

Growing Points

*Gardening Ideas from Colorado Master
Gardeners*

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Keeping Ornamental Grasses Ornamental

by Ed Carley, Colorado Master Gardener, El Paso County

Including a variety of ornamental grasses completes your landscape design. These grasses add a diversity of foliage colors, shapes, movement and sound to your property throughout the entire year.

Ornamental grasses are generally pest free and easy to maintain. A problem one commonly encounters is the appearance of native grasses within clumps of desired grasses. Unfortunately, there are no selective herbicides that will kill everything except ornamental grass species.

Planting ornamental grasses in an area containing drip irrigation, landscape fabric and stone mulch keeps most weeds out of the ornamental grass plantings. Ornamental grasses planted in an area which contains a 2- to 3-inch layer of wood mulch also minimizes native grasses growing within the planted clump.

The truly difficult situation occurs when ornamental grasses are planted in areas containing native grasses. This is probably not the smartest thing in the world to do, but the varied height, foliage colors and seed heads do improve the attractiveness of native grass plantings. In this situation, when invasive grasses are observed, it is time to sharpen an old knife. Grasses have a basal meristem and the entire plant (roots and all!) must be removed to prevent further growth. This is a tedious task but one can trace the invasive grass down to the ground and dig or cut out the unwanted plant's roots without doing significant damage to the clump of ornamental grass.

Once all the undesired grass has been removed, dig around the ornamental grass bunch and remove the roots and stolons of all grasses in close proximity. To prevent further occurrences of unwanted grass seeds germinating in the ornamental grass, sprinkle a granular formulation of a pre-emergence herbicide, such as trifluralin (TREFLAN, PREEN) on the exposed soil around the clump of ornamental grass and then apply a generous layer of wood or stone mulch. Although I haven't tried it yet, placing landscape fabric around a cluster of ornamental grass and covering it with mulch should also reduce the invasion of native grasses that produce stolons. The application of a pre-emergence herbicide will also reduce grassy weed problems in ornamental grasses grown in large, mulched landscape areas.

Preserving your Garden's Bounty

by Pat Kendall, Ph.D., R.D.

Food Science and Human Nutrition Specialist, Colorado State University Cooperative Extension

All summer long, you worked hard preparing the soil, planting seeds, removing weeds and watering. Now, hopefully, your garden has rewarded you with a bumper crop. If so, one way to preserve your excess fresh fruits and vegetables is by home canning. With proper planning and equipment, home canning is relatively straightforward. Although preparation methods and processing times differ for various fruits and vegetables, the basic principles of canning are similar.

Equipment: Vegetables are low in acid and must be processed in a steam pressure canner at a pressure needed to reach 240 degrees Fahrenheit to supply enough heat to destroy bacteria that cause botulism. At Colorado's high altitude, the pressure needed is 10 pounds plus 1/2 pound for every 1,000 feet above sea level. For example, at 5,000 feet, vegetables need to be canned at 12.5 pounds pressure or higher. Before you begin, make sure your pressure canner has a tight-fitting cover, clean exhaust vent and safety valve, and an accurate pressure gauge.

Fruits are canned using a boiling water bath. Any big metal container may be used as a boiling water bath canner if it is deep enough (at least 4-5 inches deeper than the height of the jars), has a tight fitting cover and a wire or wooden rack. At altitude, water-bath processing times will need to be increased to compensate for the lower temperature of boiling water.

Whether you're canning in a boiling water bath or pressure canner, standard canning jars are recommended. Commercial food jars that are not heat-tempered, such as mayonnaise jars, break easily and may not seal properly. Throw away any jars with cracks, chips, dents or rust. Always wash jars in hot, soapy water and rinse well before using. Prepare lids according to manufacturer instructions.

Preparing produce: Select fresh, young, tender vegetables and fresh, firm fruits for canning. Wash produce thoroughly, whether or not it will be pared, because dirt contains some of the bacteria that's hardest to kill.

Filling and processing jars: The hot-pack method is recommended for all low-acid vegetables, although the raw-pack method is acceptable for some vegetables. Fruits can be packed into jars raw, or preheated and packed hot. Follow directions specific for the type of produce regarding the amount of headspace to leave. Air bubbles should be removed by sliding a nonmetallic spatula between the food and the sides of the jar. When processing vegetables in a pressure canner, follow the manufacturer's directions with adjustments made as needed for altitude. Instructions for using a water bath are provided in the Canning Fruits fact sheet available from Colorado State University Cooperative Extension.

The day after: Test the seals on the jar lids by pressing the flat metal lids at the center of the lid. Lids should be slightly concave and should not move. Remove screw bands. Label sealed jars with contents, canning method and date. Store in a cool, dry, dark place. Food in unsealed jars should be treated as fresh and eaten immediately, refrigerated, frozen or fully reprocessed.

Be on guard against spoilage: Bulging lids or leaking jars are signs of spoilage. When you open a jar, look for other signs, such as spurting liquid, an off odor, or mold. Dispose of all spoiled canned food in a place where it will not be eaten by people or pets. Be aware that low-acid canned vegetables can contain botulism toxin without showing signs of spoilage. As a safety precaution, boil all home-canned vegetables in a saucepan for 10 minutes, plus 1 minute for each 1,000 feet above sea level before tasting. Spinach and corn should be boiled for 20 minutes.

For more information about canning fruits and vegetables, including specific preparation methods and processing times, call your local cooperative extension office and request fact sheets 9.348 Canning Vegetables, 9.347 Canning Fruits, and 9.341 Canning Tomatoes and Tomato Products, or visit the Web at www.ext.colostate.edu.

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How I Renovated My Bluegrass Yard to Xeriscape

Kathryn Meinzer, Colorado Master Gardener, El Paso County

In the spring of 2003, after four years of severe drought, I decided to renovate my bluegrass front yard, and replace it with a xeriscaped landscape. I reviewed the various methods for killing the existing bluegrass (chemicals, newspapers and mulch, or clear plastic) and decided to use the chemical approach. I do not have children or grandchildren who play on the lawn, nor is my dog allowed on the front lawn, therefore, I felt okay with this choice. I wanted to plant new plants right away, so I could not wait the weeks or months it takes for the non-chemical methods to work.

I started the project by mowing the existing bluegrass lawn down as low to the ground as possible (scalping it). I hired a lawn service company to spray the entire lawn with a grass killer that would kill the existing lawn, but not the tree in the center of my lawn. After two weeks, the bluegrass was dead, and the service came back to kill the remaining other types of stubborn grasses that did not die from the first treatment.

About a week later all of the other grasses were completely dead. I ordered three cubic yards of compost to amend the soil in the 1,000 square foot yard. I spread the compost about 1-inch thick over the entire dead lawn.

I hired a person with a large commercial tiller (not easy to find in Colorado Springs) to till in the compost and dead grass to a depth of about 6-9 inches. I learned the hard way to make sure the person who does the tilling makes more than one pass with the tiller. The person I hired only made a single pass, and I spent nearly a month in the hot summer sun breaking up dirt clods (I have clay soil). To add interest, I moved the soil around making berms and paths over the previously flat yard. I added Canadian peat moss, in addition to the compost, while breaking up the dirt clods.

Next, I purchased a number of interesting rocks from a local landscape supply store and placed them throughout the yard. I planted some about 1/3 to 1/2 of their height; others I just set in place.

The next step was to order and spread mulch over the entire yard. I chose pine bark mulch because it was less expensive than the red cedar mulch I usually use in my beds. I get lots of mushrooms and slime mold with the pine bark mulch after it rains or the plants are watered. This may all be coincidence, but if I had it to do over again, I would pay the extra for the red cedar mulch.

Finally, I purchased about thirty (30) plants from nurseries in Colorado Springs and Santa Fe to get a start. In accordance with my small budget, I purchased mostly 2 1/2 -inch potted plants. I lost four plants over the first winter.

This spring, I planted an additional 34 plants which I purchased from the Horticultural Art Society's annual spring plant sale. Many were also in 2 1/2 -inch pots, with a few 4-inch pots mixed in. The plants from 2003 are maturing nicely and I expect most of them to be of mature size next year.

All of the plants I have planted are xeric (either XX- or XXX-rated plants from the Garden Centers of Colorado Program). My water use this year has been dramatically reduced even though many of the plants are still young. This was due in part to the significant rainfall we have received in our section of town this year. I watered every other day last year because I planted in the heat of the summer and there was little rainfall. Other than deadheading and spring pruning, I've had very little maintenance to do.

For interest, I've added some yard art, potted plant holders, and some stepping stones. I will continue to add other xeric plants for color, texture, and height when the current plants are of mature sizes.

My goal is to eventually replace all of our bluegrass with xeric plants. Next year I will start a Thyme and "steppables" lawn in our parkway. In the backyard, I will remove the bluegrass around our two existing Blue Spruce trees and use a green metal border to hold in red cedar mulch around them. Since spruce trees require more water than the xeric plants in the rest of my yard, I will install soaker hoses under the mulch to ensure these two trees get adequate water. This will leave a small amount of bluegrass for our dog to play on.

The five-year plan is to replace all of our bluegrass with xeric plants as my husband and I plan to travel. We will no longer need to fret about coming home to a dead bluegrass lawn. It will be comforting to know that when we retire, our utility bill will be lower and we'll have a beautiful environment in which to stroll and to sit and read. We feel good about our choice to use native and xeric plants and do our small part in saving water for future generations of Coloradoans.

Leafy Spurge and Bindweed Control Difficult

By Robert Cox, Colorado State University Cooperative Extension Horticulture Agent,
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Leafy Spurge (Forestryimages.org)

Leafy spurge (*Euphorbia esula*) and field bindweed (*Convolvulus arvensis*) are two of the most difficult-to-control weeds, earning them a place on Colorado's Noxious Weed list. Both are creeping perennials and both have huge impacts on agriculture. In urban environments, field bindweed is far more prevalent.



Control of creeping perennials is achieved only by exhausting foods stored in the root system, often requiring persistent control efforts over multiple years. Cultural, chemical and biological controls are often combined in an integrated approach.



Field Bindweed
Oregon State University

Sowing new grasses and avoiding overgrazing of existing grasses can help to provide competition with leafy spurge. Picloram herbicide (Tordon, Restricted Use) is most effective; dicamba (Banvel, Vanquish, Clarity) or glyphosate (Roundup and other trade names) are also effective. Tordon is available only to licensed pesticide applicators and should not be used in the vicinity of desirable trees or shrubs. Dicamba may accumulate in soils to cause injury to or death of trees/shrubs in the vicinity of treated areas. As with any pesticide, read and follow herbicide label directions carefully.

Sheep and/or flea beetle grazing are examples of biological controls. The Colorado Department of Agriculture Insectary has four flea beetles that feed specifically on leafy spurge. For more information on leafy spurge control, see www.ext.colostate.edu/pubs/natres/03107.html

Bindweed control is also difficult. A relatively new, restricted-use herbicide, Drive (quinclorac) is effective. Control or suppression of bindweed is fair to good with 2,4-D, dicamba or glyphosate. Picloram application is effective in pastures, range, non-cropland and non-landscaped areas, but again, note its restricted use status.

The Colorado Department of Agriculture Insectary has an insect that is a bindweed defoliator; note that releases of such biocontrol insects are most effective over larger areas.

The Jungle In My Kitchen

By Deb Ross, Colorado Master Gardener

Gardeners who spend their lives working in office cubicles indulge their love of gardening during working hours by filling every spare inch of space in their cubicles with potted plants. But plant lovers see more than potted plants. While gazing at a single plant, the mind's eye creates fabulous climate zones: vistas of cacti and majestic purple mountains; jungles of lush foliage filled with red and green, jewel-like, squawking parrots.

At one office where I worked there was a happy crowd of plant enthusiasts who shared cuttings.

Sometimes a cutting looks innocent enough when it is small, but turns into something very different when it takes root and grows. One such green beastie is *Cyperus alternifolias*, also known as an Umbrella Palm.

I first encountered the Umbrella Palm in a co-worker's cubicle. The cuttings, about six to eight inches long had delicate green stems topped with slender green leaves radiating from a central point. They were like little umbrellas without the fabric covering. They looked very exotic in their glass jar. I was instantly enchanted.

"Ooh, those are neat," I said. "How do you root them? Can I have some?"

"Sure," said my fellow plant lover, handing me the glass jar with ALL the cuttings.



Texas A & M

This action should have set off alarm bells in my head.

"Trim the stems and leaves so they are each about half an inch long" she continued. "Spread out the leaves and place the cuttings on some WET potting soil, stem up. Keep the soil WET and eventually you'll see roots. In the wild they grow along riverbanks, so keep them WET and they'll do fine. They'll root faster and grow better with daily sunshine."

Three uses of the word WET also should have set off some alarm bells. But fascination overrules common sense.

Since I wasn't lucky enough to have a cubicle near a window, I took my new cuttings home and set them in a small pot on the kitchen window sill. In no time at all, the cuttings took root and sent out new little umbrellas. Soon, more umbrellas appeared and grew taller. The root ball quickly filled the pot, overflowing with umbrellas and there was no place to pour the daily water that the plant needed. So I bought a large plastic bowl and replanted the Umbrella Palm in the bowl.

The roots devoured all the soil in the bowl and went right on growing happily, soaking up a quart of water which I replenished daily. The umbrellas were now two feet tall. One day I found a puddle on the kitchen floor and I discovered that the roots had punched a hole in the plastic bowl. Vaguely, I remembered that my coworker had repeatedly used the word WET. I still didn't see this as a problem. I still imagined that fabulous tropical landscape right next to my refrigerator: a river vista thick with Umbrella Palms and the occasional small alligator sunning itself on the riverbanks.

The Jungle In My Kitchen (cont'd)

I bought a heavy duty - but decorative - plastic trash can and repotted the plant. The umbrellas grew to over four feet tall and sucked up two gallons of water every day. The leaves were six inches long and the stems were as thick as one of my pinkie fingers. Navigating my way into the refrigerator became challenging. Looking out the kitchen window was impossible. When the roots punched a hole in the trash can creating a river on the kitchen floor, I knew it was time for drastic action.

I man-handled the whole thing down the stairs and out into the back yard where I wrestled it out of the trash can. Determined to perform major surgery, I raided Hubby's workbench and borrowed a large saw. I was happily sawing the root ball into chunks when Hubby came home and threw a fit, accusing me of criminal tool abuse.

In a new trash can, I grew another monster from a chunk of that root ball. Spider mites finally rescued me when they infested the plant and I gave up on starting over with more cuttings.

It's nice not to have to push and shove the refrigerator door and lean on it to keep it open. The little *Opuntia robusta* cactus that now lives on my kitchen window sill doesn't need much water and looks terrific with those distant purple mountains in the background.

The Amazing Grand Teton & Yellowstone Wildflower Extravaganza

Carey Harrington, Colorado Master Gardener

This summer, a group of El Paso County Master Gardeners took a week-long trip to the Grand Teton and Yellowstone National Parks to seek out wildflowers with the experts.

A fabulous time was had by all, and everyone learned to identify at least a few more wildflowers than they could before the trip. I think for all of us it was a treat to be with a group of people as interested in flowers as we were – to not feel silly dropping to our knees to get a close-up of a paintbrush or columbine, to know that when we asked “what's this one?,” everyone else was just as curious to know the identity of the mystery flower, to be with the kind of people who were thrilled to receive a complimentary copy of “Vascular Plants of Grand Teton National Park & Teton County: An Annotated Checklist.”



Another wildflower !
Photo by Natasha Nashadka

Since I was a wildflower newbie, I kept notes during our hikes in addition to snapping photos (I highly recommend cargo pants for wildflower hiking as they have plenty of pockets for notebook, pen, binoculars, extra camera batteries, sunglasses, granola bars, insect repellent, tissues, etc, etc, etc – needless to say, I did not present the sleekest profile!).

At the end of each day, I and my hotel-mates would compare lists and pore over our wildflower guides to find the flowers we'd seen. I was surprised to discover most of them had ranges that extended down into Colorado as well. In fact, one of our guides from the Teton Science School told us that wildflower heaven was truly in our own backyard.

The Amazing Grand Teton & Yellowstone Wildflower Extravaganza

(cont'd)

Here are some, but by no means all, of the wildflower highlights from the trip:

- **Sticky Geranium** – this was prolific in both the Teton and Yellowstone areas. We could easily identify it by its pink flowers. We also saw a few specimens of the related Richardson's Geranium, with white flowers, in Yellowstone.
- **Green Gentian (Monument Flower)** – this plant takes seven years to send up a magnificent stalk of creamy greenish white blooms and then dies!
- **Paintbrush** – we saw examples of red, orange, pink, and yellow varieties. This had to be one of the most photographed flowers on the trip.
- **Cow Parsnip** – this magnificent plant with its large leaves and white flower clusters was stunning in its size. I've since seen it in Summit County, CO as well as in the Brainard Lake Recreation Area.
- **Arrow-leaved Balsamroot** – this fabulous plant looks like sunflowers with large, strappy, arrow-shaped leaves. There were fields filled with this in the Grand Teton area.
- **Blue Clematis** – we saw a few of these sprawling on the ground on our Teton hike.
- **Death Camas** – this plant, with its poisonous creamy flower stalk and lily-type leaves, has an attention grabbing name!
- **Buckwheat/Sulfur Flower** – we saw plenty of these in both areas
- **Everett's Thistle** – this cool-looking thistle became very familiar to us as all of our guides told us the same story about how it came to get its name - a poor fellow named Everett was lost for thirty days, and this was the only thing he had to eat.
- **Elephants' Heads** – once I saw this flower in a guidebook, it became my personal quest to find one. Finally, we came across a patch of it along the side of the road in Yellowstone. The individual flowers on the stalk look like little pink elephants' heads (really!). I've since seen this in a ditch on Ute Pass, on the side of a ski area utility road in Summit County, and also in some marshy fields at Brainard Lake Recreation Area.
- **Scarlet Gilia** – its scarlet/hot-pink trumpet-shaped flowers made it easy to spot along the road in both parks (and we noticed that most of them cleverly grew only in areas with no convenient pull-over areas). This wildflower novice kept thinking she was seeing penstemon.



Indian Paintbrush in Grand Tetons

Photo by Carey Harrington

Alpine Plants

We saw some terrific alpine plants on our hike up Mt. Washburn in Yellowstone. Here are a few:

- **Phlox hoodsii** – okay, my guidebook says this is found from plains to foothills, but we only saw this low, white cushion-type phlox on the alpine hike at Yellowstone.
- **Shooting Star** – this nifty little plant looks like hot pink shooting stars heading to earth.
- **Fringed Phacelia** – with its purple, bottlebrush-type flower, this plant was another often photographed favorite (my guidebook says this is also known as Silky Scorpionweed...eesh).
- **Sky Pilot** – we never did learn the origin of this plant's name, but it had bluish-purple flowers on low stems.
- **Golden Draba** – this one sports tiny yellow flowers in a cluster on a stalk above a cushion of leaves.

The Saga of the "Black Thumb"

by Nadine Salmons, Colorado Master Gardener, El Paso County

How often have you said "I can't grow a thing. I kill it every time. I really would like to see some flowers or plants to give some color to my house. I'd love to have a small vegetable garden." The time is now!

There are many plants that will grow in our difficult environment. I live at 7400', out on the windswept prairie with a minimum of trees. I have many micro-climates but still have plants that reproduce or flower every year with a minimum of care. They are mostly perennials or self-seeding plants that come back year after year no matter what the weather or drought conditions.

Here are four easy steps:

Step 1: Determine the type of soil and micro-climates you have.

- Is your soil sandy, clayey (hard-packed) or just right?
- Get a soil test to see what nutrients are in your soil.
- Are you planting where there is a lot of sun, shade or both?
- Are you planting in windy or protected areas?
- Are you planting near a paved driveway, near irrigated lawn or next to the house?
- What is your elevation?

TIP: See CSU Fact Sheets 0.501: Soil Testing and 0.507: Soil, Water and Plant Testing either online or get them from your Extension Office.

Step 2: Plan and decide what type of plants you want.

- flowers and small plants?
- edible plants?
- ground covers?
- some tall and some short plants?
- a combination of all of the above?

All can grow with a minimum of care.

Step 3: Add amendments to your soil. In my case that meant I added to my broken-up clay soil an equal amount of steer manure and Canadian sphagnum peat moss and a small amount of time-released general fertilizer. Till thoroughly and water prior to and right after seeding or transplanting.

TIP: See CSU Fact Sheet 7.235: Choosing a Soil Amendment

Step 4: Once the plants or seeds are in the ground, don't over-fertilize or over-water. Covering the planting beds with mulch conserves moisture and may mean that you will need to water only once each week. One or twice during the growing season, fertilize with time-released fertilizer.

TIP: Remember, the more nitrogen you use the more leafy and green the plant will be. Don't use a lot of nitrogen if you want flowers as well as foliage.

Here are some suggestions for reliable and "easy" plants:

Perennials:

Rhubarb (*Rheum x cultorum*)

Hens and chicks (*Chlorophytum comosum*) - can be invasive

Butterfly delphinium (*Delphinium grandiflorum*)

Horehound (*Marrubium vulgare*)

Mints (*Mentha*) – various scents, very invasive

Catnip or catmint (*Nepeta faassenii*)

Running onions - produce green, onion-like leaves and small boilable onions

Lovage (*Levisticum officinal*) - Tastes like celery. Can grow up to 8' in the right situations. You can use its leaves, stems when very thin, and seeds just as you would celery.

Bee balm (*Monarda*)

Sage (*Salvia*) - Purple Rain is spectacular

Butterfly bush (*Buddleia davidii*)

Plants that drop seeds and reproduce each year:

Hollyhocks (*Alcea rosea*) - They come in various colors sometimes dependent on the soil they are planted in.

Very hardy. They can be very tall (some of mine grow to 10') or dwarf (3-4'). Most are biennials.

Dill (*Anethum graveolens*) - Very pretty when it goes to seed. Wonderful for salads, seasoning (for chicken or fish) and dilly bread.

Fennel (*Foeniculum vulgare*) - A licorice-tasting vegetable with stunning green or bronze, fern-like foliage.

Reproduces by rhizomes, bulblets, and other means:

Bulbs - Perennials but may have to be stored each winter depending on the elevation and temperatures

Daylilies (*Hermerocallis*) - reproduces by rhizomes

Ground covers:

Sedum (*Sedum hidakanum* var. *eewersii*)

Grasses, many ornamental and hardy

Thymes

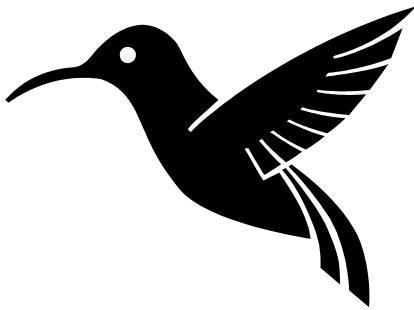
HUMMINGBIRDS

by Marge Breth, CSU Cooperative Extension Wildlife Master, Colorado Master Gardener, and Wildlife Watch Instructor, Colorado Division of Wildlife.

Who does not enjoy the flitting and buzzing of Hummingbirds throughout the growing season in El Paso County? Broadtail, Rufous, Calliope, and Black-Chinned Hummingbirds all spend a part of the growing season in Colorado. They will soon be returning to their wintering grounds.

Spring Arrival:

When Hummingbirds arrive, they come in waves according to the temperature, weather, and available cover for nests. They fly relatively low, and can catch insects while flying. They return exactly to the same place over and over, but it is not as common for them to use the same nest however. They fly an average of twenty-five



miles per hour. In five to ten days they can go 250 to 600 miles stopping to feed along the way. The young don't have it imprinted exactly right the first year on getting back to the same tree/nest area like the veterans, but do manage to find the same general area where they were reared. Early arriving hummingbirds can start arriving by mid-April so make sure to put feeders up by Tax Day.

When Hummingbirds first arrive in Colorado, they weigh the equivalent of a penny. When they are ready to leave in the fall, they have gained enough fat they weigh the equivalent of a nickel. Hummingbird life spans are usually one to five years. Three years is average. Some Broadtails have been found to be up to twelve years old.

Fall Migration:

Hummingbirds do not migrate in flocks like ducks or geese but individually from Colorado's Front Range south to wintering sites in Mexico and the Southwestern United States. Mature males are the first to go followed by mature females then lastly the juveniles which may not leave our area until October so keep your feeders clean and filled until then.

Feeding:

Generally, Hummingbirds eat all day up to ten minutes after dusk in the evening. Males will average one meal every twenty minutes or so. Females average one meal every five to seven minutes, all day long. Males burn up more food, doing as many as ninety chases and seventy dives in an hour. Their diet consists of small insects, flower nectar and feeders with sugar water. Hummingbirds will hang around damp areas collecting insects and also rob insects from spider webs. They also feed on willow sap.

Hummingbirds can go into a short-term, self-induced hibernation to conserve energy. They can get their breathing down to 5% of normal. It can take them as much as eight minutes in torpor before Hummingbirds take a breath. Their energy use is so carefully balanced they can help themselves get through a cold night by going into short-term hibernation. They pack on fat during the day, and use it at night. Most of their consumption is carbohydrates and sugars. They go torpid if they do not store up enough fat and carbohydrates during the day.

Nesting: Hummingbirds like to make nests on a downward sloping branch of a tree. Protection above the nest is important to keep the sun out and to help the mother bird retain her body heat when she is nesting.

HUMMINGBIRDS (cont'd)

The nests are made of spider webs with moss and lichens adhered to the outside. The inside of the nest is lined with cottonseeds, willows, or aspen cotton. The eggs are the size of a tic-tac, usually two to a nest. It takes approximately twenty-one days for eggs to incubate, but this can be delayed by cool weather.

If the first nest is not successful, the Hummingbirds will move to another location, and build another nest. As the baby birds gain weight, the nest stretches with them. Before they leave the nest they practice on the edge of it by using their beaks to hang on while they flap their wings in order to avoid lift off.

Hummingbird sounds

Males talk to each other, letting other Hummingbirds in the area know they are irritated, or annoyed. Early in the mornings and early evening, you will hear the most vocalization and chattering. Females make a soft quiet chirp early in the morning.

An overview of the Hummingbirds in Colorado.

In Colorado we have Broadtail, Rufous, Calliope, & Black-Chinned Hummingbirds that are identified by size and color variations. The feathers of Hummingbirds are not pigmented. What you are seeing is structural color created by angle at which light bounces off the feathers. Identification can be difficult as most of the time we see only a flash of color as the birds speed by.

Broad-tails:

Both males and females have greenish backs, black tail feathers, and white undersides. The male has a pinkish red gorget while the female does not. The tail is rounded, rather than forked, in both male and female. The female is similar in appearance to the Rufous and has green central tail feathers. The outer tail feathers are rust colored at the base with black in middle, and white on outer tips. Accounts mention it nests in the same tree year after year – a phenomenon known as philopatry – faithfulness to the previous home area.

Broadtails make the whistling noise we hear in the evening. Using the 9th, & 10th primary or feather spine, whistling is created when wind vibrates the feathers.

Rufous:

The male Rufous has a gorget of fire orange-red. Males are aggressive, and very vocal. The female does have a couple of gorget feathers. Males have non-iridescent upperparts, and sides. Females have green above, with rufous on sides, and at base of tail feathers.

Rufous hummingbirds have now been discovered east of the Mississippi for the first time. Rufous over-winter in Mexico. The Rufous make a low and loud sound with their wing beats.

The Rufous migratory pattern is north from Southern Mexico along the Pacific coast to British Columbia, and Alaska. Rufous generally breed in British Columbia or Alaska. When breeding is completed, they start their southward migration moving through Colorado only during the 1st or 2nd week in July. They will rest and gain weight for the continued southward flight.

HUMMINGBIRDS (cont'd)

The female Rufous gives a “no trespassing” signal by fanning and waving her tail if she is disturbed while feeding. The first Rufous to discover a food source defends it, even though they have enough of the nectar, a male will perch nearby and drive away any intruder with angry noises. Sometimes they face the opponent, and signal with their brilliant gorget. At mating time, the female visits the male but the rest of the time they have separate territories. After mating, the male bird moves away.

Calliopes:

Calliopes are the 2nd smallest bird in the world. The wings are longer than their tail feathers. Males are metallic green above, possess a gorget that is white with purple violet rays, which can be extended to give a whiskered look, and a stubby tail. Females are green above, white below, with dark streaks on the throat, buff flanks, and white tipped tail corners; resemble a female Rufous but smaller with smaller bill, and paler flanks, and less rufous at base of tail. Their eggs are bean-sized, which is surprising for such a small bird.

Calliopes are generally in Colorado in May. The Calliope mating display or when they are defending their feeding area is spectacular. They rise, out of sight, then make a spectacular swoop down at a high rate of speed to buzz another female, an opponent, or when you wander into their feeding area.

Black-chinned:

Males are green above, with a black chin, underlined by a violet-purple throat band. Females are green above with a white throat and breast, buff sides and white-tipped outer tail feathers. Black-chinned hummingbirds breed on the western slope in Colorado

The Black-chinned hummingbirds have an interesting courtship pattern. May to June, males will do a power dive, then when they are close to the bottom of the dive, they make a hummingbird-sized grunt, and whirl up out of the dive, going side to side, looking around. The female is usually on a low branch near the ground, or on a small bush. They will fly off in the shuttle flight pattern to copulate in a bush. If the female has left when he comes out of the dive, he will look for another female.

The Starsmore Nature Center in Colorado Springs provides lectures about these fascinating birds on National Hummingbird Day in May. Naturalists and Licensed Hummingbird Banders give classes all day long as well. Also, Wildlife Watch Instructors with the Colorado Division of Wildlife offer classes in viewing wildlife and using binoculars, one Saturday a month during the summer months. College credit is given for the 8-hour instruction.