25th Annual Meeting of the Rocky Mountain Chapter of the Society of Environmental Toxicology and Chemistry

April 19th & 20th, 2012

Fort Collins Science Center
2150 Centre Ave, Bldg C
Fort Collins, Colorado 80526-8118

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25th Annual Meeting of the Rocky Mountain Chapter of the Society of Environmental Toxicology and Chemistry April 19th & 20th, 2012

Please join us for the 25th Annual Meeting of the Rocky Mountain Chapter of the Society of Environmental Toxicology and Chemistry.

Meeting Dates: April 19th and 20th, 2012

Meeting Place: Fort Collins Science Center Fort Collins, Colorado.

Agenda:
Thursday, April 19th, 2012

Short Course: we will offer a half-day short course with USGS scientists entitled *"Ecological Sleuths: Using Stable Isotopes to Decipher Physical and Biological Processes in Environmental Studies.* This half-day course will cover analytical instrumentation and methods, stable isotope fundamentals, applications, and case studies, including use in environmental contaminant studies.

Lunch: Over lunch, we will be presenting the movie *"RiverWebs*". This movie is a documentary style environmental film about the life and relationship of two ecologists, how their collaboration changed ecology, personal tragedy, and the legacy of science and friendship. Lunch will be provided free for registrants.

Afternoon Social: Following the movie we will have a social at a local eating establishment to be announced to celebrate our 25th anniversary.

Friday, April 20th, 2012:

Meeting: we will host a full day of scientific platform presentations and a poster session. We invite presentations of all research related to environmental toxicology and chemistry issues.

Abstracts of presentations and posters are due March 30th, 2012. Register by sending a completed registration form (see attached) and payment to Lareina Guenzel, as instructed on the form. Send Abstracts to Travis Schmidt, tschmidt@usgs.gov

Please register by April 6th, 2012. If you have any questions concerning registration, contact Lareina at 303-312-6610 or guenzel.lareina@epa.gov.

See attached logistics sheet for details on lodging, dining, transportation and parking.

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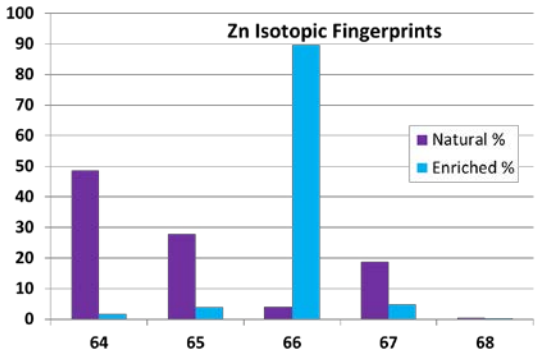
2012 SHORT COURSE
Ecological Sleuths: Using isotopes to decipher physical and biological processes in environmental studies.



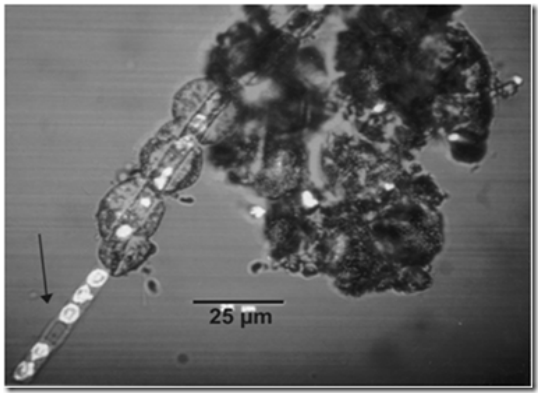


Figure caption: Left- the Naracauli Stream in Sardinia, Italy, is a neutral-pH, high-Zn stream that originates with drainages from several mines. In Spring, conditions favor bioprecipitation of hydrozincite $\{Zn_5(CO_3)_2(OH)_6\}$, the white precipitate in the streambed. Upper Right – plot showing different isotopic fingerprint of naturally occurring Zn vs. ^{66}Zn-enriched Zn. Lower Right- SEM photo of a bacterial filament that serves as a substrate for hydrozincite. Zn isotopes of the biomineralized hydrozincite are consistently heavier than the Zn in the water from which the hydrozincite forms, indicating a role of bacteria in isotopic fractionation.

Increasingly, stable isotopes are being used to study physical and biological processes in the environmental sciences. Light isotopes (Hydrogen, Carbon, Nitrogen, Oyxgen, and Sulfur) and heavy stable isotopes (Copper, Zinc, Iron, etc.) have properties that afford opportunities to trace the flux of elements through catchments and food webs. Although some isotope approaches are well established, recent methodological advances offer new opportunities to learn about the abiotic and biotic processes of ecosystems. In this half-day workshop, USGS scientists provide a practical guide on isotope geochemistry in environmental science. Topics to be covered include: analytical instrumentation and methods, stable isotope fundamentals, applications, and case studies, including use in environmental contaminant studies.

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Rich Wanty

B.A., geochemistry, State University of New York at Binghamton
M.S., geochemistry, Colorado School of Mines
Ph.D., geochemistry, Colorado School of Mines

Rich has been a research chemist with USGS since 1981. Research interests center around environmental geochemistry, and coupling of geologic, hydrologic, and geochemical processes. Current research topics include: landscape geochemistry and the relation between soil and ground-water geochemistry; geochemistry of mined or un-mined mineral deposits and natural background geochemistry; geochemistry of non-traditional stable isotopes, especially those of iron, copper, and zinc. Another current project is examining the usefulness of data mined from large online databases to evaluate regional geochemical baselines. Previous research focused on brines produced with hydrocarbon resource extraction, geochemistry of natural radionuclides in ground-water supplies, ground-water geochemistry in agricultural areas, and geochemistry of sandstone-hosted vanadium-uranium deposits.

Contact Information: Email: rwanty@usgs.gov, Phone: 303-236-1819

Craig Stricker

Ph.D., limnology, Michigan State University
M.S., biology, Central Michigan University
B.S., biology, Central Michigan University

Craig is a research biologist that studies the biogeochemistry of ecosystems, with an emphasis on the application of stable isotope techniques. His research interests are broad and fall within four focal areas: 1) *nutritional ecology*, where isotopic data are the primary source of inference on dietary resource use by study species; 2) *contaminant biology*, where stable isotopes are used to constrain trace metal biogeochemistry, bioaccumulation and biomagnification pathways; 3) *biogeochemistry*, where isotopes and traditional geochemical techniques are employed to better understand patterns, processes, fluxes, and fates; and 4) *development of novel isotope applications*, where the goal is to make these tools more widely available to a broader range of research areas.

Contact Information: Email: cstricker@usgs.gov, Phone: 303-236-7908

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Ruth Wolf

Ph. D., Chemistry, Colorado State University
B. S., Chemistry, Colorado State University
M. B. A., Marketing, University of Connecticut

Ruth Wolf has over 20 years of experience working as an analytical chemist in a variety of fields, including environmental and geochemical analysis, analytical methods development, instrumentation development, and technical sales and marketing. Ruth joined the USGS in 2004 as a Research Chemist after spending 10 years working for a leading manufacturer of analytical instrumentation in a variety of roles, including marketing manager, product manager, and applications specialist. She has also worked in both commercial environmental and national laboratories. Currently at USGS, she performs research in the area of new analytical method development and her areas of expertise include ICP-OES and ICP-MS instrumentation. Recent research topics include the development of analytical methods for speciation analysis of toxic metals in waters, soils, and simulated bio-fluid extracts, use of stable isotopes in aquatic toxicity studies, and new analytical methods development using dynamic reaction cell (DRC) and high resolution (HR) ICP-MS.
Contact Information: Email: rwolf@usgs.gov, Phone: 303-236-2470

Johanna Kraus
Ph.D., Biology, University of Virginia
B.A., Biology, Brown University

Johanna Kraus is a community ecologist whose research focuses on the ecological implications of organismal movement across ecosystem boundaries. She uses field experiments, surveys, light stable isotopes and GIS to address questions about how the movement of organisms across the freshwater-terrestrial interface affects food web dynamics, community assembly and contaminant transfer. Currently, she is studying the flux of trace metals from streams to riparian food webs by emerging aquatic insects in the central Colorado Rocky Mountains as part of a Mendenhall Fellowship with the USGS. Her dissertation research examined reciprocal prey subsidies at a pond-forest boundary, using stable isotopes as a food web tracer. She has since studied effects of habitat selection on aquatic-terrestrial linkages in experimental pond systems and collaborated internationally to study effects of dams on downstream spider communities.

Contact Information: Email: jkraus@usgs.gov, Phone: 970-226-9436

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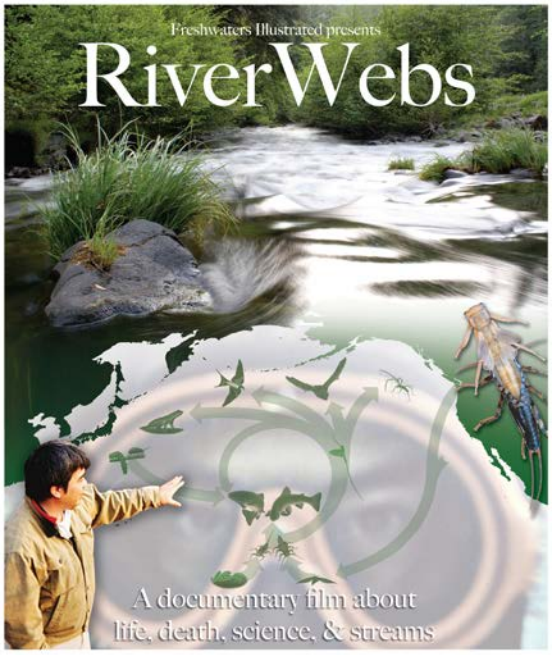
Rocky Mountain SETAC Presents:
RIVERWEBS
By Freshwater Illustrated
Screened at 1230 April 19th, 2012

Free with registration, donation at door to see film. Donations will go to Freshwater Illustrated and student awards.



www.riverwebs.org

http://www.riverwebs.org/

RiverWebs takes a close look at an international group of river ecologists who share a story of tragedy, growth, and recovery. Across Eastern and Western cultures, this unlikely circle of friends shows us a very human side of science, while demonstrating how the process of discovery works. The inspiring lives and experiences of these scientists build a rich story of hope and interconnectedness, while providing a personal window through which to view rivers, ecology, and conservation. Running Time 57 min.

CALL FOR ABSTRACTS

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On Friday, April 20th, 2012, we will host a full day of scientific platform presentations and a poster session. We invite presentations of all research related to environmental toxicology and chemistry issues in the Intermountain West. Abstracts of presentations are due March 30th, 2012. Presentations will be 12 minutes with 3 minutes for questions. When preparing your abstract, use 12 point Times New Roman font (see example abstract on next page):

1. Indicate name, mailing address, telephone number, and e-mail address of author to contact.

2. Leave a blank line.

3. Type the title (maximum of 15 words) in bold letters, capitalizing only the first word and proper nouns.

4. On the next line, type the authors and their affiliations -- last names before initials, with the presenting author's name underlined.

5. Leave a blank line.

6. Type the abstract (maximum of 300 words) in one paragraph, without indenting the first line.

7. Leave a blank line.

8. Indicate your preference for a platform or poster presentation (or either).

9. Leave a blank line.

10. Indicate whether you want to be considered for the Best Student Paper Award (platform and poster presentations).

E-mail your abstract as an attached Word document to Travis Schmidt at tschmidt@usgs.gov. Write "RMSETAC abstract" on the topic line. Contact Travis at that e-mail address or 970-226-9470 if you have questions.

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EXAMPLE ABSTRACT

Andrew S. Todd
U.S. Geological Survey Crustal Imaging Team
Box 25046, M.S. 964
Denver, CO 80225-0046
303-236-1426
atodd@usgs.gov

New Water Temperature Standards to Protect Colorado's Fisheries

Todd, A.S.†

†Mineral Resources Program, U.S. Geological Survey, Box 25046, MS 964, Denver, Colorado,
USA

Water temperature fundamentally influences aquatic diversity and ecosystem health. In Colorado, temperature water-quality standards were revised in January 2007 based on a rigorous evaluation of the thermal requirements and limitations of fish species resident in Colorado. The Colorado Temperature Database was created to assemble relevant thermal tolerance and optimum growth temperature data from the primary literature. Acute and chronic thermal thresholds were then calculated for individual fish species, assemblages of fish were identified that represent key categories of water resources in Colorado, and ultimately, temperature Table Value Standards were calculated for each assemblage. A case study is presented detailing the integration of science and policy decisions that shaped the development of Colorado's cold water temperature standards. Some issues not resolved during this revision of Colorado's temperature water quality standards are discussed.

Platform

No consideration for Best Student Paper

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*****Registration Deadline: April 6th, 2012 *****

Name: _____ **Affiliation:** _____
Mailing Address: _____
Phone: _____ **E-mail:** _____

Lunch preference for short course: ___ meat-eater or ___ vegetarian

Registrations Fees:
April 19th -- Short Course: Ecological Sleuths: Using isotopes to decipher physical and biological processes in environmental studies.

$____ - Non-student ($40, including lunch)
$____ - Student ($25, including lunch; must be currently enrolled as an undergraduate or graduate student)

April 20th -- Scientific Presentations and Business Meeting
$____ - Non-student ($35)
$____ - Student ($25; must be currently enrolled as an undergraduate or graduate student)
$____ - TOTAL

April 19th & 20th -- Short Course and Scientific conference
$____ - Non-student ($60, including lunch on the 19th)
$____ - Student ($35, including lunch on the 19th; must be currently enrolled as an undergraduate or graduate student)

Chapter Membership **Please complete official membership application form at meeting**
$____ - Non Student ($10)
$____ - Student ($5)

$____ - TOTAL

Make check payable to: RMSETAC
Mail registration form and check to:
Lareina Guenzel (EPR-EP)
1595 Wynkoop St.
Denver, CO 80202.

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LOGISTICS INFORMATION

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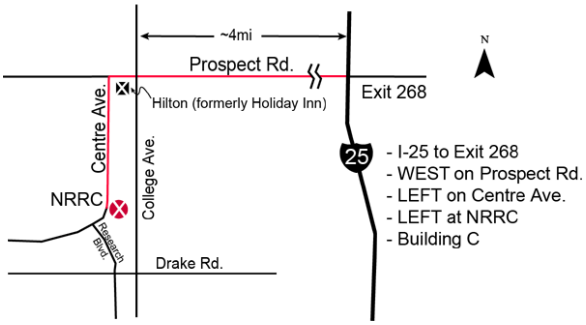
Transportation: The Fort Collins Science Center is located on the south of Colorado State University's main campus at the Natural Resources Research Center. It is located between Prospect Road to the north and Drake Road to the south and ½ mile west of College Avenue. From I-25 you can take Exit 268 and follow the directions below

Directions to NRRC/Fort Collins Science Center from I-25



Parking: Parking at the Science Center is free, however, it can be difficult to find a parking spot if you arrive late. You will require a parking permit. Please arrange to car pool if you can and contact Travis for a free parking permit. If you cannot find a parking spot there is a pay parking lot at the corner of Centre Ave and Prospect road, just on CSU's campus. It is a few minutes' walk to the Science Center from there.

Security: The Fort Collins Science Center is a secure building. You will have to sign in and wear a visitor badge when you arrive.

Lodging: The Hilton is conveniently located just to the north of the Science Center and is just a few minutes' walk away. To book a room, go to http://www.hilton.com
For a hipper environment and closer proximity to the night life of Old Town Fort Collins, consider the Armstrong Hotel. To book a room, go to:
http://www.thearmstronghotel.com/

Dining: There are many great options for dining and entertainment throughout the city with the focus of nightlife located in Old Town Fort Collins. For information see:
http://www.eatfortcollins.com/ or
http://www.downtownfortcollins.com/members.php/category/11/