



CONSERVATION

EDUCATION PROGRAM

Learning on the Land

June 2011

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San Juan Mountains Association - For Lands' Sake!

Welcome to our e-Newsletter!

We hope you enjoy SJMA's newsletter created solely for educators - whether you teach in the classroom or outdoors, this newsletter is for you! In each monthly issue, you will receive helpful information on natural and cultural resources found in the Four Corners area, as well as field and classroom activities to do with your students.

The San Juan Mountains Association is the educational nonprofit partner for San Juan National Forest and Bureau of Land Management. If you received this newsletter and do not wish to continue receiving it, send an "unsubscribe teacher newsletter" email to gabi@sjma.org. If a friend or colleague sees this newsletter and is interested in receiving it, please have them send an email to gabi@sjma.org.

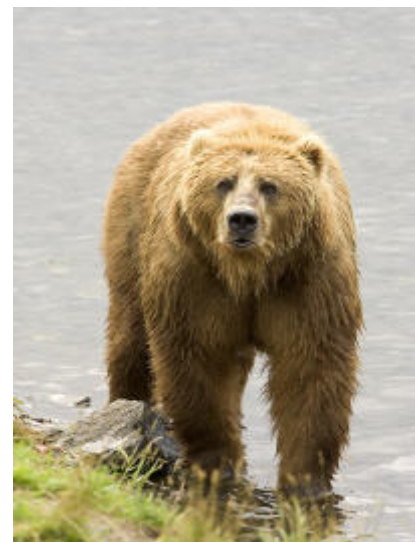
Bears of Colorado

If you live near the mountains of Colorado, chances are that you have either seen a bear or evidence of bears nearby. We need to be aware of these large, furry creatures whether we're out camping, or feeding birds in our backyard. In Colorado it is estimated that we have 12,000 bears living in our state.

Grizzlies

Although grizzly bears once roamed most of our beautiful state, their populations started declining steeply at the beginning of the 20th century. From 1952 to 1979, no grizzlies were killed in the state, and for much of that time, they were thought to be extirpated (no more found in an area). Then, in 1979, the last grizzly was killed by a hunting guide in the San Juan Mountains in self defense. Grizzlies are technically considered to be an endangered species in Colorado, although none are believed to still be here. Although some people endorse the idea of reintroducing grizzly bears to Colorado, the Colorado Wildlife Commission is not supportive of this idea.

Grizzly bears are yellowish to reddish brown and are much larger than black bears. Grizzlies can be up to 7 feet long and 500 pounds. They also have a distinctive hump to their shoulders and a different shaped face than black bears. They also have very long claws - up to 4 inches long.





Black Bears

In contrast to grizzly bears, black bears are relatively common in Colorado. Black bears can be many different colors - from black to brown, honey colored to cinnamon colored. They are much smaller than their grizzled cousins, with males only averaging 275 pounds and females 175 pounds. However, at different times of the year, and with different diets they may weigh up to 400 pounds.

Although often called carnivores, they are in fact omnivores, eating both plants and meat. In fact,

up to 90% of their daily food is plant based. They eat seeds, roots, berries, nuts, twigs, and buds. They also eat lots of insects, including grubs and bees. To supplement this diet they will eat carrion, fish, small mammals and even deer and elk fawns. In the spring, after coming out of hibernation, black bears will eat 2,000 to 2,500 calories a day; then before hibernating again in the fall their eating ramps up to 20,000 calories per day! This is needed to get them through the long months of not eating during hibernation. These calories come from some higher-caloric foods like acorns, chokecherries, service berries, squaw apples and buffalo berries.

The Bear Facts:

- There are 16 sub-species of black bear, found in different parts of the U.S. and Canada and even the mountains of northern Mexico.
- Black bears can live up to 32 years in the wild, but typically live 20 - 25 years
- They mate during the early summer months and the female usually gives birth to two cubs in mid-winter while she is hibernating, every other year
- A black bear's home range may be from 10 to 250 square miles, but may overlap with other bears

Hibernation

Ask different people, including scientists, about whether or not bears hibernate, and you'll get different answers. However, the general consensus is that bears do hibernate - just in a different way from smaller mammals. During hibernation, the temperature of smaller mammals drops almost as low as the surrounding environment, while in bears it only drops a few degrees. This means that bears can wake up and be 'on the go' almost instantly. Bears are hibernators because they hibernate due to the winter food shortage. During hibernation, not only does their body temperature drop, but their entire body metabolism slows down - from their heart rate to their breathing. They don't eat, drink, or pass wastes while hibernating. A male may lose 15 - 30% of his body weight during hibernation; a female who is nursing may lose up to 40%. Black bears typically hibernate in rock caves and will scrape in leaves and other plant material to make a nest.

Human-Bear Conflicts

Bears will almost always avoid humans if at all possible. So why have we seen an increase in bears showing up in human-populated areas? The answer is, of course, that a) we (humans) have been moving into the bear's traditional habitat, and b) we provide them (mostly inadvertently) with yummy treats that are incredibly tempting to hungry bears. We won't be moving our homes anytime soon, so here are some tips to keep bears away.

Bears are attracted by smells, especially smelly trash. In fact, bears' sense of smell is 7 times more sensitive than that of dogs! If you live in bear country, don't put your trash out the night before - do it the morning of trash pickup. Store your trashcans in your garage, and make efforts to reduce the smells emanating from it. Wrap extra smelly trash well in plastic bags, or even freeze it if possible. If you live in an area with lots of bear activity, buying a bear-proof container may be well worth your money. This website gives you a starting point to finding one: http://bearsmartdurango.org/popup_containers.shtml.

Bird feeders are another common source of interest for bears to our homes. The best thing to do is not to feed birds when bears are around - mid-April to late fall. If you do want to continue to invite our feathered friends to your house, hang bird feeders at least 10 feet from the ground, and 4 feet from anything a bear could climb up. Bringing bird feeders in at night is also a good idea.

Pet food is also a bear attractant. Don't keep pet food out at night, and even feed pets indoors if possible.

BearSmart Durango has many more tips on reducing human-bear conflicts.

Visit http://bearsmartdurango.org/avoid_conflict.shtml# for more information from them.

Face-to-Face Meetings

The following is advice from the Colorado Division of Wildlife on bear encounters

(<http://wildlife.state.co.us/WildlifeSpecies/LivingWithWildlife/Mammals/HikeCampBearCountry.htm#Encounter>):

If You Surprise a Bear on a Trail

- Stand still, stay calm and let the bear identify you and leave. Talk in a normal tone of voice. Be sure the bear has an escape route.
- Never run or climb a tree.
- If you see cubs, their mother is usually close by. Leave the area immediately.

If the Bear Doesn't Leave

- A bear standing up is just trying to identify what you are by getting a better look and smell.
- Wave your arms slowly overhead and talk calmly. If the bear huffs, pops its jaws or stomps a paw, it wants you to give it space.
- Step off the trail to the downhill side, keep looking at the bear and slowly back away until the bear is out of sight.

If the Bear Approaches

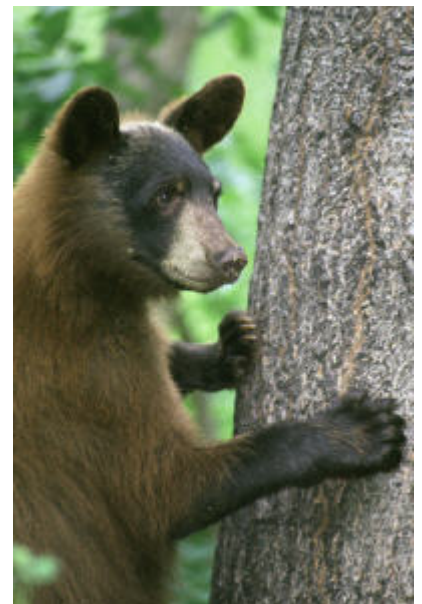
- A bear knowingly approaching a person could be a food-conditioned bear looking for a handout or, very rarely, an aggressive bear. Stand your ground. Yell or throw small rocks in the direction of the bear.
- Get out your bear spray and use it when the bear is about 40 feet away.
- If you're attacked, **don't play dead**. Fight back with anything available. People have successfully defended themselves with pen knives, trekking poles, and even bare hands.

When hiking in bear country, be noisy - you don't want to accidentally sneak up on a bear. Keep your eyes open for bear sign, and be especially careful if you are out in early morning or evening. Keep pepper spray handy - it can be useful when used at close range by an attacking bear. Remember that **bear attacks are rare**. Over the last century, only 40 human deaths can be attributed to bears (compare this to lightning strikes or bee stings, or even the flu virus, and you'll realize how low this is).

Bear Study in Durango

This spring (2011) the Colorado Division of Wildlife began a 5 year study of bears in the Durango area. Durango was thought to be an ideal spot for this study because of the high quality bear habitat surrounding the city. The goals of the study are to learn more to reduce human-bear conflicts, understand better how bears use urban areas, and to develop better techniques to study bear populations and trends.

To do this study, 50 female bears will be fitted with GPS radio collars to track their movements. Also, hair snare stations will be set up to collect genetic material from the bears and will be used to estimate population sizes.



Field & Classroom Activities

Bear Encounter Simulations

While bear attacks are rare, it is important for people, even children, to know what to do if they encounter a bear. See the instructions above for information on what to do during black bear attacks. When speaking to children, emphasize that they should always be near the adults in their group, and if they see a bear, they should NOT run. After teaching them what to do, have children simulate a bear encounter, with some acting as bears and others acting as humans. Have them demonstrate different scenarios and what to do in each.

How Many Bears Can Live in this Forest?

This activity introduces the concept of limiting factors using a bear's diet. A limiting factor is a part of its habitat - food, water, shelter, or space - that limits the population size of an animal. This activity is taken from Project WILD - if you are interested in getting this great activity guide, contact Gabi Morey at gabi@sjma.org to see about arranging a workshop. The activity is described in detail here:

http://www.inhs.illinois.edu/resources/virtualbird/how_many_bears.html

Where is Sophie?

This activity takes a look at Sophie, a bear in Banff National Park in Canada, and her movements throughout the park using actual GPS data points. After looking at the data, and going through the background information on Sophie and the park, answer questions such as: is Sophie habituated to humans? Should she be relocated? Although Sophie is a grizzly bear, the concepts hold true for black bears as well. This is a great activity looking at the complexity of human-bear interactions. It is most appropriate for middle through high school students. <http://www.cpaws-southernalberta.org/education/pics/sophie.pdf>

Extend the Experience

CDOW - The Colorado Division of Wildlife has extensive information on living with bears. Start checking out their website here:

<http://wildlife.state.co.us/WildlifeSpecies/LivingWithWildlife/Mammals/LivingWithBearsL1.htm>

Black Bear Challenge - a Jeopardy-type of game on black bears from the Colorado Division of Wildlife:

<http://wildlife.state.co.us/Education/StudentActivities/KidsPage/BlackBearChallenge.htm>

Storytime - Here read a Scandanavian story about why bears have stumpy tails:

<http://www.americanbear.org/BBeat%20Stumpy%20tails.htm>. Or, find many Native American stories about bears on this site: <http://www.ilhawaii.net/~stony/loreindx.html>. Then, make up your own story about bears and why they are the way they are.

Kids Activities - American Bear Association's Cubs Corner has lots of fun activities to do on bears, from crossword puzzles to word finds: <http://www.americanbear.org/Cubscorner.htm>

Announcements

June 4 through July 4 - The StoryWalk™ Project on the Dolores River Trail

book "I Know the River Loves Me", by Maya Christina Gonzalez (this is an on-going, open display - visit anytime!) The StoryWalk™ Project was created by Anne Ferguson of Montpelier, VT and developed in collaboration with the Vermont Bicycle & Pedestrian Coalition and the Kellogg-Hubbard Library.

Contact [Gabi Morey](mailto:gabi@sjma.org) 385-1256

Little Legs Adventures, Fridays, June 24-July 22,2011

Outdoor fun for toddlers and preschoolers. Bring your kids for one or all of these adventures, taking place in various outdoor environments in the Cortez/Dolores/Mancos area. Dig in the mud, chase insects, use a magnifying lens, and have fun outside! Pre-registration is requested as space is limited.

Contact [Gabi Morey](mailto:gabi@sjma.org) 385-1256.

June 25 - Buggy Water: Investigating the Mancos River

(ages 4 and older). Get your feet wet and come check out the amazing macroinvertebrates that thrive in this river. Contact [Gabi Morey](mailto:gabi@sjma.org) 385-1256

Date Change - SJMA Summer Naturalist Training

for free nature tours at Durango Mountain Resort will take place on **June 21st** from 9AM to 1PM. For more information contact Gabi: gabi@sjma.org or 970-385-1256. You can also visit our website at <http://www.sjma.org/education/classes/natlama.htm>.

Then, the **nature hike season at DMR** starts on **June 23rd**. Meet outside the ticket office by 9:45am for a ride up the chairlift, a guided nature hike, then a ride back down. **All for free!** No pre-registration necessary - contact Gabi for more details - gabi@sjma.org or 385-1256.

Educators—Become a member of SJMA today and receive a 20% off coupon to our bookstore!

Whether you're a 'formal' K-12 school teacher or a non-formal educator, to receive your 20% off coupon valid at any of SJMA's bookstore locations, simply print this or a future newsletter and bring it and your new membership information in to one of our bookstores (Durango, Pagosa Springs, Bayfield or Dolores).

San Juan Mountains Association has been around since 1988. For 20 years, SJMA has been establishing a legacy of caring for the land. Side by side with our members and volunteers, we are helping to ensure the survival of Southwest Colorado's natural glories for generations to come. SJMA also offers classroom visits, naturalist walks and talks, teacher for-credit workshops, and field trips to public lands. For more information, visit our website at www.sjma.org, or call 970-385-1256.

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