

ENTOMOLOGICAL COLLECTIONS NETWORK



- **Schedule of Events**
- **2008 Sponsors**
- **2009 meeting info!**



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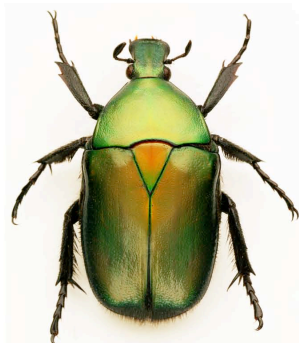
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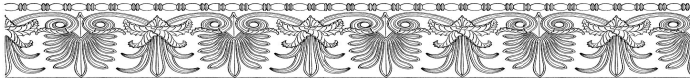
Welcome to the 2008 Annual Meeting of the Entomological Collections Network in Reno, Nevada. Thank you for attending and your continued support of the ECN.

This year's meeting begins with a retrospective of the ECN's history and concludes with presentations that look into the future of smaller entomological collections and natural history collections in general. Between these talks are presentations covering a range of topics associated with entomological museums and the specimens therein.

We hope you will find this year's meeting informative and benefit from the opportunity to share ideas and socialize with the scientists, curators and collectors that give ECN its reputation as such a vibrant and dynamic group.

Each year, the ECN receives generous support from corporate sponsors and individual donors. To these companies and individual, we wish to extend our thanks:

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Dr. Jackie Miller



PROGRAM OF EVENTS

SATURDAY, November 15th, 2008

7:30am **Reception-** Reno Sparks Convention Center
 Room D4/D5, First Floor
(Saturday presenters should load presentations)

**Coffee & Refreshments
will be served in Room D4/D5, First Floor
until the morning break**

8:30am Welcome and introduction

8:40am **David Furth** Smithsonian Institution
*The History of the Entomological Collections
Network.*

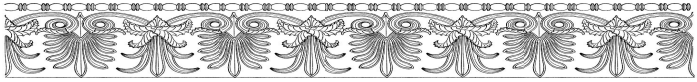
Session 1:

Uses of collections for non-systematic purposes
Colin Favret- Illinois Natural History Survey

9:00am Introduction

9:05am **Christy Geraci, Xin Zhou, & Oliver Flint, Jr.**
 Smithsonian Institution & Trichoptera BOL
DNA barcoding to benefit science and society

This talk will describe a new initiative to (1) assemble a DNA barcode library of reliably-identified adult caddisflies from the NMNH Nearctic Trichoptera collection in collaboration with the Trichoptera Barcode of Life (www.trichopteraabol.org), and (2) produce an online catalogue of NMNH Trichoptera. We will discuss our effort to develop protocols for specimen-level databasing, data management, curation, and long-term storage of DNA barcode voucher specimens in support of environmental barcoding and biosurveillance of North American freshwater resources.



9:25am

**Stephanie J. Swenson¹, S.A. Jackson²,
M.J. Bagley², E. Friedman³, I. Turcsanyi⁴,
A. Driskell⁵, L. Weigt⁵, A.C. Roth², O.S. Flint Jr.⁵,
& C. Spooner⁶**

*Development of a DNA-based tool for
bio-assessment of Maryland streams*

¹Independent Contractor to U.S. EPA/Smithsonian Institution,

²U.S. EPA/ National Exposure Research Laboratory

³Maryland Dept. of Natural Resources

⁴Dynamac Corp., c/o Maryland Dept. of Natural Resources

⁵Smithsonian Institution, Washington, DC

⁶U.S. EPA, Office of Water, Washington, DC

9:45am

Shelah Morita Univ. of Stellenbosch, S. Africa
*Bioassociative forensics: Harvesting species
interaction data from collections and the
importance of specimen level databasing*

Museum collections are not just a repository for species, but also offer a wealth of metadata related to species interactions. Several kinds of data are attainable from museum specimens that can help inform us on questions of plant-pollinator interactions and their possible coevolution. However, this kind of data necessitates a specimen level accounting of records, in other words, specimen level databasing. I will use my own data on plant-pollinator morphological correlations to show the power of this approach.

10:05am

Nathan J. Sanders & Robert R. Dunn
University of Tennessee

*A diversity of diversity gradients: using
museum-based collections to explore the effects of
climate and climate change on biodiversity*

Why does the number of species vary geographically, say along latitudinal or elevational gradients? In this study, we use >100,000 museum records to examine the current and future patterns of ant diversity along an elevational gradient in Great Smoky Mountains National Park and, more generally, in North America.

10:25am

Break (20 minutes)

Session 2: Assorted presentations

10:45am **Greg Zolnerowich, C. J. Ferguson, D. Allen, M. Haddock, M. H. Mayfield, & H. Maringanti**
Kansas State University
The K-State digital prairie plant and insect collection: strength through collaboration

The K-State entomology collection, herbarium, and K-State Libraries are collaborating to create a Biodiversity Information System (BiodIS), a biodiversity web portal based on the two natural history collections. The main objective is to expose collections data to a diverse audience that could include K-12 students, conservationists, ecologists, educators, and applied workers. This collaboration strengthens three different campus units, which results in increased funding, exposure, use of the collections, and enhanced collections infrastructure.

11:05am **Leah Larkin** University of the Pacific
The tale of the dancing pollen grains: What museum collections can tell us about floral host preference in Callandrena bees (Hymenoptera: Andrenidae: Andrena (Callandrena)).

11:25am **Lyubomir Penev¹, Jeremy Miller², & Terry Erwin³**
From “print-based” to “web-based” taxonomy, systematics, and natural history: A presentation of ZooKeys

¹Pensoft Publishing Inc.;²University of New Mexico

³Smithsonian Institution

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Focus and Scope

ZooKeys is a peer-reviewed, open-access, rapidly disseminated journal launched to accelerate research and free information exchange in taxonomy, phylogeny, biogeography and evolution of animals. **ZooKeys** aims to apply the latest trends and methodologies in publishing and preservation of digital materials to meet the highest possible standards of the cybertaxonomy era. **ZooKeys** will publish papers in systematic zoology containing taxonomic/faunistic data on any taxon of any geological age from any part of the world with no limit to manuscript size.

ZooKeys will consider for publishing works on the following topics:

- new descriptions of taxa, if they are accomplished with proper diagnoses, keys and/or revision of at least at species group level
- taxonomic revisions of extant (or "recent") and fossil animal groups
- checklists and catalogues
- phylogenetic and evolutionary analyses
- papers in descriptive and/or historical biogeography
- methodology papers
- data mining and literature surveys
- monographs, conspecti, atlases
- collections of papers, Festschrift volumes, conference proceedings

Papers containing identification keys will be accepted with priority. Extensive manuscripts consisting mostly of keys will be considered for publishing as well.

ISBN numbers will be assigned to large monographic papers (i.e., major revisions of taxa), monographs, collections of papers, Festschrift volumes, atlases, checklists, conspecti.

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11:45am **Andrew Smith** Canadian Museum of Nature
*The Canadian Museum of Nature insect collections-
lessons and update from an up and coming
collection*

An overview of the Canadian Museum of Nature entomology collections is presented. Since the mid 1980s (when the collection was established), the personal collections of Henry and Anne Howden and Stewart Peck have been donated to this museum. These acquisitions, along with numerous field expeditions by staff entomologists, have resulted in a highly significant Coleoptera collection with world- class holdings in scarab beetles and weevils.

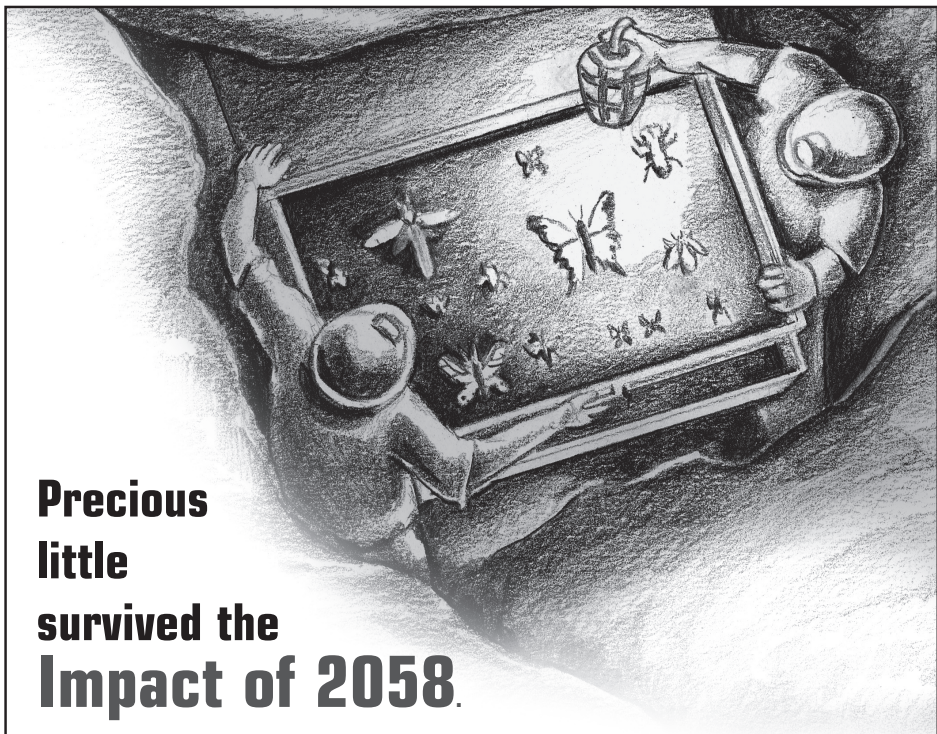
12:05pm **Lunch** (1½ hours)

1:35pm **Frank Krell** Denver Museum of Nature & Science
*Electronic publication, ZooBank, and preparations
for the new ICZN code*

With electronic communication rapidly changing the scientific working environment, the International Commission on Zoological Nomenclature works on three major initiatives to adapt the current Code while, at the same time, safeguarding the stability of nomenclature. An amendment to the Code has been proposed to allow electronic-only publications as available outlets for nomenclatural information. Such names would need to be registered in ZooBank, the proposed official register of zoological nomenclature. For names and nomenclatural acts published on paper, registration would be voluntary, but encouraged.

2:10pm **Gary L. Miller, Melissa K. Miller,
Brian T. Miller, Andrew Carmichael, &
Colin Favret** USDA-SEL
*Exploring novel alternatives to preservation: from
field to laboratory*

Two techniques for insect preservation are presented: (1) the proprietary development of a non-toxic, non-flammable, non-reactive preservative medium for insects. DNA analysis (i.e., on Aphidoidea) can be subsequently performed without destruction of the specimen, allowing DNA vouchering, and (2) DNA storage with its associated voucher specimen at room temperature. Subsequent extractions can be performed using the medium. These techniques might revolutionize insects collecting, shipping, and DNA storage.



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?

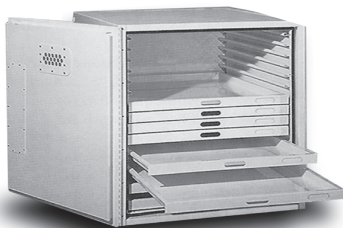
"We've discovered another!" we cheer.
Eagerly we unseal it, confident marvelous
treasures await. Securely nestled inside.

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

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2:30pm **Margaret Thayer**
Field Museum of Natural History
*Field Museum's Collection Databases - Lurching to
the Web via EMu*

As part of an institutional initiative to consolidate, modernize, and share our collection databases, the Division of Insects moved an array of databases into the FMNH's implementation of EMu collection management package (from KE Software). A large portion of this multi-year initiative has come to fruition, with species inventories or specimen databases for various parts of the collection and also our bulk sample collection now available on the web. See our Insects homepage at: <http://emuweb.fieldmuseum.org/arthropod/Query.php> or all the museum's collection databases via: http://www.fieldmuseum.org/research_collections/database.htm

2:50pm **Break (20 minutes)**

Session 3:

Georeferencing - with Panel Discussion Q/A

Stylianos Chatzimanolis Univ. of Tennessee at Chattanooga &
Zack Fallin Univ. of Kansas

3:10pm **Zack Falin**
University of Kansas
*"Best practices" versus reality- a practical guide to
improving your georeference data*

3:30pm **Derek Sikes**
University of Alaska Museum
*An entomological graduate of the Georeferencing
Road Show: Quantifying geographic uncertainty*

3:50pm **Doug Yanega** Univ. of California, Riverside
Databasing the UCR bee collection

The UC Riverside Entomology Research Museum was recently awarded a GBIF Seed Money grant to digitize the records for the bee collection, mostly composed of specimens collected (and often described) by P.H. Timberlake. The museum's existing database is serving as the initial data entry interface, but will require some modifications to the dataset to become Darwin Core-compatible. Also, the process of databasing legacy material, especially georeferencing, is indeed a challenging task. This talk will illustrate these points, and will hopefully be helpful to others who may be planning similar efforts.

4:10pm **Andrew Short** University of Kansas
*Making the most of Google Earth: before, in,
and after the field.*

The utility of Google Earth extends far beyond the retroactive visualization of specimen localities. This talk will discuss uses of Google Earth in the generation, management, and sharing of data from the fieldwork perspective

4:30-5:30pm **Panel discussion and Q&A session**

BON MIXER

6-9PM - ROOM D2/D3

MENU

Chili-rubbed Carne Adobada

Fajitas with fire-roasted peppers, onions, sour cream & warm flour tortillas

Arroz Mexicano

Fire-Roasted Potatoes

South of the Border Salad

Tres Leche Cake

CASH
BAR





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Entomology is one of the most important sciences of our time. Where would the world be without you? The important work you do is being done so that future generations will have the opportunity to appreciate the true diversity of the earth's insects, and hopefully, their natural history. BioQuip applauds your passion for the preservation of insect collections.

We welcome the opportunity to continue serving you and the science of entomology. If you have any product needs or ideas that BioQuip can assist you with, please contact us. Together we can continue to support entomology by curating the world's insect collections, and providing the equipment and tools needed to perform these important responsibilities.

Please visit us at the ESA convention, booth #'s 405, 406, 407.

With gratitude and appreciation,

The Staff
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SUNDAY, November 16th, 2008

8:30am Introduction

**Coffee & Refreshments
will be served in Room D4/D5, First Floor
until the morning break**

8:40am **Andy Austin & John Jennings**
The University of Adelaide
*Insect collections 'Down-Under' - the current state
of collections and research in Australia*

The aim of this presentation is to provide an overview of the state of insect systematics in Australia focusing on the current professional workforce, the major research collections, and the prospects for improvements in the future. Information is also provided that will help facilitate the processes for applying for permits and undertaking fieldwork in Australia. A useful source of information is the website for the Council of Heads of Australian Entomological Collections (CHAEC) -

<http://flyaqis.mov.vic.gov.au/chaec/index.html>

9:00am **Sandra L. Brantley & David C. Lightfoot**
University of New Mexico
*The Museum of Southwestern Biology: Introducing
a Growing Regional Collection*

The Arthropod Division of UNM's Museum of Southwestern Biology is a small but active, growing collection with recent institutional support through increased museum space, and the hiring of new faculty and staff. The collection includes specimens from ecological studies of regional habitats, which are diverse and still poorly known. Recent hires of curator Kelly Miller and two collection managers have added a systematics emphasis, especially for Coleoptera, Orthoptera and Araneae.

9:20am **Daniela E. Ramírez, W. H. Clark, P. E. Blom
& D. Ward Jr.** CICESE / College of Idaho
*Twenty Five Years of Pitfall Trap Material from
Baja California, Mexico at the OJSMNH &
CICESE*

Long term arthropod collecting in the Baja California Peninsula by The Orma J. Smith Museum of Natural History, The College of Idaho and Museo de Artropodos de Baja California, CICESE have resulted in the accumulation of hundreds of pitfall trap samples. The samples, in various stages of curation, have been used in various taxonomic and ecological studies. With support by the Schlinger Foundation we have begun to inventory and organize the uncurated material which dates back to 1981. We will describe the holdings and its future use in an arthropod biodiversity inventory of the peninsula.

9:40am **Break** (20 minutes)

10:00am **Jim Woolley** Texas A&M University
CollectionsWeb

CollectionsWeb (<http://www.collectionsweb.org>) is an bNSF-funded Research Coordination Network (RCN) for building a National Community of Natural History Collections. The objectives are to build communication among natural history collections and the researchers and other stakeholders using collections, and to build a case to NSF to increase funding for collections. We will update ECN on last year's activities, and present our plans for 2009.

10:20am **Nico Franz** Univ. of Puerto Rico at Mayaguez
*Lessons taken from the CollectionsWeb
Workshop I (small collections)*

A summary of points discussed and lessons learned during the CollectionsWeb Workshop I: Opportunities and Challenges of Small Collections; held at Michigan State University, April 19-20, 2008.

10:40am **Mike Schauff** USDA
Interagency Working Group on Scientific Collections

The Interagency Working Group on Scientific Collections (IWGSC) was chartered in 2006 to “address the scientific, environmental, societal, and national security needs for such collections, including an assessment of current collections resources; an evaluation of requirements to maintain and further develop these resources, including workforce needs, an assessment of how to integrate and optimize current resources, and an evaluation of gaps and research and development needs”. Members of the working group include all the major science agencies in the Federal Government. The IWGSC has surveyed Federal Collections and “government-supported collections” and is about to release a report. The history of the IWG, where it’s going, and what it might mean to ECN collections will be presented.

11:00am **Gail Kampmeier** - Illinois Natural History Survey,
University of Illinois
From Small to Big: How our efforts can contribute to the big dreams of sharing biodiversity data.

Amidst the grand initiatives and prospects of quickly gathering the “low-hanging fruit” represented by the big players and data providers, the needs of individual and small group contributors of biodiversity information have been neglected. Ignoring these small contributors, who often represent taxon specialists, producers of agricultural datasets, or compilers of geographically-based faunal inventories, misses rich content that could be used for a variety of high quality analyses, e.g., contributing towards informed decisions for sustainable use of our biotic resources. This neglect poses a great challenge for the global biodiversity informatics community to find a way to balance the needs of the smaller contributors whose immediate goals are more focused on the specimens on their bench than sharing their findings over the internet.

11:10am **Wrap-up / Business meeting**

Coordinating the 2008 ECN meeting involved the help of a number of our members. Thanks to everyone who volunteered their time and expertise to the cause!

The 2008 ECN meeting coordinators:

Matt Buffington
Stelios Chatzimanolis
Zack Falin
Colin Favret
Christopher Marshall
Matt J. Paulsen
Andrew Smith
Michael Wall

**ECN is a participating group of the
COLLECTIONSWEB - check them out online at:
www.collectionsweb.org**

COLLECTIONSWEB

Building a Community of Natural History Collections

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Project News

Welcome to CollectionsWeb, the website of the Research Coordination Network (RCN) for **Building a National Community of Natural History Collections**. At CollectionsWeb you can find out general information about the RCN and find out how you can **get involved** in the activities of the RCN.

Partner Organizations

- American Institute of Biological Sciences (AIBS)
- Natural Sciences Collections Alliance (NSCA)

Indianapolis-ECN 2009

December 12-13, 2009



MARK YOUR CALENDARS!!!

but more importantly:

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- Logistical support
- Registration
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