



Dedicated to informing the community about water resource issues that affect the health of the Boulder Creek Watershed (a 501(c)3 non-profit)

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Board of Directors

Larry Barber
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Members and Friends of BCWI,

In search of life in the solar system? Scientists look for evidence of water to indicate the potential to discover evidence of life. Water is a simple molecule, yet it sustains all living creatures and defines the unique characteristics of the planet earth. We may experience water as providing tranquility along the banks of a mountain stream, or as a warm shower to cleanse our bodies, or as something to scrape off the windshield during winter. But, water is more than a tool, or sensation. We are increasingly aware of the extent to which both the quantity and the quality of our water is essential to our well-being and survival.

More than 150,000 people, live in the drainage basin of the Boulder Creek Watershed. From the headwaters of Boulder Creek at the Continental Divide to the confluence with Saint Vrain Creek, water flows over 80 kilometers and descends 3000 meters in elevation. Along its descent, Boulder Creek traverses five climatic zones, each containing a unique and diverse community of microbial, plant, and animal life. Ultimately, water that flows through our community reaches the Gulf of Mexico by way of the South Platte, Platte, Missouri, and Mississippi Rivers.

The watershed provides our drinking water and carries away our waste. We all live downstream from a diversity of plant, animal, and human effects on the quantity and quality of water. Likewise, a diversity of plants, animals, and humans live downstream from us and are impacted by our activities. One of the ways to protect our precious water resources is to become informed and involved in watershed related issues. Do you know your watershed?

Our local watershed community is fortunate to have strong environmental leadership at the city and county government levels, the presence of world class research organizations including the United States Geological Survey and the University of Colorado, and community grassroots organizations such as the Boulder Creek Watershed Initiative, all of which are actively involved in research and outreach on topics ranging from floods to feminization of fish.

An important opportunity to learn more about the interconnection between water and living organisms is the 2005 Boulder Creek Watershed Forum Series titled *Perspectives on Water and Life*, which begins January 18, 2005. The monthly lectures presented from January to October are sponsored by the Boulder Creek Watershed Initiative, the United States Geological Survey, the City of Boulder, and the Boulder Public Library. The forums are held the third Tuesday of the month at 7:00 PM at the Boulder Public Library Auditorium and are free and open to the public. The first forum will be presented by Sarah Spaulding of the US Geological Survey and will explore how microscopic organisms (diatoms) can influence entire watersheds. Upcoming speakers include Theo Colborn, author of *Our Stolen Future*, who will discuss the global significance and health implications of locally consumed toxic chemicals. Alexandra Davis of the Colorado Attorney Generals Office will discuss the foundation of who legally owns water. Greg McCabe of the US Geological Survey will describe the role of global climate patterns on local hydrology and availability of water resources. The forum series will include a panel discussion of risks associated with living along Boulder Creek, one of the highest flood hazard areas in Colorado, the need to respond promptly and properly to flood warnings, and what can be done by individual residents to mitigate the impact of flooding.

In addition to presenting the forum series, the Boulder Creek Watershed Initiative is proactive in community-based water resource preservation. We are interested in community input on water related issues and we also welcome members and volunteers to the organization. To learn more about the Boulder Creek Watershed Initiative or the Forum Series visit our website at: www.basin.org/bcwi

Upcoming Boulder Creek Watershed Forums: *Perspectives on Water and Life*

Forums are held at the Boulder Public Library Auditorium at 7:00 PM. Doors open at 6:30 for refreshments.

JANUARY 18, Sarah Spaulding, US Geological Survey, *Connections between water and life: a tale of a microscopic diatom*

FEBRUARY 22, Panel Discussion, *The role of streams and wetlands in sustaining ecosystem diversity*

MARCH 22, Alexandra Davis, Assistant Colorado Attorney General for Water Rights, *Who owns the water?*

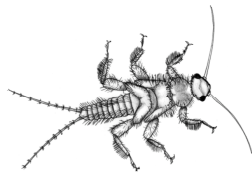
APRIL 26, Theo Colborn, Author of "Our Stolen Future", *Stealth chemicals and their impact on wildlife and human health*

MAY 17, Greg McCabe, US Geological Survey, *Global, regional, and local climate factors controlling water availability*

JUNE 28, Panel Discussion, *Flood Risk, Response, and Mitigation*

The BCWI Forum schedule is posted at:

www.basin.org/BCWI



Missed a Boulder Creek Watershed Forum?

Videotapes of all forums are available at the Boulder Public Library and can be checked out for home viewing.

Forums are also televised on Channel 8:

Wednesday 3 PM
Saturday 10:30 AM and 7:30 PM
Sunday 7:30 PM

The Boulder Creek Watershed Initiative extends a "thank you!" to local businesses for their generous donation of delicious food and beverages to our forums in 2004:

Moe's Broadway Bagels (on Arapahoe)
Breadworks - pastries
Caffe Solé – coffee

Boulder Creek Watershed Forum Report: *Science in Public Policy*

The theme for the 2004 talks in the BCWI Forum Series was *Science in Public Policy*. Brief highlights follow.

Protecting Drinking Water at the Source. Amy Struthers and Jim Shelley, City of Boulder Drinking Water Program.

Amy Struthers and Jim Shelley presented information about limits of drinking water treatment and the focus on the importance of source water protection. They discussed Colorado's new Source Water and Assessment Program and identified potential contaminant sources in Boulder's drinking water watersheds.

Growth and development in Boulder County – The role of water resources. Paul Danish, Boulder County Commissioner.

Boulder County Commissioner and Journalist Paul Danish presented his unique perspective on the relationships and interactions between water resources, development, and long-range planning. He focused on the role floodplains serve as a resource-development planning tool and the need for protection and preservation of riparian zones. He also discussed policy decisions of local governments, included the expansion of the City of Boulder public library within the flood plain of Boulder Creek.

Boulder Creek is an impaired stream - Sources of microbial contamination through the urban corridor, Mark Williams, Boulder County Public Health Department, William McKee, Colorado Department of Public Health and Environment, and Junko Munakata Marr, Colorado School of Mines.

This panel discussion featured experts speaking about bacteria in Boulder Creek, health implications, regulatory issues, and new methods for identifying the source of contamination aspects of Boulder Creek. Boulder Creek was included on the State of Colorado's 2004 list of

water-quality impaired streams because of high levels of *Escherichia coli* (*E. coli*) bacteria. These bacteria are present in fecal material and may indicate the presence of disease-causing microbes, which can cause hepatitis, gastroenteritis, and dysentery. Potential sources of bacteria are human (from stream recreation, malfunctioning wastewater treatment plants, and septic systems) and animal (raccoons, pets, and waterfowl) excrement. Mark Williams of the Boulder County Public Health Department discussed the levels of *E. coli* in Boulder Creek and potential health implications. Bill McKee of the Colorado Department of Public Health and Environment discussed state water-quality standards and what it is involved when a stream is listed as water-quality impaired. Junko Munakata Marr of the Colorado School of Mines discussed methods of identifying the source of bacteria, including DNA tracking, and her efforts on Boulder Creek.



This Land of Shining Mountains. Prehistoric Human Use of the Boulder Creek Headwaters Region. Jim Benedict, Center for Mountain Archeology.

Jim Benedict spoke about the prehistoric use of the Indian Peaks Wilderness Area, used seasonally by hunters and gatherers for at least 10,000 years. The severe alpine environment limited human use of the timberline region to summer and early autumn. Proximity of mild wintering environments along the eastern mountain front and the rich resources of Middle Park, west of the Continental Divide, encouraged elaborate seasonal migration patterns. Plant foods constituted less than 20 percent of human diets above timberline, with game animals making up the remainder. Rock walls, cairn lines, and blinds built for driving and ambushing elk and bighorn sheep on tundra uplands are a hallmark of the region, with more than fifty known localities. Campsites are also numerous. Clustering of radiocarbon dates suggests that the high mountains were used most heavily during periods of warmth and aridity. Population densities fell when upslope snowfall on the winter ranges of large game animals reduced the availability of prey species above timberline.

Eight publications on archeological sites in the Indian Peaks and Rocky Mountain National Park are available from the Center for Mountain Archeology, 8297 Overland Road, Ward, CO 80481 or cloudridgeadb@earthlink.net

A Warm Thank-you!

To Jeane Woods at Channel 8 for all of her effort to film, edit, and televise the BCWI Forums. We appreciate Jeane's ongoing help and attention to detail.



Boulder Creek Cleanups

In 1997, BCWI adopted the stretch of Boulder Creek, which runs from Folsom Avenue to 30th Street. This section of the creek sees a lot of use, and we try to organize cleanups at least four times per year. Although our section is not particularly long, it is an important area to cleanup frequently due to the large inputs of trash entering off of Folsom, 28th and 30th Streets. Besides trash entering from the street crossings, there are a few apartment complexes with dumpsters that overflow and blow trash down into the creek corridor. Trash is also plentiful close to the CU campus (cylindrical aluminum debris loads are high after the football tailgating season).

Join us in your work clothes, ready for fun. Bring friends and family, all ages are welcome. We would love to have a high turnout for this cleanup so we can thoroughly clean up our section before high flows arrive and prevent trash and any resulting pollution from travelling to our neighbors downstream. Contact: Eric August at 303-527-0191.

Meet at Scott Carpenter Park
Saturday, March 5 at 10:00 AM
Saturday, May 21 at 9:00 AM

Creek Critters Puppet Show

Our standing room only favorite for grades K-3 and community events is the *Creek Critters Puppet Show*. Join Jasmine and the lively cast of characters on their adventures to learn why clean water is critical to wildlife and people. Students learn how they can help keep our water healthy. For more information, call 303-413-7365.

Remember: Keep it clean, 'cause we're all downstream!



Ways that you can help

- * wrap pet waste securely and put it in the trash
- * use lawn fertilizers sparingly
- * recycle or dispose of automobile fluids properly (engine oil, antifreeze, transmission fluids, brake fluids) Contact: Boulder County Household Hazardous Waste at 303-441-4800.



snails



limpet



clam

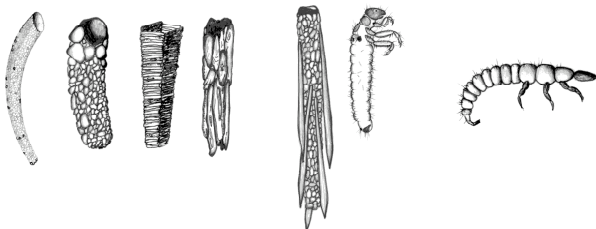
Winter Ecology Course

Wintertime offers insights into the natural history of organisms and function of ecosystems that are not often appreciated in summer visits to the field. Through classwork, fieldwork, and individual projects, we will focus on the dynamics of high-elevation ecosystems in the western US. Based from the CU Mountain Research Station's new year-round Moores-Collins Lodge, we will spend 5 weekends exploring the ecology of upper montane, subalpine, and alpine landscapes in winter.

Winter Ecology Course for 2 hours credit at CU meets:
Feb 12 - Mar 12 2005 (5 weekends)

Prerequisite: 1 year of college general biology
Class requirements: field exercises, exams, individual project

Register through the CU Mountain Research Station at:
<http://www.colorado.edu/mrs/course.html>



Water Flow in South Boulder Creek

The Boulder Flycasters hosted the South Boulder Creek Symposium this fall, bringing together many of the important water interests in the basin to discuss ways to increase winter flows in South Boulder Creek. Opportunities were identified to improve safety and allow fish passage during the low flow period. The city of Lafayette and Boulder Open Space agreed to evaluate stream flows from Eldorado Springs to the South Boulder road diversion into Baseline Reservoir.

More information: <http://www.boulderflycasters.org/>



CALLING ALL GIRL SCOUTS!

The US Environmental Protection Agency and the Girl Scout Council have developed a new patch to encourage girls to make a difference in their community by becoming watershed and wetlands stewards. To earn the Water Drop Patch, scouts will explore the natural world and gain practical experience in science and math. Scouts will work to educate their community about the need to protect valuable water resources. The WASH *Get to Know Your H₂O* education program provides programs and resources for Girl Scouts to meet the Water Drop Patch requirements.

For more information, call 303-413-7365 or visit the EPA website at: ww.epa.gov/adopt/patch

BCWI Volunteer Opportunities

- * Video editor for forums
- * Contributing writer for newsletter
- * Forum organizer (refreshments, postcards, advertising)
- * Volunteer Coordinator for creek cleanups
- * Creative website modification

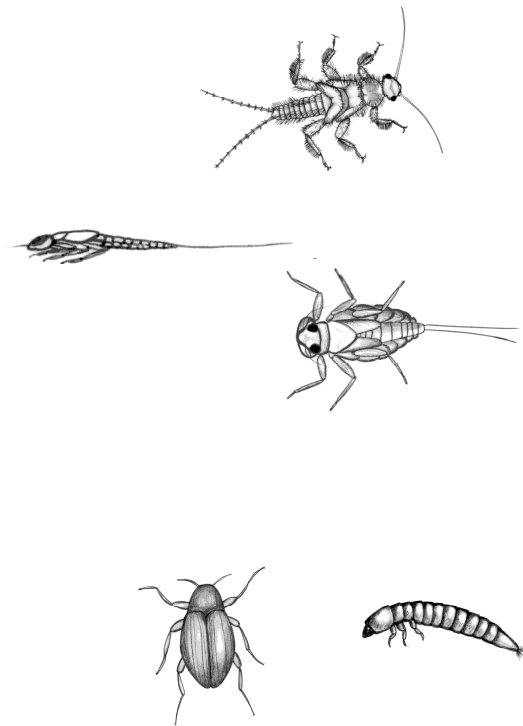
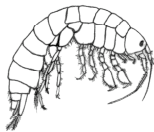
For more information, contact Eric August, 303-527-0191.

Contributing to BCWI

For the past seven years, BCWI has brought engaging speakers from academic institutions, government agencies and the local community to exchange science and ideas through the Watershed Forum Series. These efforts have been accomplished largely through in kind donations and volunteer time. We need your help to continue and expand the series and programs of BCWI with your tax-deductible donation.






Newsletter Drawings

Images of invertebrates in this issue of the BCWI Newsletter were obtained through <http://www.seanet.com/~leska/Online/Guide.html>




YES! I will make a (tax-deductible) contribution to the Boulder Creek Watershed Initiative!

My level of support is (check one):

	_____ \$ 500 & up	Belted Kingfisher <i>Ceryle alcyon</i>
	_____ \$ 100 - 499	Greenback Cutthroat Trout <i>Oncorhynchus clarki stomias</i>
	_____ \$ 50 - 99	Tiger Salamander <i>Ambystoma tigrinum</i>
	_____ \$ 20 - 49	Green Darner <i>Anax junius</i>
	_____ \$ 0 - 19	Golden Stonefly <i>Hesperoperla pacifica</i>

Enclosed is my check for \$_____. The entire watershed thanks you.

BCWI also needs volunteers! Tasks include video editing, creek cleanup, and outreach events. To get involved, let us know your interests and how to reach you!



PO Box 18
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The Boulder Creek Watershed Forum

Sarah Spaulding, US Geological Survey

Topic: Connections between water and life: A tale of a microscopic diatom

**7 PM (doors open at 6:30), Tuesday, January 18, 2005
Boulder Public Library Auditorium, 1000 Canyon Boulevard**

Free to the public
Refreshments provided by Moe's Broadway Bagels

For more information call Eric August (303) 527-0191 or Sheila Murphy (303) 541-3023

*Sponsored by: Boulder Creek Watershed Initiative, U.S. Geological Survey,
City of Boulder, and Boulder Public Library*