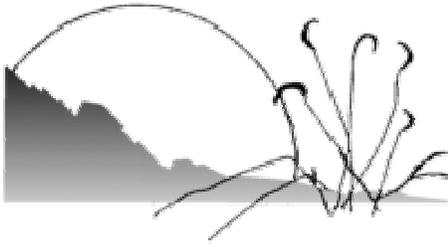


BOULDER COUNTY NATURE ASSOCIATION



Volume 22, Number 2
Summer 2005

Three-Toed Woodpeckers

Three-toed woodpeckers are year-round residents of Colorado's high elevation spruce-fir forests. They specialize in feeding on spruce bark beetle. This means that drought, fire, and forest disease are a boon to woodpeckers because these conditions promote beetle infestation. A characteristic sign of three-toed woodpecker foraging is large reddish bark chips surrounding the base of an Englemann spruce tree. They feed by scaling off pieces of bark and are often conspicuous and easily approached by humans.

The best places to see Three-toed woodpeckers in Boulder County are the Wild Basin burn site and other historic burn sites west of the Peak to Peak Highway. During the pine bark beetle outbreak of the 1970's they were often seen in Boulder Mountain Park. The subspecies *dorsalis*, which is present locally, has a nearly white back with a thinner moustachial and eye stripe distinguishing females from female hairy woodpeckers. Strangely enough it's *pik* call is most similar to that of an American Robin. Its characteristic drum becomes more rapid near the end so it sounds like the closing of a creaking door.

After mid-July look for fledglings who have shorter beaks and an overall rounder shape. The yellow feathers on the head of both sexes are farther forward than on adults, extending down on the front of the forehead and between the eyes, rather than on the crown. The breast in juveniles is also more densely mottled.

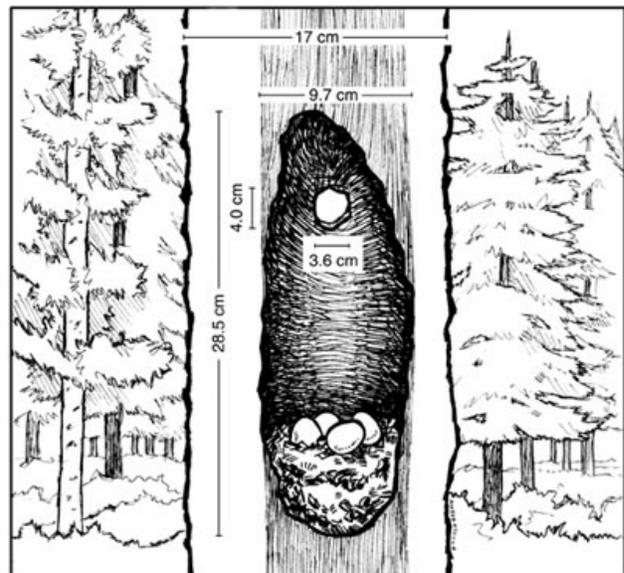
Three-toed woodpeckers are considered an indicator of old-growth forests. They are also a keystone species because they create habitat for secondary cavity nesting birds like tree swallows, bluebirds, nuthatches, chickadees and others. The importance of woodpeckers as cavity excavators was evidenced when the near demise of the ivory-billed woodpecker decreased nest availability for wood ducks enough to significantly reduce wood duck populations.

Three-toed woodpeckers tend to favor Aspen or broken-topped conifers for nesting. Multiple cavity excavation attempts are common in the nest tree itself, with one or two partially excavated cavities or cavity attempts in addition to the active nest. Three-toed woodpeckers also tend to orient their nests facing clearings or forest openings. This often makes them easier to spot than one would expect.

The following sketch is of a nest I observed being excavated in a live aspen tree in May 2000 on the Fishlake National Forest in south-central Utah. It was blown over by a windstorm on June 7th of the same year. Inside the blown down cavity were four eggs. The pair apparently re-nested immediately in an aspen 20 meters away, though I was unable to determine if they fledged a successful brood. One year later I returned and removed the fallen nest cavity in anticipation of the area being logged. I discovered that this tree was infected with fungal heartrot, which causes the center of the tree to become soft, making it easier to excavate. In this cavity the pattern of woodpecker excavation closely followed the pattern of heartrot.

Habitat conservation for three-toed woodpeckers should focus on protecting a diversity of dead and living trees and patches of aspen mixed with conifers within old growth forests. Periodic natural wild fires are a boon to three-toed woodpeckers because they increase the amount of forest insects and promote aspen regeneration.

-Rebecca Hill



Sketch of the interior of a nest cavity that was excavated by a pair of Three-toed Woodpeckers. The tree was blown down after the four eggs were laid, and the woodpeckers immediately re-nested in a nearby tree. I collected the nest one year later before the area was logged. Drawing by Amber Ashton

BCNA Summer Calendar

Saturday, July 9, 7-11 AM: Butterflies and warblers of Boulder Canyons. Steve Jones (303-494-2468; stephen.jones@earthlink.net) will lead a hike in Long and Gregory canyons to look for songbirds and butterflies. Bring binoculars and/or a camera with a close-up lens, a hat, water, and a bird or butterfly field guide. Meet at the Gregory Canyon parking lot, to the left where Baseline turns up the summit of Flagstaff Mountain. Non-residents of Boulder County will have to pay a parking fee. Co-sponsored by Boulder County Audubon.

Sunday, July 10, 8 AM-Noon: Peak wildflower bloom walk with Joyce Gellhorn. Join Joyce for a walk in the Indian Peaks to enjoy this year's amazing bloom. Call or e-mail Joyce (303-442-8123; jgellhorn@sprynet.com) for location and directions.

Sunday, July 10 North America Butterfly Count, in Gilpin County. Meet at 8:30 a.m. , east side of Tunnel 1, Hwy 6, west of Golden. (Note date change) Contact Dr. Ray Stanford ray.Stanford@stanfordalumni.org

Sunday, Aug. 7, 9 AM-1 PM: Dragonflies of Boulder County, with Scott Severs (303-684-6430). Observe these jewel-like insects in selected open space areas. Bring your binoculars and insect books, water, sunscreen, a hat, and bug repellent. Meet at Sawhill Ponds parking lot off 75th Street between Valmont and Jay roads. Co-sponsored by Boulder County Audubon.

Indian Peaks Fall Bird Count Sept. 10-25 .Count Day is Sept. 17. Contact Bill Kaempfer (Kaempfer@colorado.edu; 303-443-3175).



Spotted Coral Orchid
Tim Henson

Rocky Mountain Orchids

Spring—a time to look for native orchids and lady slippers. While orchids in Boulder County may seem improbable, our native species are diminutive relatives of the spectacular corsage orchids of the tropics. Some native are drab, others colorful, but finding them is always a special treat that requires a sharp eye as well as knowledge of their habitats and blooming times.

This year's wet spring has rewarded Boulder County with abundance: fairy slippers, brownie lady slippers, spotted coral-root, and spring coral-root bloomed in early June with signs of the various bog orchids, rattlesnake plantain, and yellow lady slippers still to come. All Colorado orchids grow in the mountains at elevations from 5,500 to 12,000 feet. Many prefer cool, wet ravines or north facing slopes where the plants are protected from direct sunlight most of the day.

One favorite is the fairy slipper or moccasin flower, a delicate beauty whose swollen lower petal looks like a moccasin decorated with purple stripes and yellow fringe. Lavender or rose-colored sepals and petals add a crowing touch. Flowers grow singly on three to five-inch stalk subtended by a single round basal leaf, often in groups of three to twenty individuals.

Fairy slippers grow between 7,500 and 11,000 feet in moist, shady locations frequently associated with yellow-flowered heartleaf arnica. Flowers appear from late May until the end of June, depending



upon the elevation and exposure and in spite of their bright color, they are frequently overlooked by all but the most careful observers.

The genus name for this orchid, Calypso, comes from sea nymph in Homer's The Odyssey, who detained Odysseus for seven years as he was on his way home following the fall of Troy. The specific name, bulbosa, refers to the bulb-like growth or corm found just below the soil surface. These corms are a common feature of many terrestrial orchids.

The two paired bulblets or corms in a European orchid species led Theophrastus, three centuries before Christ, to give this family its name after the Greek word orchis, which means testicle. Many sexual attributes have been given to orchids because of the derivation of their name.

One of the most common types of orchid in Colorado, the coral-roots, grow under pine forests from the foothills to timberline. As their name seems to indicate, white or pinkish underground stems or rhizomes, resemble highly branched coral. Their root mass intertwines with fungi and roots from other plants, especially the pines underneath which these orchids grow. Lacking chlorophyll and having reddish brown or yellowish stems, these plants obtain their nourishment from rotting leaf mold and organic material in the soil.

In early spring, coral-roots can be identified by slender asparagus-like reddish-brown shoots from which flowers eventually develop. The spotted coral-root, the most common of this group, stands six to 18 inches high with a spike of a dozen or more small flowers. Reddish-brown petals and sepals surround the conspicuous lower petal, a white lip with purple dots. Other coral-root orchids include the yellowish northern coral-root, the striped coral-root and the spring coral-root.

Blooming time depends upon altitude, from late May in the foothills to mid-July near timberline. After flowering, seeds ripen, and the seed capsules enlarge and hang down. Over 20,000 dust-like seeds can be produced in one capsule.

The bog orchids make up another widely distributed category. Found along wet grassy stream banks or swampy areas, these tall, slender orchids are often hard to see among the other green things in the bog. Their green or white flowers are less than one-half inch long, but a close look with a hand lens reveals a diminutive elegance. A spur, a

slender hollow tube projecting back at right angles from the base of the lower petal, is an identifying feature of this group, which includes: slender bog orchid, tall northern green orchid, piperia, long bracted green orchid, tall white bog orchid, northern small bog orchid, and sparsely flowered bog orchid. Blossoms of the tall white bog orchid have a delicate, spicy fragrance.

The rare yellow lady slipper, the largest and the showiest of all Colorado orchids, has been almost exterminated by wildflower lovers. The flower, one and one-half inches in diameter, has a large inflated yellow lip surrounded by spirally twisted yellow and brown-stripped sepals and petals. It grows singly on a leafy stem eight inches to two feet tall and blooms toward the end of June or early July under aspen forests. To increase your enjoyment of our native plants, look for orchids while hiking on our mountain trails.

-Joyce Gellhorn

The Teeter Bird by Theo. H. Scheffer

By mossy fringe-drip the ouzel stands
and teeters
and totters
At cool marge of the waters.
"Why," asks the savant, "does the teeter
bird totter
by wildwood water?"
Unanswered query
- except that it oughter.

VISIT OUR WEBSITE

For the calendar, class offerings, research results, publications, and other BCNA-related information: www.bcna.org

JOIN THE NATURE-NET LIST SERVICE

For the latest news and in-depth discussions of Boulder County natural history issues, go to: [Http://groups.yahoo.com/group/nature-net](http://groups.yahoo.com/group/nature-net)

E-mail BCNA at mail@BCNA.org

BCNA Summer Nature Classes

BCNA offers scholarships to defer part or all of class tuition. For more information, visit www.BCNA.com, or contact one of the instructors listed below.

Flowers of the Alpine Tundra: Joyce Gellhorn
Explore the unique adaptations of alpine plants while visiting spectacular tundra sites. Practice keying out alpine plants, and learn about their survival strategies.

Monday, July 18, 6:30-9:30 p.m., indoor class
Tuesday, July 19, 8 a.m.-3 p.m., field class

Tuition: \$50 (\$40 for BCNA members). To register contact Joyce at 303-442-8123; jgellhorn@sprynet.com

The Natural World of the Arapaho in Colorado: Andy Cowell. Learn about the natural world of the Front Range and Great Plains as seen by the Arapaho Tribe of the nineteenth and twentieth centuries. We will explore plant and place names, creation and cosmology beliefs, and the idea of "ecological consciousness" in traditional Arapaho culture.

Tuesday, August 9, 7-9 p.m., indoor class
Thursday, August 11, 7-9 p.m., indoor class
Saturday, August 13, 9-noon, field class

Tuition: A minimum donation of \$50, all of which will contribute to Arapaho language and culture projects. To register contact Andy at 303-543-7504; cowellj@colorado.edu

Bats of Boulder County: Dr. Rick Adams

Come learn about the natural history of these enigmatic mammals by delving into their ecology, physiology, and behavior. We will see bats up-close-and-personal while conducting fieldwork.

Friday, August 5, 6:30-9 p.m., indoor class
Saturday, August 6, 7-11 p.m., field class

Tuition: \$45 (\$35 for BCNA members). To register contact Rick, battings@yahoo.com; 303-245-1059.

Grassland Ecology: Steve Jones and Naseem Munshi

Camp out under the full moon in the Pawnee National Grassland and spend a morning in the South Boulder Creek Natural Area while exploring the geology, ecology, and cultural history of the grassland sea.

Thursday, August 18, 7-9 p.m., indoor class
Saturday, August 20, 6:30-11 a.m., field class
Saturday, September 17, 12 noon to Sunday, September 18, 4 p.m., field class

Tuition: \$80 (\$70 BCNA members). To register contact Steve at 303-494-2468; stephen.jones@earthlink.net.



Birders in the Field
Tim Henson

BCNA would like to welcome the Boulder County Parks and Open Space 2005 Volunteer Naturalists. It has been a tradition for BCNA to send complimentary copies for the year of graduation to all new naturalists. If you would like to know more about BCNA please check our website. We would be delighted to have you continue your membership next year if you are interested.

Summer Natural Events Calendar

Early July: Golden Eagle, Prairie Falcon, and Peregrine Falcon young fledge from their nests in the Flatirons. Look for families of falcons hunting together on NCAR Mesa, Enchanted Mesa, and Shanahan Ridge before they head out onto the plains to spend the fall and winter.

July 21: Full moon rises at 8:47 MST.

Thunder (Lakota)

When the Buffalo Bellow (Arapaho)

Deer-Hiding (Osage)

Late July: Large flocks of Franklin's Gulls gather at Boulder Reservoir as they head south to winter along the Pacific Coast of South America. Known to nineteenth-century homesteaders as "prairie doves," these handsome gulls nest in large colonies throughout the northern prairie region, where they are vulnerable to draining of wetlands and conversion of grasslands to croplands.

August 2: Lammas celebrates the time of hot weather and the beginning of the harvest. The fruits of the earth are cut and stored for the long winter months. Fruits are eaten and their seeds are planted in the ground.

Early August: Ripening berries signal the beginning of the sacred summer month known to Plains Indians as the Chokecherry Moon, the time of the annual sun dance. These same wild fruits lure a dozen or more black bears into foothills canyons west of Boulder.

August 7: Venus is very close to the new moon in the evening sky.

August 11-12: Perseid meteor shower peaks in northeastern sky.

August 19: Full moon rises at 7:31 MST.

Black Cherries Ripening (Lakota, Cheyenne, Arapaho)

Harvest (Ojibwa)

Corn in Silk (Ponca)

Late August: If the summer "monsoon" rains have cooperated, mushroom fruits sprout up throughout Montane and Sub-Alpine forests. We recommend Vera Evenson's excellent field guide, *Mushrooms of Colorado* (Denver Botanic Gardens and Westcliffe, 1997).

September 2: Venus and Jupiter are close together in the western sky.

Early September: Giant Evening-Stars (*Nuttallia decapetala*) unfurl saucer-sized, cream-colored blossoms on the shales of Six-Mile-Fold, north of Boulder. Look for White-lined Sphinx moths whirling in at dusk to sip nectar from the trumpet-throated flowers.

September 7: Venus and the new moon drift very close together in the western sky.

September 18: Full moon rises at 7:45 MST.

Dear Paw the Earth (Lakota)

Drying Grass (Arapaho)

Deer-Breeding (Osage)

September 22: Autumn Equinox occurs at 4:23 PM, MDT. Completion of the harvest and equal length of day and night prepare the world for the coming death and rebirth. People wander through the wilderness gathering dried plants to be used as healing herbs or house decorations. Altars hold acorns, pine cones, corn stalks, and colorful leaves.

Late September: Migrating birds of prey stream over the Dinosaur Ridge Hawk Watch Site, north of Morrison, and the Dakota hogback, west of Boulder. Look for highest numbers on mornings with gentle or easterly winds, September 25 through October 10.

Frogs and Snakes of The Amazon Basin

Thursday, Sept. 15, 7:00 P.M. George Reynolds Branch library 3595 Table Mesa Drive (west of Broadway opposite King Soopers). How far from green can a frog get? We looked at the Amazon Leaf Frog with its orange-yellow abdomen and at several Poison Dart Frogs, rich with pattern and color, popping out from under the brown forest duff. There was little doubt that frogs could draw us to step back and shake our heads in surprise and pleasure. As to snakes there were surprises at the many new forms. The three species of stolid boa, Coral snakes, and the stiffly posturing Green Striped Vine Snake. New shapes, patterns, and habits were all part of a trip last December searching out frogs and snakes in the Amazon Basin. The slides to be shown are a sampling of the extravagance we found.

George Coffee (303-449-0082)

Front Range Mountain Lion Research

Janet George, Northeast Region senior wildlife biologist convened a meeting on May 25 of representatives from various city and county open space departments as well as State Parks, Air Force Academy, Colorado Division of Wildlife (CDOW) personnel and other interested parties.

Stated goals of the meeting were: 1. Determine what level of interest exists outside the CDOW, but within the natural resource community for pursuing a Front range Lion Study. 2. Determine what questions those who manage mountain lion habitat would like to have answered by such a study. 3. Discuss and begin to frame an idea of what such a study would actually look like, what the logistics might be, and how it might be funded, etc.

Tom Remington discussed the two main focus areas for CDOW in pursuing a Front Range lion study. First, to focus on concern for the species, rather than putting emphasis on livestock damage. Second, to take a proactive approach to managing lions for human safety concerns.

Mike Miller described the research the CDOW is pursuing relative to mountain lions and chronic wasting disease; a project aimed at determining whether lions are selectively preying on diseased mule deer. There are no such indications to date. Don Hunter of the U.S. Geological Survey discussed ongoing lion research in Rocky Mountain National Park which is going very slowly because of budgetary constraints and restrictions of method of take for attaching radio collars.

Much of the remainder of the meeting was devoted to gaining ideas from the group. Most questions from attendees fit into 4 categories: 1. Natural history: Lion densities, numbers, home range sizes, movements, activity budgets, survival, and mortality 2. Risk assessment and management responses to affect human-lion incidents: Assess and reduce risks to people and domestic animals. 3. Relationship to prey: Includes prey preference and relationship of wild ungulate numbers to lion numbers 4. Education: Coordinate efforts, assess effectiveness.

Janet George and Dave Freddy outlined a draft of a potential study proposal. Both emphasized that the proposal was designed to generate response - give the group an idea of many of the thoughts of CDOW staff and to invite participation in refining it into a study that all might eventually support.

It was proposed that each agency/organization return to their colleagues and discuss the meeting in order to get a feel for support, additional questions, and other thoughts. Tom Remington proposed getting together a small team, (including CDOW and partners) to further refine a project design.

If you need more detail regarding this meeting, please contact Jim McKee (303-494-3393) or jimmckee@prodigy.net.

Falconry Licenses

I found out at the June 9 Wildlife Commission Workshop the U.S. Fish and Wildlife Service would no longer be licensing falconers at the federal level. Instead this will be left to the responsibility of individual states. Colorado is already doing this so I don't expect to see major changes here. For many other states, this will be a new responsibility and hence, another unfunded mandate.

Jim McKee



In early summer Yucca moths gather pollen from and lay their eggs in Yucca flowers. The Yucca moth is the only insect able to pollinate these flowers, and the yucca flowers are the only host for its young.

Photo by Tim Henson

Sign up now for Thorne Natural Science School summer classes. TNSS, in its 49th year, offers hands-on, field-based, fun, environmental education programs for children, teens, and adults. Call 303-499-3647 or log-on www.thorne-eco.org for more info or to register.

Sightings

In mid-June, birdwatchers reported a Wood Thrush, two singing Ovenbirds, and two Flammulated Owls along the Amphitheater Trail in Gregory Canyon. It has been a great spring for Willow Flycatchers, listed as declining in Boulder County. The Lyknis Gulch birdbanding team banded eight individuals, and singing males were observed in mid-June along Coal Creek and Boulder Creek. Paula Hansley reported a Veery (rare in Boulder County) along South Boulder Creek near Eldorado Springs on June 21, and a Red-headed Woodpecker (rare and declining) along Coal Creek in mid-May.

On May 21, participants in the BCNA owl class were treated to a close view of a northern pygmy-owl perched on a dead limb just off the Coulson Gulch trail (Mitch Strohl gets credit for spotting this cooperative little owl). Later that evening, the class called in a pair of flammulated owls at the upper end of the gulch.

Either Barn Owls (rare in Boulder County) are proliferating or we are becoming more aware of them. In June, nesting Barn Owls were observed in a tree cavity east of Table Mountain, an old barn south of St. Vrain Road, a wood duck nest box at Valmont Reservoir, and a hollow tree along St. Vrain Road.

Those endearing but decidedly non-native Moose continue to galumph around between Ward and Niwot Ridge. Participants on the May 17 BCNA trip to Gregory Canyon all got good looks at a very large Black Bear, who was foraging on the hillside above Green Mountain Lodge.

Anti-drought: Here are 365-day percent of average precipitation amounts for stations in Colorado and adjacent states through June 20:

Alamosa 110, Boulder 133, Grand Junction 145, Pueblo 100; Goodland 130, Dodge City 135; Albuquerque 145, Farmington 127; Cedar City 200; Salt Lake City 126; Lander 140, Cheyenne 105; Scottsbluff 140, North Platte 143.

Source: Climate Prediction Center, Global Precipitation Time Series.

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 and SteveJones (303-494-2468).
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- *Wintering Raptor Survey:*
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The membership year is January 1 to December 31. Those who join after October 1 are considered members in good standing through the following year. All members receive this quarterly newsletter. Supporter-level members and higher also receive a complimentary copy of each BCNA publication.

Please make checks payable to "Boulder County Nature Association" or "BCNA" and mail to: P.O. Box 493, Boulder, CO 80306.

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