into our Systematic Collection of fossils with funding by the National Science Foundation -Biological Research Collections program. The Stratigraphic Collection is housed in the basement of the Peabody Museum and represents approximately 150 years of curatorial and student collections of Paleozoic material from around the world. It consists of over 3500 drawers of material. The specimens are exposed to agents of destruction, such as water, extreme fluctuations in temperature and relative humidity, contamination by soot, physical forces from overcrowded conditions, acidic conditions produced by oak cabinetry, dissociation via blanket and abbreviated labeling practices, and data loss from disintegrating, fading, and dirty labels. A portion of this collection is bulk rock, but approximately 45% has been identified and has well documented accession and locality data. This non-bulk portion is being removed from the basement, retrayed in archival acid-free trays, cataloged electronically in KE EMu; new labels are printed, and specimens are photographed. Finally, the specimens are incorporated into the Systematic Collections in Yale's new Class of 1954

ORAL PRESENTATION ABSTRACTS

Environmental Science Center, which features temperature and humidity control and compactorized storage. As one goal of this project, we have been photographing all brachiopods. Brachiopods are well represented in the Stratigraphic Collection and the Yale Peabody Museum has a prolific history of research on this group: the Charles Schuchert Collection of Brachiopods is the third largest collection of brachiopods in the United States. Our system employs IBM ViaVoice voice recognition software along with a headset in order to accomplish hands-free photography and expedite the imaging process. For each brachiopod, at least two views are imaged: ventral, dorsal, hinge, interior valve, exterior valve, or "other", and downloaded onto the user's computer. For each object, specimen numbers are spoken into an Excel spreadsheet, along with the orientation of the photograph; each row represents a separate image number assigned by the camera. A shell script is then run that validates the camera image numbers and renames files with the IP naming protocol (specimen number and abbreviated orientation as a suffix), and invokes ImageMagick to resize images for database and web consumption. A color correction macro is then called as a batch process in Adobe Photoshop. A second shell script prepares CSV files for automated import into the KE EMu database and automated attachment of resized images to individual specimen records. Using this

innovative system, we can take three images of a specimen, resize and color correct images, and upload all images to the object record in the database in less than one minute per specimen. Photographs are available to scientists worldwide by querying our online collections database.

Butts, Susan H.

YALE UNIVERSITY, PEABODY MUSEUM OF NATURAL HISTORY, DIVISION OF INVERTEBRATE PALEONTOLOGY, 170 WHITNEY AVE., NEW HAVEN, CT 06520-8118 USA
Bazeley, Jessica A.

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Gall, Lawrence F.

YALE UNIVERSITY, PEABODY MUSEUM OF NATURAL HISTORY, DIVISION OF ENTOMOLOGY AND COMPUTER SYSTEMS OFFICE, 170 WHITNEY AVE., NEW HAVEN, CT 06520-8118 USA
Briggs, Derek E. G.

YALE UNIVERSITY, PEABODY MUSEUM OF NATURAL HISTORY, DIVISION OF INVERTEBRATE PALEONTOLOGY, 170 WHITNEY AVE., NEW HAVEN, CT 06520-8118 AND YALE UNIVERSITY, DEPARTMENT OF GEOLOGY AND GEOPHYSICS, 210 WHITNEY AVE., NEW HAVEN, CT 06520-8109 USA

NOTES:

GOING GREEN

Thursday, 15 May—Plenary Session

As the "green" movement in the US gains momentum, US museums are starting to examine how they can be better stewards of the earth. For natural history museums, this often is part of the mission but has not been fully interpreted through the policies and procedures put in place. One of the ways to align policies and procedures with the stewardship mission is through green building certification. The Sam Noble Oklahoma Museum of Natural History recently registered as a LEED-EX (Leadership in Energy and Environmental Design – Existing Building) project with the US Green Buildings Council. The museum is fully involved in the process to become LEED certified and it is hoped that the museum will achieve certification by July 2008. One of the surprises encountered in going through this process was the direct correlation between best practices in collection care and green certification objectives. I will discuss the impetus for going "green" and the process that the museum has gone through to achieve certification.

Censky, Ellen J.

SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY, UNIVERSITY OF OKLAHOMA, NORMAN, OK 73072 USA

NOTES:

ORAL PRESENTATION ABSTRACTS

WORKING TOWARDS STANDARDIZATION: A SURVEY OF CURATION PROCEDURES IN INVERTEBRATE PALEONTOLOGY COLLECTIONS

Friday, 16 May—Concurrent Special Session 5

Invertebrate Paleontology collections are one of the most important resources available to paleontologists. They serve as vast repositories of data on invertebrate fossils, including potential data for future paleontological research. Collections are essential resources whose care and curation need to be documented. Published guidelines for the curation of collections are in place, but there has not been a consensus as to how to establish best-practice standards. Setting standards will lead to consistency in the curation, organization, and use of all invertebrate paleontology collections, but standards cannot be set without a clear understanding of how the current curation practices vary. A representative sample of 23 collections was surveyed to provide an overall view of curation procedures in invertebrate paleontology. Collections were generally found to be in good shape with their curation procedures, but there is a lack of consistency and communication among collections. An analysis of the current status of curation procedures facilitates the process to move invertebrate paleontology collections towards standardizing procedures. Identifying the reasons behind

the lack of an accepted standard for the management and curation of collections will help collections focus on areas where the current guidelines are lacking. Four major areas of concern with curation procedures need to be addressed to make standardization of collections possible: data capture and uncurated backlogs; type organization; secondary type designations; and preventative conservation practices. A comparison of collection procedures with other collection disciplines was found to be useful in finding some innovative solutions to common problems. Invertebrate paleontology collections, as a whole, need to work together to address shared issues and look to other collection disciplines as a means to work toward standardization and bridging the gaps between disciplines.

Cundiff, Jessica D.

*MUSEUM OF COMPARATIVE ZOOLOGY,
HARVARD UNIVERSITY, 26 OXFORD STREET,
CAMBRIDGE, MA 02138 USA*

NOTES:

TRANSFERRING TO NEW CABINETS DURING A RAPID MOVE

Thursday, 15 May—Concurrent General Session 2

As part of the recent move from the Academy's temporary facility to the new collections building in Golden Gate Park, most of the geologic collections had to be transferred from old wooden drawers into new compactorized cabinets. The drawers in the old and new cabinets were roughly the same size, but were not interchangeable. Initially it was planned that specimens would be moved to the new building in the old drawers, and then transferred individually into the new metal drawers. Timing experiments showed that this method would slow the entire museum move, and would require additional trained staff.

It was decided to invest in custom-designed lidded cardboard boxes that would fit in both types of drawers. All specimens that could fit into these boxes were packed in them before the move, and returned to the old drawers. The boxes were eventually moved in the old drawers, in transport carts, and then placed in the new metal drawers in the Park. Oversized specimens were moved, as originally planned, in the old wood drawers and transferred by hand.

Each box was given a number, and a list was kept of the contents. A simple database was created with box number, a brief description of contents, number of

ORAL PRESENTATION ABSTRACTS

lots, number of specimens, date packed, and by whom. Using this information, the destination of each box could be determined ahead of time, which will make it easier to keep the collection in order during the move. Once the move has been completed, the boxes will be unpacked gradually and the specimens placed in the drawers. The boxes will be recycled or used to store other materials. The boxes were paid for out of departmental gift funds, since they had not been included in the original move budget.

DeMouthe, Jean F.

CALIFORNIA ACADEMY OF SCIENCES, 875
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SAN FRANCISCO, CA 94037 USA

NOTES:

DEVELOPMENT OF BEST PRACTICES IN INTEGRATED PEST MANAGEMENT

Friday, 16 May—Concurrent Special Session 4

The Integrated Pest Management Working Group (IPM-WG) was set up in 2002 as an ad hoc group of museum professionals dedicated to the development of pest management resources for the general museum community. Through its Standards and Best Practices Subgroup, IPM-WG has been evaluating pest management policies and procedures from a variety of cultural institutions with a view to developing policy and procedural templates that can be employed in the development of integrated pest management programs. In pursuing this goal, the Subgroup first considered the mechanisms by which standards and best practices in pest management could be developed and used. This information was distilled into an easy-to-use grid format for distribution to the community. Using the grid as a basis for evaluation, the group reviewed a wide range of pest management documents, drawing out critical elements for inclusion in template documents and vetting suitable examples for distribution via the museumpests.net website. The process adopted by IPM-WG, involving critical review by a group drawn from a range of institutions and professions within the cultural heritage community, allows the grid and template documents to act as outlines of best practice in the development of pest management programs.

Elkin, Lisa

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Norris, Christopher A.

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NOTES:

ORAL PRESENTATION ABSTRACTS

RESEARCH SPECIMENS ON DISPLAY, HOW TO PROTECT VALUABLE SPECIMENS IN A BUILDING THAT “BREATHES”

Friday, 16 May—Concurrent General Session 5

The mission of the California Academy of Sciences in San Francisco, California is to explore, explain, and protect the natural world. One way the museum advances this mission is by displaying research specimens on the exhibit floor. The decision to display valuable research specimens in the newly rebuilt museum has proven challenging to both the collection managers and the exhibit designers. As a scientific research organization the collection staff is primarily responsible for preserving research specimens for future scientific study. At the same time, the exhibit team is concerned with the story they are telling and often request the use of the best and most valuable specimens. This conflict is further complicated by the sustainable architecture of the new building which is designed to “breathe” naturally to control the building temperature and humidity, and by the emphasis on the use of natural lighting in all public spaces. These factors greatly affect the display methods available for this project.

This new green building utilizes an automated ventilation system to take advantage of the natural air currents of Golden Gate Park to regulate the temperature, thus reducing dependence on traditional HVAC systems. Automated skylights throughout

the exhibit hall provide natural light. The relative humidity of the exhibit hall, also controlled by the automated natural HVAC system, fluctuates greatly due to the many aquaria on display including one of the world’s largest aquarium-based coral reefs. These lighting, ventilation, and humidity issues pose unique environmental control challenges. To address these concerns the collection managers and exhibit designers worked together to develop a tiered rank system for all specimens under consideration for display. After evaluating each design concept, the environmental control equipment necessary to provide an appropriate and stable environment for each specimen was identified. In some instances (i.e. cast skeletons) no environmental controls were needed while in other cases (i.e. rare Galapagos Finch study skins) approval to display specimens was contingent on obtaining a self-contained unit with ultraviolet light, temperature, and humidity controls. As more earth-friendly buildings are built, environmental control issues will once again become one of the main challenges of collection stewardship.

Flannery, Maureen E.

CALIFORNIA ACADEMY OF SCIENCES, 55 CONCOURSE DRIVE, GOLDEN GATE PARK, SAN FRANCISCO, CA 94118 USA

NOTES:

OKLAHOMA MUSEUMS ASSOCIATION AND PROFESSIONAL DEVELOPMENT

Friday, 16 May—Concurrent Special Session 3

Professional development and training for museum professionals is an ever increasing challenge for various reasons including limited time and funds. In September 2007, the Oklahoma Museums Association released a focus group report which identified the training and support needs of Oklahoma’s museum community; evaluated current programming and services as they relate to these needs; gathered information to help plan future programs and services; and explored the barriers that prevent participation in the Oklahoma Museums Association. Although the information to be presented is specific to the Oklahoma museum community, the information will offer general insight into what is working with current professional development opportunities as well as new ideas for future trends training.

Granger, Brenda

OKLAHOMA MUSEUMS ASSOCIATION, 2100 NE 52ND STREET, OKLAHOMA CITY, OK 73111

NOTES:

ORAL PRESENTATION ABSTRACTS

THE NATIONAL POLITICAL AND POLICY ENVIRONMENT: OPPORTUNITIES AND CHALLENGES FOR COLLECTIONS

Thursday, 15 May—Special Session 1

Natural science collections are important components of our research and education infrastructure. Collections can, should, and will play an important role in advancing the frontiers of knowledge and informing solutions to our most pressing environmental and health challenges. To do this, however, collections require funding, modern infrastructure and appropriate staffing. In recent years, some federal policy makers have recognized the importance of natural science collections and have helped trigger national discussions and assessments of federal and non-federal collections. These efforts have created an important opportunity for natural science collections stakeholders to work collaboratively to develop and implement policy (e.g., increased funding), that will better serve the collections community in years to come. This talk explores the current federal political and policy landscape.

Gropp, Robert

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES AND NATURAL SCIENCE COLLECTIONS ALLIANCE, 1444 I STREET, NW, SUITE 200, WASHINGTON, DC 20008 USA

NOTES:

DEVELOPING BEST PRACTICE ACROSS EUROPE –THE SYNTHESYS PROJECT

Friday, 16 May—Concurrent Special Session 4

SYNTHESYS is a five year project comprising 20 European natural history museums and botanic gardens aiming to create an integrated European infrastructure for researchers in the natural sciences. The project's Networking Activity C focuses on identifying and improving standards of care and access to natural history collections and disseminating best practice throughout the community. 13 museums and herbaria in Europe and the NMNH, Smithsonian have been assessed using a standardised survey methodology. The survey methodology establishes a set of benchmarks based on best practice and assesses institutions against these benchmarks. The results indicate variability in how best practice is applied, can identify individual strengths and weaknesses and have identified some general areas of weakness such as levels of disaster preparedness. Many of the weaknesses detected by the surveys can be related to training needs and these have been addressed by a series of workshops aimed at middle management level staff. The course participants are strongly encouraged to disseminate information by seminars etc. within their own institutions and by talks at specialist society meetings etc. The surveys and courses have also revealed interesting data on how best practice is regarded in institutions,

for example, how high a priority written policies and procedures are considered to be. A parallel activity has examined best practice in the management of molecular collections using a web-based self assessment method and a set of benchmarks derived from known best practice.

Further funding has been sought to continue this work into the future as part of a SYNTHESYS 2 project. SYNTHESYS 2 will substantially increase the amount of data available on the set of collections management in Europe by supplying self-assessment tools to a much greater number of institutions with natural history collections. The project goes beyond SYNTHESYS 1 by providing the means for improvement through targeted training, supplying "help packages" to assist institutions in applying best practice and providing access to centres of excellence who can offer practical advice on specific areas.

Huxley, Robert

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Owens, Simon

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Collins, Chris

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NOTES:

ORAL PRESENTATION ABSTRACTS

INCORPORATING DISASTER PREPAREDNESS INTO COLLECTIONS STEWARDSHIP: PLANNING STRATEGICALLY FOR INTERNAL AND EXTERNAL CHALLENGES

Thursday, 15 May—Concurrent General Session 2

The world is ever changing; forcing museums to prepare in ways never imagined. Subsequently, disaster preparedness has become an integral element of collection stewardship. The American Museum of Natural History (AMNH) responded to these new demands by convening a Disaster Recovery committee in 2001. This group has advanced efforts concerning Emergency Response, Business Continuity and Disaster Preparedness, working within the framework of existing hierarchies and policies while meeting demands, guided by the museum's mission. Some of the resulting accomplishments include a comprehensive risk assessment of the AMNH scientific collections, duplication and off-site storage of primary documentation, back up systems and 'hot sites' identified and positioned, detailed collection surveys accomplished to gauge needs and costs, business continuity plans outlined for all museum departments and ongoing emergency response training for the scientific collections staff. This presentation will cover the strategies developed to advance such efforts including identification of funding sources, defining roles, prioritizing need, organizing data, and training.

Kronthal Elkin, Lisa

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Fenkart-Froeschl, Dieter
AMERICAN MUSEUM OF NATURAL HISTORY,
OPERATIONAL PLANNING, CENTRAL PARK
WEST AT 79TH STREET, NEW YORK, NY
10024 USA

NOTES:

BUILDING AN ENDANGERED LANGUAGE COLLECTION IN A NATURAL HISTORY MUSEUM

Friday, 16 May—Concurrent Special Session 5

The Native American Languages collections at the Sam Noble Oklahoma Museum of Natural History began from scratch in 2002. The collection now contains over 4,000 audio, video, manuscripts, and ephemera on endangered languages of North America, with a focus on the languages and language families represented by Oklahoma tribes. This talk will introduce the collection and discuss how a linguistic collection fits into the scope natural history collection and into the mission of SNOMNH. In addition, best practices in documentation and archiving of audio/video collections will be introduced. Finally, the talk will show how collaboration with local tribes and tribal people has built the collection, showing how 'best practices' is extended to community outreach, and sensitivity to intellectual property rights. These issues that make Native language collections unique in natural history museums.

Linn, Mary S.

SAM NOBLE OKLAHOMA MUSEUM OF
NATURAL HISTORY, OU 510E SNOMNH,
2401 CHAUTAUQUA AVE, NORMAN, OK
73072 USA

NOTES:

ORAL PRESENTATION ABSTRACTS

THE ROLE OF NATURAL HISTORY SPECIMENS IN AN IMMERSIVE AND INTERACTIVE MUSEUM

Friday, 16 May—Concurrent General Session 5

Over the last decade or so, museums have increasingly become “popular leisure venues” and this change has driven museums to examine and question their position in the local community. Many museums have been forced to look at their exhibits and collections and ask the question, “How can we become more competitive while still following our mission?” While most established institutions draw on historic natural history collections and traditional display methods (enclosed dioramas) to introduce and explain biodiversity, The Wildlife Experience (TWE) which opened in 2002, does not have an established collection. The majority of the TWE natural history collection was donated and is comprised of taxidermied full-body mounts and shoulder mounts. The increased interest in the natural world and wildlife conservation mirrors the mission of TWE and provides the director and the board an opportunity to explore new ways of displaying natural history collections while still following the museum’s mission. Dr. Richard Smartt (Executive Director) envisioned exhibits representing different biomes of North America and Africa, but did not want to use enclosed dioramas. Instead TWE adopted an immersive approach where the visitor can wander through the exhibit and view the animals unhindered by glass

covers. In 2007 Wild Colorado opened to the general public. Four biomes of Colorado are represented in the exhibit, which combines unique technology and traditional taxidermied specimens. This new approach of presenting natural history specimens has been warmly welcomed by our visitors who enjoy the immersive and interactive experience, yet it does not come without its challenges for the collections department. Natural history specimens are inherently fragile and at times rare: providing a safe environment is paramount for the collections staff. The Integrated Pest Management Policy was “beefed up”, temperature, relative humidity, and light levels are checked regularly, and a new cleaning schedule was implemented. TWE continues to grow and is in the process of building a new extension, which will display several biomes of the world using the same immersive and interactive approach to displaying the natural history specimens. This presentation will discuss the challenges for the collections department brought about by this “immersive and interactive” approach to the exhibition of natural history specimens along with insight into the collaborative process required to ensure the long-term preservation of the collection.

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IMPACT OF POTENTIAL EMERGENT DISEASES ON GENETIC RESOURCES TISSUE COLLECTIONS, THE HEALTH CONCERNS OF MUSEUM WORKERS, AND NATURAL HISTORY MUSEUM PROCEDURES AND POLICIES

Friday, 16 May—Concurrent General Session 4

The twenty-first century has seen the study of rare and emergent diseases come to the forefront of biological research, in part as a result of the appearance of hantavirus. Systematic collections, and in particular tissue collections, at natural history museums have proved valuable in determining carriers of these diseases. However, the use of these samples for zoonotic studies has established the fact that these collections contain potentially hazardous pathogens. To date, no specific regulations exist to protect the health of workers housing and handling these special collections at museums. At the Natural Science Research Laboratory, Museum of Texas Tech University, an ongoing investigation was initiated to make informed decisions for the Genetic Resources Collection on the management of such samples. A number of sources were consulted including personal communication with CDC staff, literature searches, and a survey of similar collections. The results of this investigation have spawned discussions between staff and scientists at the NSRL are leading to formulation of new policies and procedures on the handling, storing, loaning and transporting these tissues.

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Currently the NSRL has a number of procedures in place including special labeling and isolation of tissues from known carriers within the collection and the designation and placement within the type cabinet of animals known to be the first host from which a new strain of virus was isolated. All of these procedures seek to alert staff as to potential dangers so that extra care in handling may be afforded the samples. Throughout this process of evaluating procedures and policies, a balance must be made between limiting liability and fostering research. Ultimately, benchmark policies protecting both the museum and researchers should exist and can only be adopted through an open dialogue between natural history institutions facing similar situations.

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NOTES:

OVERCOMING THE DIGITIZATION BOTTLENECK IN NATURAL HISTORY COLLECTIONS

*Friday, 16 May—Concurrent Special
Session 5*

The information associated with natural history specimens stored in museums is critical for understanding and properly managing our natural resources and in documenting basic scientific research. Although excellent new mechanisms have been developed to provide ready access to existing digital information across multiple institutions, most of the data associated with museum specimens remains outside of the digital domain. For example, the Global Biodiversity Information Facility (GBIF) now provides access to data on only ca. 3–5% of the estimated one billion biological specimens worldwide. A workshop to explore mechanisms to dramatically increase the rate at which specimen data can be extracted and rendered available to the user community was held recently at Harvard University. To address the digitization bottlenecks we brought together a group of technical experts, data stewards, and stakeholders concerned with obtaining, archiving, and using digital data from museum specimens. The two days of presentations and discussions highlighted several issues that must be considered in efforts towards removing bottlenecks to collections digitization. These issues can be summarized generally as either social or technological, which includes

imaging, geo-referencing, data management and dissemination, artificial intelligence and robotics. It was quickly recognized that there was no uniform solution across collections/domains but that in the short-term, greater efficiency in data capture could be realized through social, work-flow and technology changes. Longer-term, substantial allocation of resources will be required, both in money and cross-disciplinary expertise, to implement larger-scale strategies to capture the remaining invaluable majority of the data associated with natural history collections.

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Beaman, Reed

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Donoghue, Michael

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Hanken, James

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NOTES:

ORAL PRESENTATION ABSTRACTS

UNIVERSITY MUSEUMS AND THE ART OF WAR

Thursday, 15 May—Plenary Session

"If your enemy is secure at all points, be prepared for him. ... If he is taking his ease, give him no rest. If his forces are united, separate them. If sovereign and subject are in accord, put division between them. Attack him where he is unprepared, appear where you are not expected."

- Sun Tzu,

University natural history museums develop in a repeatable pattern. Through professional assessment visits and accreditation activities at many museums throughout the United States, South America, Europe and Australia, as well as in broad overviews of selected institutions in many countries, I have noted similarities in the challenges facing university museums and collections. These similarities far outweigh their differences irrespective of the country in which they occur or the type of university of which they are a part. Almost uniformly, such organizations are understaffed, underfunded, ill-housed, and languishing as largely forgotten or ignored components of the university. By using two major universities that have made great strides in protecting their collections—the University of New Mexico and the University of Oklahoma—I discuss how university museum and collection development strategies are generally destined to fail because of their history. Administrators, wittingly or unwittingly, are masters of

utilizing tactics that would have made the ancient Chinese military master, Sun Tzu, very proud. University collections and museums must unite in a common purpose if they are to remain viable across time and through numerous confrontations with the superior forces of the university administration.

Mares, Michael A.

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NOTES:

BENEFITS OF A BRIEF SURVEY FOR A NEW COLLECTIONS MANAGER

Friday, 16 May—Concurrent General Session 4

The Field Museum of Natural History's invertebrate paleontology collection is estimated at over 320,000 specimen lots and is ranked in the top five in the nation by size. However, the majority of specimens are not cataloged. As the new collections manager for this collection one duty is to provide data on inquires about the size of the collection and volume various parts of the collection occupy. The main collection is housed in 546 cabinets each with 25 drawers. A very brief and quick survey was conducted cabinet by cabinet to get some basic data but, to obtain data that will help shape decisions about collections priorities and future collections work a more complete survey was devised and is currently being implemented.

Note previous statistical extrapolations resulted in the size figure cited above. This survey will involve a more refined drawer-by-drawer count of specimen lots in all of the 546 cabinets, a total of over 13,000 drawers. It is estimated that the survey will require four months to complete while continuing the regular day-to-day duties of the collections manager. Besides providing an opportunity for a new collections manager to become familiar with the collection this longer survey will also provide counts on the total

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number of specimen lots, free space, and a drawer-by-drawer assessment of the condition or grade level of the collection.

The grading level employed in this survey is a simplified version of the many different grading levels previously published (McGinley, 1989; White, 2000; Hughes et al., 2000; Adrain et al., 2006). It gives a point to the specimen lot for each of the following objectives:

- 1) Has location and/or stratigraphic data associated with it.
- 2) Has been sorted at the phylum level.
- 3) Has been identified to genus or species level.
- 4) Has been cataloged and numbered.

These objectives are easy to observe during a quick survey and produce a simple zero to four point grading system.

To make this data easily accessible and to help track changes in the collection over time color-coded maps of the collection will be generated that display the size of the collection, free space availability, and overall condition of the collections.

Mayer, Paul

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NOTES:

USING DIGITAL INITIATIVES TO PROMOTE AND PRESERVE THE KANSAS STATE UNIVERSITY HERBARIUM

Friday, 16 May—Concurrent General Session 3

The Kansas State University Herbarium houses ca. 200,000 specimens, the majority of which are from the prairies of the central Great Plains. It is particularly rich in historical material (approximately 40% of specimens were collected during the 1800s) and taxa of agronomic interest (e.g., weeds, introduced species). Despite a strong legacy, the KSU Herbarium, like many regional natural history collections, has faced challenges in recent decades. A modern databasing initiative has significantly enhanced research within the Herbarium. An overview of findings enabled by the database (relating to noteworthy collections, collection communities, distributional patterns, and “holes” in floristic knowledge) is presented. The databasing project has, in turn, led to additional opportunities for research and preservation, and increased visibility of the museum within the institution and beyond. A new collaborative project on digital biodiversity resources within Kansas State University (the Biodiversity Information System, BiodIS) is briefly discussed.

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Rolfsmeier, Susan J.

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NOTES:

ORAL PRESENTATION ABSTRACTS

COLLECTIONS SUPPORT FROM THE NATIONAL SCIENCE FOUNDATION

Thursday, 15 May—Special Session 1

The Biological Research Collections program at NSF provides support for the enhancement of existing, vouchered, object-based natural history collections. Support comes in the form of funding for cabinets, compactors, and other physical infrastructure, as well as computerization of data associated with collections. This computerization usually involves making data interoperable and accessible to the worldwide community of scientists and educators through Internet portals. Traditionally, collections of pressed plants, shells, pickled fish, bird skins, and other preserved physical specimens have been the focus of BRC. More recently, frozen tissues and DNA samples have become the target of efforts to improve curation and digital accessibility. This talk will present information on the proposal review process, trends in the program over the last few years and preliminary results from a survey of NSF-supported collections requested by the White House Office of Science and Technology Policy.

McCourt, Richard M.

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Taylor, W. Carl

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THE AMERICAN SOCIETY OF MAMMALOGISTS' MAMMAL COLLECTION ACCREDITATION PROGRAM

Friday, 16 May—Concurrent Special Session 4

The American Society of Mammalogists' Systematic Collections Committee was formed in 1972 as an outgrowth of an ad hoc committee formed at the request of the National Science Foundation. By 1975, the Committee had established a program of accreditation for interested mammal collections. Using what is referred to as a set of minimal standards for proper collection maintenance, the Committee serves, on behalf of the Society, as an informal inspecting and accrediting agency for the curatorial status of collections. It also responds to requests from curators for information on proper collection care.

Committee make-up includes members who are knowledgeable about care and management of systematic collections and are geographically dispersed to allow for inspection of collections throughout Canada, Mexico and the United States. There are currently 75 collections from 32 U.S. states, three Mexican states and three Canadian provinces as well as one collection in Argentina that have requested accreditation visits over the last 32 years, with numerous collections requesting re-accreditation two or three times during that period.

This presentation will provide details about the manner in which this accreditation process is conducted.

McLaren, Suzanne B.

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NOTES:

ORAL PRESENTATION ABSTRACTS

“NOT ONLY BE LEGAL, BUT BE ETHICAL”...WHICH MEANS WHAT?

Friday, 16 May—Concurrent Special Session 4

Is it time to develop a “Code of Ethics for Natural History Museums?” The public, press, regulators and funders are raising their expectations regarding transparency and accountability in museums. In the absence of strong, effective self-regulation, the field risks such control being imposed through legislators, regulators or outside watchdog groups. While much of the recent attention has been on art museums and their high-value collections, scandals in the last few years have left natural history museums vulnerable as well: tax fraud associated with big game hunting and taxidermied specimens; “flipping” of specimens to benefit donors and generate cash for the museum; minimal or reluctant compliance with NAGPRA. Looming ahead are issues of source country/culture claims on cultural, biological, intellectual property. Art, history, and children’s museums have all developed discipline-specific codes of ethics more detailed than the field-wide AAM Code of Ethics for Museums. Such codes help guide the behavior of museums, shape press coverage, and educate the public regarding museum values. Museums often find these codes to be their most effective “sword and shield” for condemning unethical conduct and providing context for explaining the appropriateness of their own policies. This session will provide

an overview of the recent hot button topics, and engage the audience generating the outline for a natural history-specific code of ethics.

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NOTES:

BEST PRACTICES IN THE WORST ENVIRONMENT: ARE THEY RELEVANT?

Friday, 16 May—Concurrent Special Session 5

Over the last eight years the Non-vertebrate Paleontology collections of the Texas Natural Science Center (TNSC) have followed best practices suggested by the wider community of natural science collections experts. Focus has been on the physical conditions of specimens, their larger environment and methods to access specimens in order to monitor their conservation. Several aspects of our particular collections create problems for the adoption of best practices:

1. Physical size (about 32K sf of densely packed specimens)
2. Physical environment (most still without HVAC)
3. Variable quality and sources of data, and multiple formats for that data
4. Lack of permanent staff to handle well over 4 million specimens

We have addressed the first issue by developing a GIS management system presented before this audience in 2003. The third issue is being addressed through database developments and the use of OCR technology to speed up digital access. Issue four is slowly being addressed through directed endowments in both the Jackson School of Geosciences and TNSC, more soft money and enormous growth in our volunteer pool. The second issue, the physical environment, is the one under scrutiny here. Can we

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satisfactorily use best practices within an inadequate repository. The obvious 'build a new facility' is actively pursued but until it becomes a reality how do we handle the interim? We noticed several contraindications of concern which included the downside to effectively hermetically sealing outgassing wooden drawers and reacting specimens in well-gasketed metal cabinets. As a follow up to that study we examined behavior of specimens and microclimates by tracking conditions within; plastic bagged specimens vs open trays vs closed vial containers within both metal and old wooden cabinets in both HVAC and non-HVAC environments.

The major question we hope to be able to answer is simple. Are we better off making sure that all specimens reside within a cabinet and drawer, or is it worth the time required to encapsulate specimens and are we accidentally generating new microclimates that are deleterious to the specimens?

Our data so far substantiates earlier indications that wooden drawers should not be used in tightly gasketed cabinets even under reasonable HVAC conditions. At a minimum, reacting specimens should be removed from such environments. Advantages of location within any cabinet, wood or metal, appear to be more significant than the improvements bestowed by increased encapsulation. Under certain climatic conditions that increase in encapsulation also creates a negative micro-environment.

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Inzinga, Angella

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NOTES:

COMMUNICATING RESEARCH COLLECTIONS: A DIGITAL APPROACH

Friday, 16 May—Concurrent General Session 3

The non-vertebrate type and figured paleontology collection at NPL (TNSC) comprises some 20,000 specimens derived from multiple source collections that have come to be part of the current repository. Our project, funded largely by NSF, is to upgrade that important research collection improving physical conditions and increasing global accessibility through digital approaches.

Several exciting developments in digital technology and associated software are enabling this project:

1. Improved SLR imaging
2. Improved flat bed scanning
3. Improved software to manipulate images
4. Improved portals through which databases can be queried

This presentation examines the initial stages of our project (points 1, 2 and 3) especially the methodology and protocols developed for imaging specimens and early results. So far there are 20,000 processed images of specimens and labels. Standard use of multiple focus composite images has increased the depth of field and dramatically improved discrimination of detail. Access to the high quality tiff format imagery is by loan request through a password protected web link.

Some unexpected results are already evident. One such result is a replacement technique for

ORAL PRESENTATION ABSTRACTS

standard silicon peels of very small specimens which can lower the wear and tear on fragile materials while providing excellent imagery of that specimen. Another surprising result was an immediate increase in loan requests for 'images' within the sector that we had tackled first, namely the echinoids, indicating that the quality of imagery met the reference need off that sector of the research world.

Providing such imagery on a global basis enables the research, educational and public sectors to see far more specimens than normally would be available to them without a specific visit to the repository or a direct specimen loan. The latter is never an option for general educators and the public within the type and figured collection, and the former can be prohibitively expensive to those who live far distant to these collections.

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NOTES:

THE COLLECTIONSWEB RCN: BUILDING A COMMUNITY OF NATURAL HISTORY COLLECTIONS

*Thursday, 15 May—Concurrent
Special Session 2*

The CollectionsWeb Research Coordination Network (RCN) is in its first year of funding. An update of activities and progress will be provided. A brief panel will address recent efforts to survey scientific collections in the United States and discuss the funding crisis for natural history collections. During 2007, seventeen different professional societies and scientific groups named members as Core Participants to the CollectionsWeb RCN. Discussions of the goals of CollectionsWeb were held at several professional society meetings. CollectionsWeb Workshop I: Opportunities and Challenges of Small Collections was held in mid-April 2008 in East Lansing, Michigan. A summary of this meeting will be presented. There will also be a presentation and discussion of how best to expand participation in a survey of natural history collections beyond the federally-held and federally-funded collections which were surveyed by the federal Interagency Working Group on Scientific Collections and the U.S. National Science Foundation, respectively. Representatives from both of these groups will participate in a brief panel to review the status of these surveys and to engage in discussion on the future of funding for natural history collections.

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NOTES:

ORAL PRESENTATION ABSTRACTS

NPS BIOLOGICAL COLLECTIONS FORUM: TO THE "O" WORD AND BEYOND

Thursday, 15 May—Special Session 1

On 2 April 2008, I represented SPNHC at the Biological Collections Forum in Washington, DC organized by the National Park Service. This meeting was attended by personnel from the Department of Interior, the National Park Service and representatives of five scientific societies and four natural history museums. The purpose of the meeting was to air and discuss the issues and perceptions surrounding natural history specimens collected on NPS lands and options that may be fruitful to pursue towards a cooperative, beneficial resolution. The meeting was very enlightening and all parties agreed that the "fruits" of this meeting should be shared beyond that room. This discussion session will be lead by the SPNHC and NSCA members who attended the meeting and at least one NPS staffer.

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NOTES:

THE 2007 SURVEYS AND FUTURE DIRECTIONS FOR SPNHC

Friday, 16 May—Concurrent Special Session 3

In March 2007, we prepared and distributed two surveys via SurveyMonkey.com to gather information from both SPNHC members and the broader collections community. While some questions were focussed on learning more about our members and what they felt the Society should be doing to assist them, we also wanted to learn more about how SPNHC is perceived by others. A 43-question survey was prepared for our membership and garnered 198 responses; 43% of the membership. A note inviting participation in a shorter, 18-question survey was posted on 15 list-servs; 575 of potentially several thousand professionals took the survey. Summaries of the results have been provided to SPNHC Committee Chairs to assist them in tailoring their activities to our members needs. This talk will focus on points arising from the work of the Long-Range Planning Sessional Committee in analyzing the results vs. the mission and goals of SPNHC to assure that we continue to be an active, relevant, and guiding group in the area of collections care and management.

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NOTES:

ORAL PRESENTATION ABSTRACTS

REHOUSING OF FLUID SPECIMENS IN THE COLLECTION OF MAMMALS AT THE SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY

Friday, 16 May—Concurrent General Session 4

The fluid-preserved collection in the Collection of Mammals at the Sam Noble Oklahoma Museum of Natural History consists of over 3,300 specimens. In 2006-2007, a complete inventory and rehousing of this collection took place as part of a collection renovation project funded by the Oklahoma Department of Wildlife Conservation. At the start of the project, only 1,500 specimens were cataloged, many more were backlogged and uncataloged, and most were found in inadequate storage conditions (low EtOH concentrations, metal lids, etc.). Primary data (e.g. specimen identification, locality, collection date), secondary (e.g., measurements, reproductive information) and tertiary data (e.g., ancillary collections such as tissues, karyotypes, or parasites) were verified and captured. Backlogged specimens were cataloged and integrated into the collection. Once specimens were identified and inventoried, all were reboxed and rearranged to reflect the most recent taxonomic authority. During the rehousing, it was determined that many of the original specimen tags were fragile and were comprised from a variety of different paper media. As a solution, all original

tags and jar labels were removed and replaced with a more stable label generated from a thermal printer. The original tags were transferred into a new archival system created to permanently house them. Specimen tags were removed, dried, and labeled to cross-reference them back to the collection catalog number. The collection is now more than twice its original size, consists of over 3,300 specimens, is housed and stored in accordance with best practices, and the tags are archived in six volumes of storage binders.

Revelez, Marcia A.

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Braun, Janet K.

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NOTES:

THE PROBLEM WITH "CELEBRITY" SPECIMENS: BALANCING THE NEEDS OF RESEARCH AND EXHIBITION

Friday, 16 May—Concurrent General Session 5

In January 2006, a northern bottlenose whale (*Hyperoodon ampullatus*) appeared in the River Thames, London, UK. Over the course of two days, the presence of the whale, its plight and attempted rescue, attracted the attention of the global media, and caused thousands of people to line the Thames to view the spectacle. Following the death of the animal, the Natural History Museum (NHM), London, took possession of the carcass for its Cetacea research collection, one of the best of its kind in the world.

Following the preparation of the skeleton of the whale, requests were received from researchers for access to the remains for their study. Similarly, requests were also received from both outside and within the NHM, asking for the display of the skeleton for both short and medium-term exhibitions.

This talk will examine the attempts by curators to cope with the demands of exhibition teams, whilst at the same time trying to meet the needs of visiting researchers. Suggestions for 'novel access and display' will be outlined, and opinions on best practice sought from conference delegates.

ORAL PRESENTATION ABSTRACTS

Sabin, Richard C.

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NOTES:

CONSERVATION AND RE-HOUSING OF THE HUMAN BODY SLICE EXHIBIT

Friday, 16 May—Concurrent General
Session 5

The Human Body Slice Exhibit is a collection of anatomical preparations consisting of four sagittal sections of the head and torso of an adult female and 26 transverse sections of an adult male. The specimens were prepared in the 1930s, apparently using a solution of chloral hydrate, glycerin, potassium acetate, and water. The bodies were frozen, cut into 12 cm thick slices with a band-saw, stained and treated with colored wax and latex, and preserved in formaldehyde. The preserved slices were mounted in glass cases with metal frames. Some of the specimens were shown in the Century of Progress exhibition at the 1933-1934 Chicago World's Fair, and used as teaching aids at the Loyola University medical school. The slices were loaned to the Museum of Science and Industry in 1943 for public exhibit and donated to the museum in 1992. The specimens were transferred to all acrylic cases in the 1960s or 1970s when the glass and metal cases began to leak as the metal frames corroded. Due to loss of preservative and damage to the acrylic, in 2004-2005 an IMLS grant was obtained to replace the cases and clean the specimens. The acrylic cases were cut open, the specimens de-attached, thoroughly washed with deionized water, cleaned of grease, oil, and other debris using cotton swabs, and rinsed

again with deionized water. The slices were then re-mounted on borosilicate (Borofloat®) glass backing plates with monofilament loops, and installed in custom-made borosilicate glass containers sealed with Hxtal Nyl-H epoxy. The new containers were filled with a commercial 10% v/v formaldehyde solution (one part formaldehyde with nine parts water) neutralized with monobasic and dibasic potassium salts (pH of 7.0). To reduce pressure on the container closure, the containers were filled to 95% of their volume. The long-range conservation plan for the Body Slice Exhibit includes monitoring changes in fluid levels, topping up the containers with a 10% buffered formaldehyde solution, monitoring changes in color, appearance, accumulation of precipitates or lipids in the containers, and other evidence of possible deterioration, and monitoring of temperature, relative humidity, and light levels in the exhibit.

Simmons, John E.

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McCarthy, Kathleen

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Ward, Patricia

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NOTES:

ORAL PRESENTATION ABSTRACTS

YOUR COLLECTION DATABASE: DATA FORTRESS OR DATA INTERCHANGE?

Friday, 16 May—Concurrent General Session 3

Populating a database with specimen information for an entire collection is a significant, long-term investment. Highly usable software can have a huge impact on the efficiency and productivity of data entry tasks. But collections database programs can act more like sentinels charged with keeping data out, rather than as facilitators of easy and effective information interchange. Software user interfaces can seem like fortresses with specimen data hurled at the castle gate hoping to penetrate. How can database applications streamline data entry and efficiently move collection data into complex biological database systems?

Once specimen information is inside a database fortress, it can be hard to mobilize. Labels and reports are high-priority output formats. DiGIR and TAPIR internet protocols have enabled remote access to structured data, through parallel queries on taxonomic discipline federations and global specimen data warehouses. But what other ways are there to integrate specimen data with internet applications and web services? How can the architecture of a collections software platform support other kinds of web-based interactions to enhance the accessibility, quality and utility of data already captured? What other kinds of networked software functions

can help curators and collections managers use their data more effectively to gain a strong return on their recurring investment in data management?

In this presentation we will use Specify 6 to illustrate various software and network approaches for mobilizing specimen data into and out of natural history databases for increasing the utility and research impact of collection data management.

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NOTES:

PLANTCOLLECTIONS—A COMMUNITY SOLUTION

Friday, 16 May—Concurrent General Session 3

PlantCollections – A Community Solution is funded by an IMLS National Leadership Grant in Building Digital Resources & an anonymous donor, to provide access over the WWW to natural history data stored in plant records databases.

The objectives of the project are the creation of a federated schema, upgrading the APGA website, creation of a WWW Portal & creation of sustainable infrastructure. Sixteen institutions participated in either Phase 1 or Phase 2 activities with 5 primary partners contributing significant resources. Five international institutions have joined the project (China, UK).

Scientists were surveyed to identify data they needed and the results were correlated with information available in plant record databases to define the federated schema. Google Base was chosen because it is open source, has quick responses & caches large volumes of data. The Portal for accessing the data integrates Web2.O advances and can access other data providers using RSS or ATOM. Living plant collections, herbaria, DNA, image & seed storage databases provide most data. A partnership with Morphbank has provided storage of digital images while Google Map/Earth have been used to create distribution maps.

ORAL PRESENTATION ABSTRACTS

Among the benefits to collections stewardship are the creation of an application that bridges technology, nationality, language, professional affiliations & cost concerns. It also supports the study of origins, conservation value and characteristics of plants and provides a mechanism to contrast cultivated environments with those of natural populations. It permits a data user to identify commercial sources for many botanic garden plants while providing insights in to plant propagation protocols. Data users may search and collate records from multiple institutions to create a report, map or image.

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NOTES:

TIED DOWN AT YOUR JOB BUT NEED A PROFESSIONAL DEGREE? GET ONLINE WITH THE MUSEUM STUDIES PROGRAM FROM THE UNIVERSITY OF OKLAHOMA

Friday, 16 May—Concurrent Special Session 3

This presentation focuses on professional training and a degree that is designed for the working professional. In two years, you can earn an MA in Liberal Studies through the Museum Studies Program Online offered at the University of Oklahoma. On campus residency is not required. The program has experienced Professors with academic and hands on knowledge and understanding of museums and collections. The advantages of the Program include that it is less expensive, is self-paced, does not take time away from jobs and families; can be completed by students who are rural areas, isolated, or face physical challenges, and learning can be immediately to the students home museums. Since beginning in 2004 with 12 students, over 150 students have been enrolled in the Program. The students have been highly motivated because they have made a substantial commitment in expense and time. Students have come from all sizes and types of museums located in widely different geographic sites and cultural backgrounds—potentially worldwide—and may have numerous training or learning experiences that they can contribute. The faculty has maintained a high level of interaction and

ORAL PRESENTATION ABSTRACTS

focuses on facilitated but rigorous independent research. Evaluations and indications have been that students not only gained a high level of learning but were able to advance professionally. It appears that the Online program has been preparing a new generation of creative and thoughtful professionals that may go on to become change agents and leaders who have been trained and equipped to enhance the future of museums and collections.

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NOTES:

THE GREAT MIGRATION— INTEGRATING AN HERBARIUM MOVE WITH PEST MANAGEMENT EFFORTS

*Thursday, 15 May—Concurrent
General Session 2*

Over the past 10-15 years, several large herbaria have found themselves in the position of having to move either part or all of their collections into new or refurbished facilities. The herbarium along with the entire museum at the California Academy of Sciences has undertaken such a move twice during the past 4 years, first into a temporary facility and now into our permanent, new building. During our time in the temporary facility, we discovered a beetle infestation that we have never been able to eliminate completely. We have taken the opportunity afforded by our move into the new building to place our entire collection into a freezer warehouse during the time that our cabinets were being relocated. There were two primary concerns. First and foremost, the safety of the collections had to be considered. Second, we had to come up with a system to ensure that when we received the collections in the new building we would be able to get them back into the right place. We were able to come up with a system that in the end worked extremely well, enabling us to transport the collections safely, with a minimum of wear and tear, and allowing us to return the collections to their proper locations using collection handlers who had no knowledge of our systematic organization.

The best part is that we were able to both pack and unpack the collections in exactly half of the allotted time for the move.

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NOTES:

ORAL PRESENTATION ABSTRACTS

COLLECTIONS CARE VERSUS CUSTOMER CARE: HOW DO YOU PROVIDE ACCESS FOR VISITING RESEARCHERS WITHOUT COMPROMISING CURATION?

Friday, 16 May—Concurrent General Session 5

A peer group review of the Department of Zoology at the Natural History Museum, served to highlight the increasing demands on our collections at all levels, both internally: through exhibitions, media and Museum scientists, and externally: again through exhibitions, the media, artists, research scientists at other institutions etc. The collections management staff of 24 currently provide access to about 5,000 visitor days, send 800 scientific & exhibition loans and answer 20,000 enquiries a year, leaving little time for collections care. The review helped raise awareness of this growing crisis with senior Museum management and finally allowed us to start looking at ways to alleviate the pressure. This was initiated in a number of ways:

- Agreement for collections managers to close sections, allowing for team curation weeks.
- Electronic calendars, allowing all members of a curation team to see what's booked in advance, allowing control of visitor numbers.
- Agreement for longer turn-around time to process loans without fear of comeback.
- Development of new collections management pages outlining our

visitor and loans policies, so that expectations are not too high and giving staff a framework to point to as well as creating standards across the Department.

- Development of a questionnaire that will begin to look at the level of service we were able to offer both visiting researchers and people requiring loans.

This talk will outline a summary of each of these initiatives and hopefully provide a focus for delegates to start discussing what is for many of us a serious issue. It will allow the gathering of advice from those who have had to tackle similar issues and already developed viable solutions.

Valentine, Clare

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NOTES:

THE CONSORTIUM OF CALIFORNIA HERBARIA—A MODEL FOR COLLECTIONS

Friday, 16 May—Concurrent General Session 3

The Consortium of California Herbaria (CCH) includes collections of varying sizes, from a diverse range of institutions such as University Herbaria, Natural History Museums, private institutions, non-profit institutions, and State departments, including three of the ten largest herbaria in the United States (the three largest in California). The online searchable database of the CCH includes almost 1,000,000 herbarium specimen records from California, proving a wealth of data on the flora of the state. The database's enormous capabilities include mapping and several specially developed tools to help the contributing institutions edit their own data and cut down data-entry time by downloading the data (either partial or total) for duplicate specimens. The Consortium has been seeking funding as a unit with regional nodes, and has received support from the National Science Foundation to organize its goals, and more recently funding from the Global Biodiversity Information Facility to geo-reference specimens of invasive species across the consortium. The Mellon Foundation is also funding Consortium members' efforts to digitize their type specimen holding. This partnership demonstrates how institutions can work together, and we hope that the CCH database can serve as a model for other collections communities.

ORAL PRESENTATION ABSTRACTS

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NOTES:

DEVELOPMENT OF BEST PRACTICES AND STANDARDS FOR PLANT GENE BANKS

Friday, 16 May—Concurrent Special Session 5

Genebanks assemble, preserve and distribute genetic resources that are critical for research on biological diversity in a changing world. Traditional users of plant genebanks for crop improvement and rare specimen preservation are now joined by scientists from increasingly diverse disciplines who need access to broad collections of quality-assured materials with good physical integrity plus accurate phenotypic, genotypic, ecological and provenance data. We recognize that these needs are similar to those of the users of natural history collections and unified methods for database documentation will facilitate future interoperabilities across disciplines. The impact of genebanks is contingent on our ability to anticipate future uses and applications of genetic resources in the broadest context.

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NOTES:

BIODIVERSITY, GLOBAL CHANGE AND MUSEUM COLLECTIONS: CHALLENGES IN MANAGING NATURAL HISTORY COLLECTIONS IN THE 21ST CENTURY

Thursday, 15 May—Plenary Session

There are many challenges facing natural history collections in the 21st century. According to Heritage Preservation, there are more than 820 million natural history specimens in the United States alone. While many institutions are enjoying rejuvenation others continue to struggle to find their niche. Also according to the Heritage Health Index there are two challenges that all museum need to address, i.e., disaster planning and improved climate and environmental control for collection storage.

Another area that the HHI identified that needs attention is improved training and education for collections care and management. With an increase demand for natural history collections for new and innovative research, there is an increased demand for making collection information openly accessible and available. These needs require an investment in new technologies from collecting methods (e.g., tissue sampling for molecular systematics) digitization (e.g., georeferencing), which require the continual training and education. The development of our collection staff is critical to the success of any collection management program and natural history museum.

ORAL PRESENTATION ABSTRACTS

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POSTER ABSTRACTS

A SYMBIOTIC RELATIONSHIP BETWEEN *ECHINOCORYS* AND BIVALVES IN THE LATE CRETACEOUS OF NORTH ALBORZ MOUNTAIN RANGE, IRAN

A specimen of *Echinocorys scutata* bearing traces of many bivalves is described from the late Cretaceous of the North Alborz Mountain Range. Echinoderms are unusual amongst marine invertebrates in that their skeleton is mesodermal, and thus will respond through abnormal growth to parasitic and commensal associations. Among the numerous groups of invertebrates associated with sea urchins, only a few are tightly attached to the external surface of the host, leaving visible damage on the skeleton. The nature of those symbiotic relationships can be described as commensalisms. *Echinocorys* was the dominant component of the macrobenthic community and was a suitable host for symbiotic interactions because of its size and assumed longevity.

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NOTES:

SPECIFY 6.0—A WELL-SUPPORTED, FREE, OPEN SOURCE, WEB 2.0, WINDOWS, MACOS X, LINUX, AND STATE-OF-THE-ART, COLLECTIONS COMPUTING PLATFORM

Specify 6.0 is an innovative collections computing platform supported in the free and open source software (FOSS) model. It has an architecture designed for development collaboration and for 'plugging-in' new software functions. Specify's cross-platform (Windows, MacOS X, and Linux) compatibility and initial use of MySQL allows users to operate their preferred workstation types, while supporting a mainstream, open-source database manager with any of several server operating systems.

Specify 6 and its embedded WorkBench expand options for efficient data entry, interactions with web services and for provisioning collection data to the research community. Data acquisition, validation and analysis tools are integrated into Specify. They support basic research methods on collection data, but also extend specimen data processing by accessing internet web services. In the near future, Specify's internet enabled workflows will include cross-collection data re-use and comparison.

Specify's expanded, comprehensive data model and its wholly customizable and refined user interface offer powerful capabilities for museum-wide data integration.

For example, Specify sites can search on specimen holdings across all disciplines at the institution, document registration and conservation actions across collections, and easily manage binary file attachments like images, sounds or documents, associated with various collection data types such as taxa, specimens and localities. Specify 6 also has a tree-based interface for intuitive, interactive, drag-and-drop editing of taxonomic, stratigraphic and geographic information.

Specify 6 represents the future of biodiversity collections computing. The Specify Software Project's 20-year track record and ongoing support model ensures that Specify will continue to meet the data management requirements of collection staff and of researchers managing specimen data from multiple sources. Specify's open source collaboration model, internet software interfaces and modular, pluggable design provide the cost effectiveness, flexibility and extensibility for collections to participate electronically in broader computational frameworks and initiatives in environmental and evolutionary biology.

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POSTER ABSTRACTS

VIRTUAL COLLECTIONS ACCESS FOR RESEARCH, TEACHING AND OUTREACH: CHALLENGES AND SOLUTIONS FOR DIGITIZING COLLECTIONS

The University of Iowa Paleontology Repository holds the fifth largest university collection in the U.S. with over 1 million specimens, but only 10% of the collection is catalogued and only 1% of specimen records accessible on-line. To help fulfill the Paleontology Repository's contribution to the University's mission of teaching, research and public service, a project was developed to make the collections more accessible to researchers, students and the public. In 2006 the Paleontology Repository received funding from the National Science Foundation to realize this goal by digitizing priority sections of the collections. The "Computerization Project" is now in its third year and by completion in March 2009 an estimated 70,000 records will have been added to the specimen catalogue, and over 4000 images will be available to researchers and the public. In addition, a novel way of bringing virtual collections into the classroom is being developed, creating a Tropical America Virtual Field School that puts a large collection of marine specimens from the Caribbean into field context and provides fun, on-line, interactive challenges for university students and school pupils.

Criteria for prioritizing collections included research potential,

availability of associated information, risk of data loss over time, potential for data sharing with other projects, and historical significance. Four major tasks were identified: 1) cataloguing of undocumented material; 2) creation of a Digital Image Project to provide high quality photographs of type material; 3) data-sharing with other database initiatives; 4) enhanced interactive web-based education and outreach component. Selected collections include the Micromammal Collection (potential datasharing with FAUNMAP), Paleozoic Coral Collection (historical documentation preservation); the Amoco Conodont Collection (primary cataloguing of c. 30,000 slides); the Amoco South Florida Collection (c. 900 lots from 300 Caribbean localities); the Midwest Echinoderm Collection (over 10 tons of material bequeathed by local amateur paleontologists), the Pope Collection (300 bulk samples from now inaccessible Iowa localities); and the trilobite and Neogene coral research collections (integration into the type collection and access to associated digital images).

New experiences and challenges we are facing so far during this project include:

- 1) preparation of large quantities of data associated with the Amoco Conodont Collection for transfer to Specify;
- 2) integration of images with Specify and creation of web-queries to display images;
- 3) digitization of hard copy data associated with the

- Amoco Conodont Collection for integration with Specify;
- 4) digitization standards for images and hard copy data;
- 5) storage of incredibly delicate silicified trilobite material;
- 6) connecting the Paleontology Repository's Specify Collections Database to multiple portals (Paleontology Portal, GBIF, and NMITA); and
- 7) creation of web-based queries for data stored in an Oracle database and development of a virtual collection, based on a real one.

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NOTES:

POSTER ABSTRACTS

A CLOUD OF BUTTERFLIES, A KALEIDOSCOPE OF LEPIDOPTERISTS

Few subjects in natural history attract the interest of serious amateurs as do butterflies. Just as today, over the years people of very diverse backgrounds, training and experience have expended considerable resources on collecting and documenting the "diurnal lepidoptera", and in the early 20th century many areas of North America were yet to be heavily developed, and thus were still home to diverse butterfly fauna.

In 1951, a modest collection of insects – mostly butterflies – was transferred from the Los Angeles County Museum of Natural History to the Riverside Municipal Museum. Documentation of the collection was limited primarily to the data on the specimen labels, and this data was not systematically reviewed or captured until the mid 1990s. Through analysis of these label data sets, the Riverside Museum has begun to learn much more about the origins of the specimens, the activities of the individual lepidopterists who collected them, and the history of entomology in Southern California.

Project methods involved manual inventory of the collection and recording of data sets using computer software; Internet searches for background information on the collectors and the localities where the specimens originated; archive searches for further materials

documenting the careers of some of the leading collectors; georeferencing of the specimens using gazetteers and on-line resources, and analysis of the collecting activities during that time period using Geographic Information Systems.

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NOTES:

MOLD REMOVAL AND REHOUSING OF THE ICHTHYOLOGY AND HERPETOLOGY SKELETAL COLLECTIONS AT THE NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY (LACM)

There are approximately 5,000 fish and 3,000 herpetological skeletons at the LACM. In October of 2003 we noticed our Ichthyology and Herpetology skeletal collections were infected with a fungus, principally *Aspergillus fumigatus*. We conducted a study to determine the best way to treat skeletons and found that 70% ethanol is a non-toxic, effective and inexpensive fungicide. Within our collections approximately 12% fish and 4% herpetological skeletons were visibly infected. We received an NSF grant to decontaminate and upgrade storage for our skeletal holdings. We treated infected skeletons with 70% ethanol, manually removing visible mold with HEPA (high efficiency particulate air filtered) vacuums, brushes, and forceps. Decontamination of specimens was carried out by a commercial fungus remediation firm and monitored by an environmental consultant. Once free of mold, specimens were heat sealed in 4 mil plastic bags and stored in new plastic boxes. Skeletons not visibly contaminated and/or uncatalogued were brushed clean, catalogued and stored. To evaluate performance of different storage types, treated skeletons were stored in new plastic boxes and divided into

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four rehousing groups: (1) sealed bags (2) sealed bags with desiccant (3) desiccant only or (4) no bag or desiccant. Periodic agar plate sampling showed no fungal growth in a subset of the four rehousing groups over the course of two years. However, one specimen stored without bag or desiccant did display fungal growth after treatment. It appears that this method of mold removal and specimen storage is successful for treating fish and herpetological skeletons. We recommend storage in plastic boxes and bags, to prevent infestation and to contain the spread of infection if it does occur.

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REPATRIATION OF BIODIVERSITY INFORMATION: A CASE STUDY WITH ECUADORIAN MAMMALS DEPOSITED IN NATURAL HISTORY COLLECTIONS OF THE WORLD

Natural history collections are important for the study, understanding, and conservation of biodiversity of our planet. Since the 19th century, increasing collections of fauna and flora from Ecuador have been deposited in numerous institutions around the world. These collections have allowed a better knowledge of distributional patterns and systematics of Neotropical biodiversity. An extensive survey based on scientific literature, natural history museum databases, and personal communications with museum staff was carried out to identify the institutions that hold mammals from Ecuador. The information generated by the institutions with Ecuadorian collections allowed us to analyze taxonomic groups, surveyed areas within the country, and the chronology of collections. A total of 42 institutions from South America, North America, and Europe were identified as holding Ecuadorian mammals. An effective collaboration of 26 institutions allowed the organization and implementation of a central database containing approximately 23,000 records. In the case of taxonomic groups, phyllostomid bats constituted the most commonly collected mammals throughout the country, followed by cricetid rodents. By natural regions, the Amazon basin forest of

eastern Ecuador was the most surveyed region across the country. Chronologically, the oldest collections were made during the last decades of 19th century, whereas the most collections have been performed since the 1980's. This project provides a general overview of the current status of collections of Ecuadorian mammals. It also establishes the need to update information from local museums and collections made after 2004.

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NOTES:

POSTER ABSTRACTS

DIGITAL ATLAS OF OKLAHOMA MAMMALS: DATA CAPTURE AND GEOREFERENCING FOR MUSEUM RECORDS OF OKLAHOMA MAMMALS

General information about the distribution of Oklahoma mammals is available from several sources. However, there is no comprehensive, searchable, georeferenced database of Oklahoma mammals that are vouchered in Oklahoma Museum Collections. Oklahoma State University Collection of Vertebrates (OSUCOV) is working in collaboration with Sam Noble Oklahoma Museum of Natural History (SNOMNH), Oklahoma Cooperative Fish and Wildlife Research Unit (OCFWRU), and the Oklahoma Department of Wildlife Conservation (ODWC) to develop the Digital Atlas of Oklahoma Mammals (DAOM). DAOM will compile information currently present in paper ledgers, taxonomic card files, geographic card files, and field notes into a searchable, electronic format. Conversion of these records into a digital format will aid in their preservation and increase their searchability and ease of use. To date ca. 13000 records from OSUCOV have been entered and first-tier proofing against the paper catalogs and second-tier proofing against specimen tags is 90% complete. Additional, proofing against taxonomic and geographic card files will commence in the near future. All specimens will be georeferenced and the entire database made available to the general public, researchers, and other museums.

Although in its early stages, DAOM has proved a useful tool for OSUCOV staff searching for specific holdings in the mammal collection and upon completion will be invaluable in the operation of OSUCOV and other museums around Oklahoma.

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NOTES:

DIGITALIZING OF MUSEUM SPECIMENS: BUILDING LIBRARY FOR WORLDWIDE ACCESS

A goal of natural history collections in the 21st century should be to create and share digital images and databases of specimens, procedures in the past considered impossible. Creating digital images of special collections of biological specimens and placing those on-line will indicate a significant progress. Additional material should be added through time. Digitalizing museum specimens and data open the possibility to automate processing, increase efficiency of taxonomic processing, and reduce cost and risk of loaning delicate and valuable specimens. Capturing digital identification, collection label data and associated images allows them to be more easily corrected and updated. The digitalization permits museums to post on-line selected specimens that are generally not available for loan such as type or unique specimens, contaminated specimens, or endangered species. The access to electronic images will allow scientist and the public worldwide to examine these materials without the need for touching the actual specimen thus improving research opportunities. This will allow recognition of what, if any, additional type material should be examined in more detail for systematic studies and thus greatly reduce the need for travel and requests for the loan of material. Nevertheless, it should be recognized that, in many

POSTER ABSTRACTS

cases, having access to digital images will not be a substitute for researchers physically examining critical specimens. Digital images at low resolution and limited angle of views cannot show all the details that might be needed by the researchers. Certainly future studies with SEM, MRI, CT scans, will also have to be undertaken. All images created by examination (either by the museum staff or researchers) should become a part of that specimens digital library. While the efforts needed for the initial digitalization will be high, the creation of the libraries will reduce the need for loans and visits, thus freeing up staff. Currently many institutions have taken advantage of new technology and the number of images of museum specimens accessible over the internet is rapidly increasing. These projects contribute to the maintenance, increase research, and conservation of biological collections. Online exhibition allows the examination from a much larger worldwide community 24 hours a day.

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USA

A TOO WELL-KEPT SECRET: THE COLLECTION OF VERTEBRATES AT OKLAHOMA STATE UNIVERSITY

The Oklahoma State University Collection of Vertebrates (OSUCOV) dates from the early 1900s; includes specimens over 120 years old; and consists of collections of fishes, amphibians, reptiles, birds, mammals, and frozen tissues. The Collection of Fishes has grown to more than 30,000 lots today. Specimens are primarily from Oklahoma (62%), but 45 states are represented, with an emphasis on the southern U.S. from Florida to California. An especially significant series comprises 1,866 lots from Nepal. This series, among the world's most extensive collections of Nepalese fishes, is an irreplaceable resource having formed the basis for descriptions of several new species in the last few years. The catalogue for the Collection of Fishes is computerized and the collection is curated by Anthony A. Echelle. Earliest specimens in the Collection of Amphibians and Reptiles date from 1930. Current holdings include ca. 5,700 catalogued specimens of reptiles and 7,500 catalogued specimens of amphibians. OSUCOV has among the largest collections of the Oklahoma salamander (*Eurycea tynerensis*) and the grotto salamander (*Typhlotriton spelaeus*). Holdings for common species of Oklahoma amphibians and reptiles represent a continuous temporal sample over the last 60-70 years. There also is a sizeable collection of Chilean

lizards, including 17 species of *Liolaemus* and voucher specimens of *L. dorbignyi* (formerly *L. puritamensis*), a species new to Chile in 1989. The Collection of Amphibians and Reptiles is curated by Stanley F. Fox. The first bird in OSUCOV dates from 1923. Most of 2,500 skins are from Oklahoma but there are also 129 specimens from the 1960s in the Philippines. The Collection of Birds also contains 300 clutches of eggs dating from 1880. The Collection of Birds is curated by Craig A. Davis. The first mammal catalogued into OSUCOV dates from 1924. Between 1947 and 1985, Bryan P. Glass expanded the Collection from a regional holding to a collection of international significance in both taxonomic and geographic representation. The Mammal Collection has grown to include more than 13,000 specimens from all 50 states and 50 other countries. The Collection is one of the most taxonomically diverse collections at any university in the U.S. among the most significant components are the more than 1,000 specimens from Ethiopia. The Collection of Mammals is curated by Karen McBee and the catalogue is computerized. The Collection of Frozen Tissues was initiated in 1990 by McBee and now is curated by Ron Van Den Bussche. It contains tissue biopsies from ca. 9,500 animals, primarily mammals, that are vouchered in the other collections. Unique holdings are series of tissues from animals collected from contaminated sites (EPA Superfund sites, industrial waste dumps, and strip mines) along

POSTER ABSTRACTS

with series of reference tissues from animals collected from undisturbed habitats.

McBee, Karen

DEPARTMENT OF ZOOLOGY AND COLLECTION OF VERTEBRATES, OKLAHOMA STATE UNIVERSITY, STILLWATER, OK USA

Echelle, Anthony A.

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Fox, Stanley F.

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Davis, Craig A.

DEPARTMENT OF NATURAL RESOURCE ECOLOGY AND MANAGEMENT AND COLLECTION OF VERTEBRATES, OKLAHOMA STATE UNIVERSITY, STILLWATER, OK USA

Van Den Bussche, Ronald A.

DEPARTMENT OF ZOOLOGY AND COLLECTION OF VERTEBRATES, OKLAHOMA STATE UNIVERSITY, STILLWATER, OK USA

NOTES:

BEYOND THE COLLECTION ROOM AND INTO THE GRAND FOYER

Many activities vie for our attention. Our museum audiences today make choices about what they want to see, when to see it, and how to experience it. No longer is it good enough to only have visual experiences. Museum audiences are savvy visitors expecting unique and stimulating visits which engage all of their senses. As a result, museums everywhere are challenged to create learning environments which also entertain, dazzle, and create a sense of adventure.

Curatorial staff working with research specimens are in an excellent position to contribute to such stimulating experiences. More and more frequently we are called upon to interact directly with our museum patrons. Whether it is watching a magnified image of barnacles actively feeding or observing a paleontologist carefully brushing dirt from around a *Tyrannosaurus* leg bone, engaged audiences are excited about learning more about our natural world.

To successfully exhibit and incorporate museum research specimens, collaboration between curatorial staff, conservators, exhibit designers and builders is essential. Production designers envision and communicate the overall exhibit design. Exhibit staff understand how to present the best lighting, sound, tactile, and case design. Collection managers contribute their

expertise of their specimens' needs – their fragility and environmental requirements. We share some examples of recent experiences involving formal and informal exhibits and demonstrations. We address the most frequent visitor question: IS IT REAL?

Omura, Kathy

NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY, 900 EXPOSITION BLVD. LOS ANGELES, CA 90007 USA

NOTES:

POSTER ABSTRACTS

OKLAHOMA COLLECTION OF GENOMIC RESOURCES: THE NEWEST COLLECTION AT THE SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY

The Sam Noble Oklahoma Museum of Natural History established its newest collection, the Oklahoma Collection of Genomic Resources (OCGR) in 2006. The organization and management of the collection is modeled after the Ambrose Monell Collection for Molecular and Microbial Research at the American Museum of Natural History. Partnered with other life science units at the University of Oklahoma (Department of Zoology, Oklahoma Biological Survey, and University of Oklahoma Biological Station), the OCGR provides researchers with genetic material from specimens vouchered (traditional or e-Voucher) in the museum's curated departmental collections (Mammalogy, Herpetology [Reptiles and Amphibians], Ichthyology, Ornithology, and Recent Invertebrates). By providing a centralized repository, the SNOMNH can achieve institutional oversight where standard procedures and best practices can be applied. Currently, more than 14,300 aliquots for more than 5,300 specimens are cataloged, databased, and bar-coded. Tissues of 10 holotypes and paratypes are stored separately in accordance with the museum's collection emergency and response plan. A website is available facilitating search capabilities and loan requests.

An advisory committee serves as consultants and assists in the development of broad, long-range initiatives.

Revelez, Marcia A.

SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY, 2401 CHAUTAUQUA AVENUE, UNIVERSITY OF OKLAHOMA, NORMAN, OK 73072 USA

Braun, Janet K.

SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY, 2401 CHAUTAUQUA AVENUE, UNIVERSITY OF OKLAHOMA, NORMAN, OK 73072 USA

NOTES:

INTEGRATING PEST MANAGEMENT: A MODEL FOR SUCCESSFUL TEAMWORK FOR FACILITIES OF ALL SIZES

The power behind the theory of Integrated Pest Management (IPM) is the concept of integration. One year ago the Denver Museum of Nature & Science (DMNS) pioneered an Integrated Pest Management Task Force, building upon the institution's existing IPM program. IPM at any size institution can be complex, and is especially so at the DMNS. The building is 520,000 square feet and houses over 1 million artifacts in exhibits and 49 different storage locations. Successes stem from the design of the Task Force because it integrates members from the key departments that have an impact on pest management: Building Services, Building Operations, Conservation, Exhibits, Food Services and Catering, Security, and a representative from our professional pest control company. Additional oversight is provided by the Museum Conservator, and Marketing, Catering, and Collections Management staff. The IPM Task Force meets on a monthly basis to discuss strategies and carry out IPM improvements in the facility. Accomplishments have involved every area of the museum, including extensive structural and housekeeping facility improvements by internal staff, collaboration with Food Services and Catering departments, and increased trainings and communication with all of the museum staff. This has resulted

POSTER ABSTRACTS

in reductions of infestations in exhibit, collection, and public areas. The Denver Museum of Nature & Science IPM Task Force model is one that has proven itself to work in a large facility, and can be adapted to institutions of all sizes.

Sabo, Bridget

DENVER MUSEUM OF NATURE & SCIENCE,
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Calder, James

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Radliff, Carol

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NOTES:

VOLUNTEER MANAGEMENT AT RANCHO SANTA ANA BOTANIC GARDENS

Budgetary limitations are an almost universal concern for natural history collections. Many institutions rely heavily on volunteer work for daily tasks, but volunteers are hardly free labor. They must be recruited, trained, and hopefully retained, and doing so takes the time and resources of the institutional staff. At Rancho Santa Ana Botanic Garden, approximately 220 regular volunteers have become essential to our operation. The Volunteer Organization Board and the Volunteer Manager (the latter a paid staff position) help teach prospective volunteers about the mission statement and goals of the institution and its departments as well as insure that each newcomer receives proper training for his or her chosen position. Taking this extra effort in the beginning of each volunteer's tenure allows them to feel connected to a larger aspect of the Garden and increases the likelihood that they will serve for many years to come, and perhaps recruit others to join as well. Social events like luncheons and volunteer field trips help solidify the institution as an excellent place for personal enrichment as well, further cementing the intrinsic benefits of volunteering to the participant. In the herbarium specifically, we rely on almost 20 volunteers collectively donating over 1350 hours of their time every year. Volunteers are responsible for almost all of our specimen mounting and lettering

of specimen folders, as well as a significant proportion of our specimen label databasing. They also participate in herbarium-sponsored botanical field work, and in special curatorial projects like insect monitoring and processing of backlog collections. We try to match all our volunteers with something that will be enjoyable for them, whether a team project with built-in social interaction or a solo task they can take ownership of and fit to their schedule. A solid volunteer program is greatly beneficial to both the organization and the participating individual and can help both parties achieve their respective goals.

Siedschlag, Sarah

RANCHO SANTA ANA BOTANIC GARDEN,
1500 N. COLLEGE AVE, CLAREMONT, CA
91711 USA

NOTES:

POSTER ABSTRACTS

RE-CURATION OF THE MALACOLOGY COLLECTION AT THE SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY

The malacology collection at the Sam Noble Oklahoma Museum of Natural History is currently being rehoused and recurated with funding from the Institute of Museum and Library Services. This collection contains over 7000 lots, many of which were collected in Oklahoma before the 1950s. The project involves purchase of new museum cabinets and archival storage materials. The project will secure the safety of valuable specimens and make them more easily accessible for scientific study.

Smith-Patten, Brenda D.

SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY, NORMAN, OK 73072

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USA

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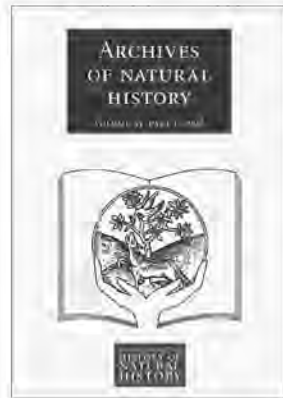
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CHALLENGES OF BALANCING COLLECTION
STEWARDSHIP AND TECHNOLOGY
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TABLE 6

Alcomon provides a simple instrument used to monitor the ethanol concentration in fluid-preserved specimens.

AMERICAN ASSOCIATION OF MUSEUMS

TABLE 26

AAM has been bringing museums together since 1906, helping to develop standards and best practices, gathering and sharing knowledge, and providing advocacy on issues of concern to the entire museum community.

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

TABLE 13

AIBS is a nonprofit 501 ©(3) scientific association dedicated to advancing biological research and education for the welfare of society. AIBS advances its mission through membership activities in research, education, and public policy.

ARCHIVAL PRODUCTS

TABLE 1 (LITERATURE ONLY)

Archival Products is committed to serving you with archival quality elegant solutions for preservation needs. Specializing in quality preservation enclosures we offer expansion storage envelopes, boxes, binders, storage bags, various pamphlet binders and other storage enclosures.

ATLAS FINE ART SERVICE

TABLE 16

Atlas Fine Art Service provides exhibition design and fabrication, collections services and mount-making.

BORROUGHS CORPORATION

TABLE 9

Borroughs museum storage products are designed to be versatile and flexible in any application. We manufacture a complete line of cabinets, shelving, high-density mobile units, art screens, and preservation tanks. Visit us at www.borroughs.com or call toll free 1-866-666-0061.

BRADY CORPORATION

TABLE 3

Brady identifies and protects premises, products, and people with high performance barcode labels, printers, and software.

THE CAMPBELL CENTER

TABLE 1 (LITERATURE ONLY)

The Campbell Center offers professional development coursework to meet the training needs of individuals who work in the fields of culture resource management. The Center offers courses in collections care, historic preservation, and conservation refreshers for mid-career professionals.

CASCADE GROUP, INC.

TABLE 1 (LITERATURE ONLY)

Cascade can help you with an unstable environment that can cause irreversible damage to your objects...all it needs is a little self control. We specialize in alarms, control systems, dataloggers, and radiologgers.

COLLEGE OF LIBERAL STUDIES, UNIVERSITY OF OKLAHOMA

TABLE 17

The mission of the CLS is to provide the highest quality interdisciplinary education to non-traditional students. The

College utilizes its setting within a comprehensive research university to enhance students' skills as life-long learners, thereby enriching their lives at the personal and professional levels and encouraging them to participate in the work of active citizenship.

DELTA DESIGNS, LTD.

TABLE 21

Delta Designs, Ltd. specializes in the custom design, professional manufacture, and personal installation of quality museum storage equipment.

DGI TRAINING CENTER

TABLE 22

DGI Training Center is the largest provider of dangerous goods/hazardous materials transportation training seminars in the U.S., including IATA (air), IMDG (water), 49CFR (surface), public, onsite, and online seminars.

DORFMAN MUSEUM FIGURES

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TRADE SHOW EXHIBITORS

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GAYLORD BROS.

TABLE 7

Gaylord Bros. supplies museums with the finest quality materials to handle, store, and preserve natural history collections.

GBIF (GLOBAL BIODIVERSITY INFORMATION FACILITY)

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GBIF aims to be the preferred gateway, worldwide, to a comprehensive, distributed array of primary species-occurrence data. Achieving the GBIF vision requires: inviting participation in a global initiative; promoting open access to primary scientific data; and building an open-source information architecture.

GETTY CONSERVATION INSTITUTE

TABLE 1 (LITERATURE ONLY)

The Getty Conservation Institute works internationally to advance conservation practice in the visual arts – broadly interpreted to include objects, collections, architecture, and sites. The Institute serves the conservation community through scientific research, education and training, model field projects, and the dissemination of the results of both its own work and the work of others in the field.

HERITAGE PRESERVATION

TABLE 1 (LITERATURE ONLY)

Heritage Preservation is working

to save the objects that embody our history, partnering with conservators, museums, civic groups, and concerned individuals across the nation who care about preserving our past.

THE HOLLINGER CORPORATION

TABLE 4

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KE SOFTWARE INC.

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KE EMu is the world's premier collection management system—the first choice of leading museums around the globe.

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NATURAL HISTORY MAGAZINE

TABLE 8

Natural History is the authoritative voice that curious readers turn to for informed insights and understanding of nature.

NATURAL SCIENCE COLLECTIONS ALLIANCE

TABLE 14

The Natural Science Collections Alliance is a Washington, D.C.-based nonprofit association that supports natural science collections, their human resources, the institutions that house them, and their research activities for the benefit of science and society. Membership in the NSC Alliance links you to a network of institutions, scientists and other professionals in North America through which you can share news, information and common concerns—and help shape the future of our community.

SILVERBIOLOGY

TABLE 25

SilverBiology provides biodiversity informatics software, services, web tools, and consulting. We create and design interfaces to collection databases, web 2.0 tools, and consulting with current TDWG standards and other third party tools for integration. Please visit our website at www.SilverBiology.com

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TRADE SHOW EXHIBITORS

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TLS PRINTING

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UNIVERSITY PRODUCTS, INC.

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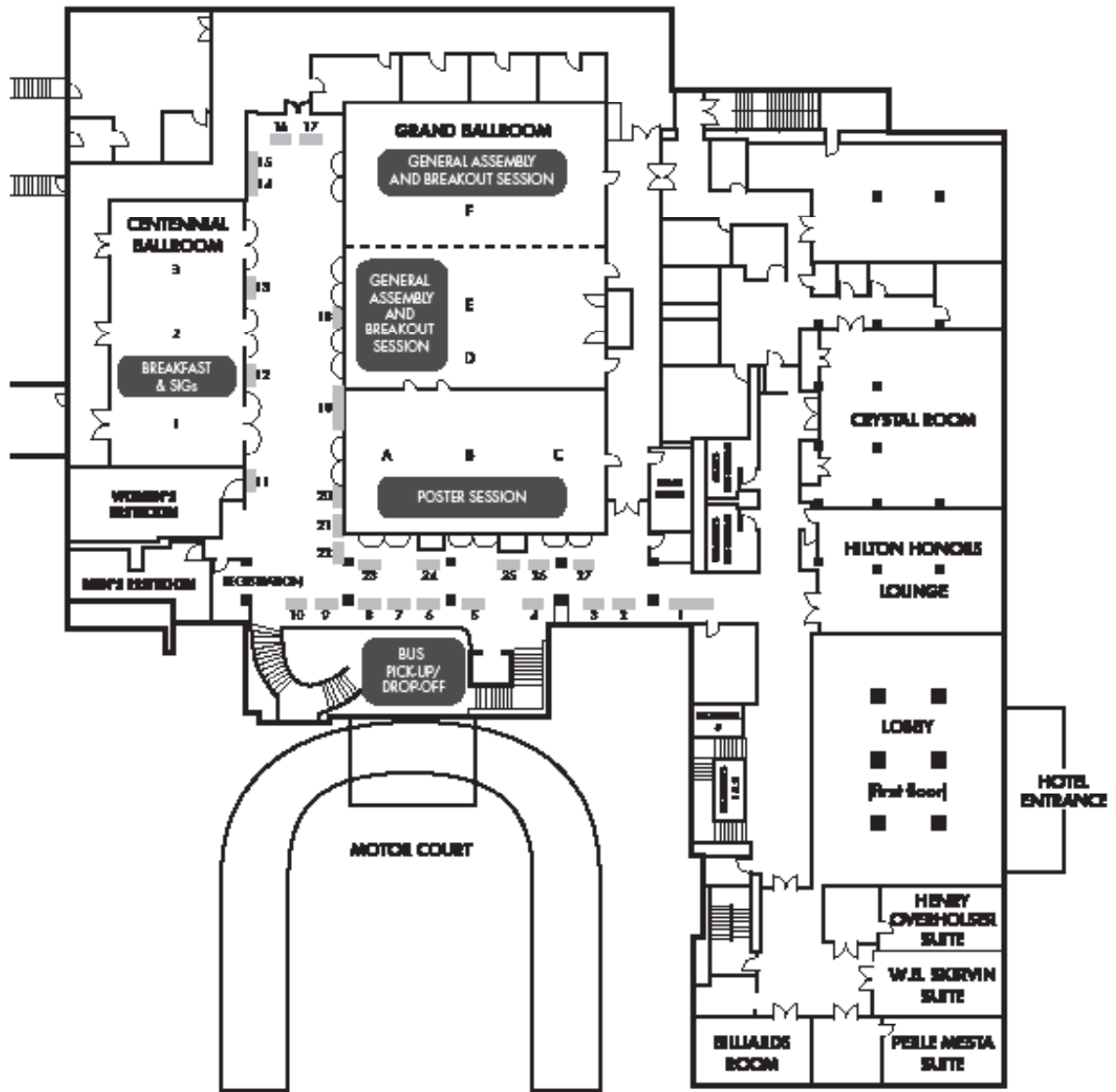
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