When the lawn mower passes into memory

By BRUCE BYERS
For the Camera

IN OUR PLACE

I awaken with a start. It's 7 a.m. on a summer Saturday, and my neighbor is moving his quarter-acre of Kentucky bluegrass, the eager buzz of his mower a familiar summer sound. I drift back into a doze.

Then I hear the siren. I jump up to see what's going on just as the green Eco Patrol car pulls up in front of my neighbor's house. The two officers get out and, as I step outside, I hear one yell: "We finally caught you in the act, sir. You know it's been illegal to use a gasoline lawn mower since 2005 — that's a $5,000 fine!"

Blue grama grass

I seem to remember that in 2005 the State Legislature passed the Eco-Lawn Bill by an overwhelming majority. It banned gasoline mowers, lawn chemicals and lawn watering. That was when oil was almost gone, and anyone with the brains of a dandelion could figure out that the last oil in the world was just too valuable to use for mowing lawns, or making chemicals to help them grow faster.

Then my neighbor starts yelling. "This ridiculous law! What about my constitutional right to a green lawn! All I hear these days is 'native grasses' and 'xeriscaping!' That stuff is *ugly* if you ask me — just look at my neighbor's place there!" They all turn to stare at me standing in pajamas in my yard. I look down, horrified. Beneath my bare toes is a turf of native blue grama grass, tough and somewhat brown. It looks smooth enough for croquet, though.

"Your neighbor is the smart one," I hear the officer say. "He understands how ecologically ignorant and arrogant we were for so many decades, with our huge lawns of Kentucky bluegrass here in Colorado. Why, bluegrass is adapted to a place with three or four times the rain we get here."

"If you get nostalgic, sir, there's the Antique Lawn Demonstration," said the second officer. "Once a summer people can try pushing the old gasoline mowers around an acre of bluegrass they water up especially for the occasion. It's mostly the old-timers who come. That buzz reminds them of the summers of youth, or something. To me, it's just noise."

Then I notice — the neighborhood is *quiet*. No lawn mower buzz anywhere.

I sit bolt upright in bed. Whew! I had *dreamed* all of that — an eco-nightmare. Eight-thirty a.m.! Time to get up, eat breakfast ... and mow the lawn.

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Bruce Byers is the director of the Environmental Studies Program at the Naropa Institute in Boulder.

Graphic from, "From Grassland to Glacier," by Cornelia Mutel and John C. Emerick, Johnson Publishing

Boulder Daily Camera 5 Sept. 1991 p. 1B

Ecological changes cause aspen decline

By BRUCE BYERS
For the Camera

IN OUR PLACE

It's almost that time again; on the high ridges a few leaves are already turning. Over the next few weekends, a horde of cars, motorcycles, jeeps and motor homes will invade the high country. A new word, "aspencade," has even been coined to describe this calvacade of aspen gawkers. Even the most hardened city-lovers take a drive in the mountains once a year at aspen time.

If the aspencaders do get out of their cars and walk through an aspen grove, they are likely to see shade-tolerant Englemann spruce and subalpine fir coming up under the aspens. Those with sharp eyes may notice the burned stumps of large old trees — spruce and fir — that the aspen replaced after a fire long ago.

Populus tremuloides, quaking aspen, is a lover of ecological disturbance. Sprouting in the wet, gravelly soils left by retreating glaciers, the paths of avalanches, the wakes of fires and the devastation of clearcuts, aspen is considered an "early successional" species by ecologists. Given its penchant to dominate recently burned areas, it has been called the "phoenix tree." It is the "weed" tree of northern and mountain forests.

Aspen's ability to take over an area following ecological disturbance is explained by the fact that it can reproduce both from seeds and from "suckers," young trees that sprout from the widespread root system of the parent tree, even long after that tree has been burned, cut or killed. In our region, aspen reproduction is exclusively by suckering.

Adapted to natural disturbances, aspen thrive following some human activities, as they have after logging in the Great Lakes region. But in our own Front Range, the rapid ecological changes we have wrought — especially suppressing fires and removing predators — are too much, too fast, and aspen are declining. The natural replacement of aspen by spruce and fir is proceeding apace, and fire suppression blocks the resetting of the ecological clock required for them to thrive. Elk herds have grown beyond the carrying capacity of their available winter range in places, such as Rocky Mountain National Park, and are overbrowsing and killing the aspen suckers. As the nutrient reserves of their underground root systems are exhausted, aspen are slowly dying out. Sad, since some of these root systems have persisted for thousands of years, since the end of the last Ice Age at least, and maybe much longer.

Photo courtesy of BRUCE BYERS

The things aspen need to thrive in our region — free-burning natural fires (or perhaps heavy logging?) and the return of wolves (or heavy hunting?) to reduce elk populations — will themselves be controversial, and challenge the values of people across the spectrum of environmental opinion. But unless we make tough ecological choices, the hillsides of yellow that brighten these shortening days may shrink and fade, and our lives will be duller without them.

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Daily Camera 19 Sept. 1991 p. 1B

An incomplete symphony

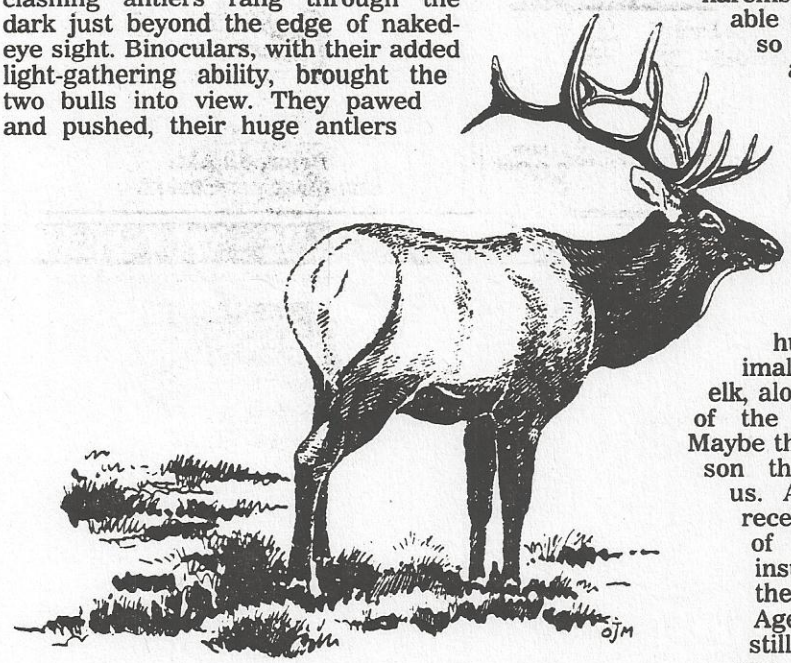
By BRUCE BYERS
For the Camera

IN OUR PLACE

The sound starts low in pitch but quickly climbs octaves, reaching for the cold stars, growing in intensity to a shrill, breathy push that cracks, falls and fades into a few low grunts. Another big bull bugles back, the sound echoing across the moonlit meadow.

I remember a magical October full moon in Rocky Mountain National Park a few years ago. The sound of clashing antlers rang through the dark just beyond the edge of naked-eye sight. Binoculars, with their added light-gathering ability, brought the two bulls into view. They pawed and pushed, their huge antlers locked together, then stopped to step back and circle slowly, frosted breaths silver in the moonlight, before lowering heads and beginning the ancient dance again. Among the silver trunks of a nearby aspen grove, the cows yipped and squeaked. The glaciers along the divide glowed with moonlight.

The "bugle" of the big elk bulls in their ritual competition for breeding harems is unbelievable at first, it is so high-pitched, alien and wild. Yet for some reason it is also deeply familiar.



Our Ice Age ancestors followed and hunted big animals, including elk, along the edges of the ice sheets. Maybe this is the reason they fascinate us. Although the recent trappings of civilization insulate us from the wild, Ice Age instincts still run warm in our blood. We have a deeply evolved "psychogenetic" connection with wild nature. If we get out of our cars and step off the road into a moonlit meadow, these instincts quickly come to the surface.

For millennia — unbroken except for a brief, man-made gap — these silver peaks have run with the bugling of elk. Each fall throughout the 1860s and 1870s market hunters shot many hundreds of elk a year, their carcasses hauled to Denver by the wagonload to be sold as cheap meat. By 1900 elk were gone from their winter ranges on the eastern slope near the growing Front Range cities. Just a hundred years ago, wolves were common here too. Twenty years later, none were left.

A reintroduction program begun in Estes Park in 1913 brought the elk back. The wolves are still gone. Now the elk herd in Rocky Mountain Park has exceeded the carrying capacity of its winter range, with no predators to keep it in check and hunting banned. Aspen groves in the park are declining from overbrowsing by elk.

Another bugle splits the silence. Someday, soon I hope, the howls of wolves will rejoin the bugles of elk in a wild symphony of harmony and balance. Maybe if more of us heard the lonely bugling in these moonlit mountains, we'd agree to bring back the wolf, restoring the ancient music of ecological wholeness that is meant to fill this place.

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17 Oct. 1991 Boulder Daily Camera

14 November 1991 Boulder Daily Camera

An enlightening encounter

IN OUR PLACE

By BRUCE BYERS
For the Camera

The dark comes earlier and earlier this time of year, and I often find myself out on the foothills trails just at dusk, determined to get out for a run after work. Two years ago as I ran alone one late afternoon, my thoughts rambling, I was startled into the present moment.

Illustration courtesy Colorado Division of Wildlife

The tawny mountain lion was crouched over a freshly killed deer not far from the trail, tearing off big bites of bloody meat. Spellbound, I watched for half an hour, until the dusk grew too thick to see well and I jogged home, late for supper.

I sometimes feel a prickle of alertness and fear as I round a bend in a trail or pass under a rocky ledge at dusk. I can imagine a lion crouched, waiting. I wonder what I would do. Would I, as recommended in the Colorado Division of Wildlife's pamphlet titled "Living with Wildlife in Lion Country," stand calmly, speak forcefully and raise my arms so I look as large as possible? Or, would I remember the jogger who was killed by a cougar last year near Idaho Springs, and panic?

"The Hungry Tigress" is a story from ancient India. Once long long ago, the story says, a prince went walking in a forest in the foothills of the Himalayas. Suddenly, out of the woods, came a tigress, followed by two cubs. As the prince turned to flee, the tigress stumbled and fell. The prince could see that she and her cubs were starving. Moved with compassion, he quickly took off his silken robes, cut his skin with a stone so the tigress could smell his blood, and lay down. Hungrily, the tigress devoured him. The story says that for many years this forest was filled with a golden light.

This is a radical vision of biocentric equality, in contrast to our usual anthropocentric view that places humans higher on a scale of value than other species.

Somehow I have never pictured myself acting like the prince in this story if I met a lion face to face. Many of my ancestors probably faced down lions or cave bears and survived, I imagine, or I wouldn't be here. I have hoped that my instincts might save me in such a situation.

Predators shape their prey. Mountain lions are the architects of the alertness and fleetness of deer — over the millennia of evolution they have eaten the less alert and less swift, eliminating their genes from the deer population. In a deep way, lions are "good" for deer.

They may be good for us, too. Having lions in our midst may encourage us to rediscover our innate alertness. Learning to live "in lion country" may wake us up, and teach us the mindfulness we need in our daily lives. I may have to stop running with my Walkman, and tune in to the world around me. Those hungry eyes could be waiting just around the bend.

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A 'hope' of ladybugs masses for winter

By BRUCE BYERS
For the Camera

IN OUR PLACE

A few weeks ago, before the snow got deep, I climbed one of our foothill peaks. On the very top, I noticed a ladybug between stones. Turning stones, I found more and more, hundreds, and then thousands; piles and piles of ladybugs!

Why ladybugs congregate in winter masses like this is not known, but it is common throughout western North America. Maybe the masses somehow help to deter ladybug predators. Maybe conditions on peaks are somehow just right for wintering ladybugs. They may travel uphill in the fall until they can't go higher in order to find each other, much as butterflies fly upward to ridge tops for mating. Or peaks may just provide a good "jump off" point for dispersal in the spring.

Ladybugs (both adults and larval stages) mostly eat aphids, those soft-bodied sucking insects that are common pests of human crops and ornamental plants. To biologists, beetles and true bugs are very different kinds of insects. But to most of us, any insect is a "bug," including a "lady beetle" — hence the common name "ladybug."

For me, the piles of "lady beetles" on peaks are a symbol of hope. In medieval times, "terms of venery" described groups of every species, often with a surprising poetic freshness. Some of these terms, such as a "gang of elk," a "pod of whales" and a "pride of lions," have been retained in our modern language. For ladybugs, no term of venery has survived. I propose that a large group be called a "hope of ladybugs."

Their metabolism slowed to almost nothing, they'll wait until a warm day months from now. Then they'll crawl out from between the stones, and a spring wind will carry them to the green fields that they know in their genes are waiting somewhere.

In a poem titled "For the Children," the poet Gary Snyder gives three precepts for surviving our current eco-crisis and developing ecologically sustainable communities: "stay together; learn the flowers; go light."

For me, the mountain-top masses of ladybugs are not only a symbol of hope; they also symbolize these three "eco-precepts." Together the ladybugs wait for that warm wind. When it begins, they will fly up, light as air, to be carried far and wide across the greening valleys. They know their flowers, on which the aphids will be waiting, as they have for millennia.

We humans too wait under the cold stones of hatred, ignorance and greed. We must "stay together" and create peaceful communities. We must "learn the flowers," increasing our ecological knowledge and wisdom. And we must learn how to "go light" on the ecosystems of our planet, through appropriate technologies and voluntary limits to consumption.

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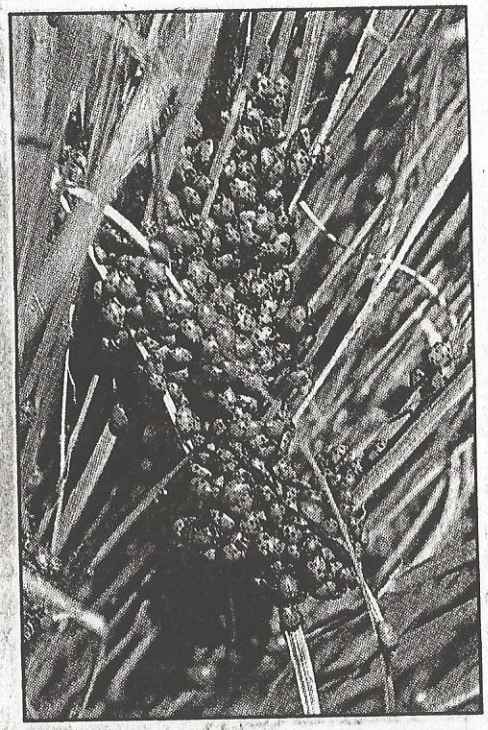


Photo by BRUCE BYERS

NATURE'S MYSTERY: No one is quite sure why ladybugs congregate together in winter.

Boulder Daily Camera 12 Dec. 1991, p. 1B

Rattlesnakes shake our feelings about nature

By BRUCE BYERS
For the Camera

IN OUR PLACE

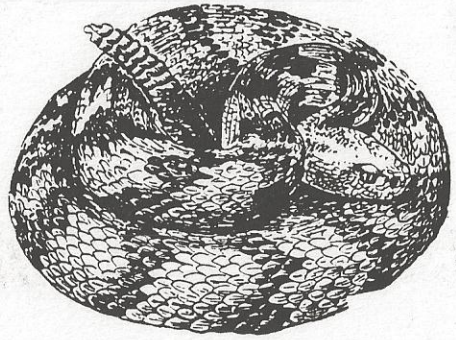
One of my memories of second grade is of a gray winter day, about this time of year. There wasn't much snow on the ground. That day at recess some boys in my class went into the woods behind the school. They found a big snake under a rotten log — dead they thought, because it didn't move. When the bell rang, they put it in a paper grocery bag, brought it to class, and put it on the radiator. But they didn't tell the teacher — we weren't allowed to play in the woods at recess.

In about half an hour, a rustling sound started to come from the bag. The snake had warmed up; it hadn't been dead, just torpid because of the cold. The teacher looked in the bag, found herself nose to nose with an angry rattlesnake, and panicked. She pulled the fire alarm, and the whole school evacuated into the cold.

When the firemen got there, they chopped the snake into several pieces on the playground. Even then, at 7 years old, I felt bad for the snake.

The other day, I heard another rattlesnake story. A family friend, who lives just on the edge of city open space near Chautauqua Park, was sitting in her living room with her granddaughter on a warm afternoon last fall. The door was open, and she saw a tiny snake crawl into the house. When she went to investigate, she saw that it was a small rattlesnake about 10 inches long. It coiled up and shook its tail, but its rattlers were still too small and unformed to make a sound.

As she was trying to shoo it out the door with a rolled newspaper, it launched itself at her and bit her on the finger — but its fangs were so



small that the bite didn't break the skin. She then got a broom, let the snake wrap itself around the handle, and flung it down the hill behind her house.

After hearing this story, an agitated neighbor asked her, "But why didn't you *kill* him?!" Her answer? "I just couldn't bear to! He was too feisty — I *admired* him too much!"

These stories provide images of two very different attitudes about nonhuman species and, by extension, about the relationship between humans and nature in general. Anthropocentrism, or human-centeredness, assumes that our species is of greater value than any other species, and is entitled to use nonhuman species however we see fit. Ecocentrism, in contrast, recognizes that nonhuman species have an intrinsic value and right to existence, apart from any "instrumental" or "use" value they may have to us. Many people can find some value in beautiful or harmless species, but obnoxious or dangerous ones — like rattlesnakes — challenge our anthropocentrism more directly.

Knowing that my elderly neighbor refused to kill a rattlesnake because she "admired" its feistiness cheers me, and gives me hope that we can learn to live with nature after all. ●

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Daily Camera Jan. 9, 1992 p. 1B

Daily Camera Feb. 6, 1992

Song of the house finch a welcome harbinger

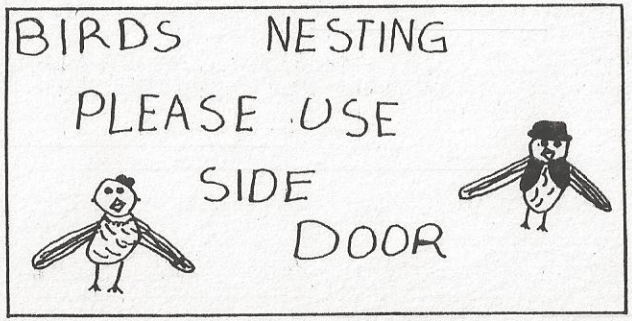
By BRUCE BYERS
For the Camera

IN OUR PLACE

As I was shoveling my walk so that the mail carrier could get to my door, squinting from a bright sun reflected on the snow, I was surprised to hear a house finch singing its spring song, already, in January! That bright, warbling song warmed my soul, reminding me that the days already are getting longer.

According to the old saying, "Neither snow nor rain, nor heat, nor gloom of night..." can stop the mail. Maybe not, but a pair of house finches *almost* stopped ours last spring, and I wondered if the finch whose song graced the snowy morning was the male of that same pair.

When my 8-year-old daughter discovered that some finches were building a nest atop a grapevine wreath hanging under the shelter of our front porch last May, she promptly declared the porch off limits to humans. A hand-lettered sign, illustrated with drawings of the proud parents-to-be, hung from a rope tied across the porch. "BIRDS NESTING. PLEASE USE SIDE DOOR!" it ordered.



The next day the postman knocked at the side door. Our mail slot is on the front porch, and we should have realized what consternation the roped-off porch would cause to a courier making his appointed rounds. Being a sympathetic fellow who liked birds, he was adaptable, and agreed to deliver our mail to an old metal breadbox by the *back* door for five weeks, undoubtedly ignoring a long list of official postal regulations in doing so.

After completing their sturdy nest of twigs and grass and lining it with shredded Kleenex, fine grass and hairs from the neighbor's dog, the female laid four eggs and began to sit. A window gave us an eye level view of the nest. The male sometimes perched on the porch light, and his happy song echoed through the house. After two weeks the eggs hatched. The chicks, almost naked at first, rapidly grew fluffy, bright eyed and fat. Their stiff wing and tail feathers unfurled, and they grew so big that all four could barely perch on the nest. One day, without any previous wing-flapping practice, the young birds flew to a nearby tree, and soon were off about the neighborhood.

The finch songs that will increasingly fill the bright mornings of these lengthening days are our payment — and the postman's — for our patience with the disruption of a closed porch.

The Endangered Species Act is up for renewal by Congress this year. It will be a heated battle, fueled partly by the bitter controversy over the spotted owl and logging in the Pacific Northwest. Ultimately, the question is whether a bird, or any nonhuman species, has an intrinsic right to a place on the planet, even if that right disrupts "business as usual" for humans. The trouble is, the rewards for allowing "business as usual" to be disrupted by other species often can't be given an economic value. They are simply invaluable — like the song of a house finch in January.

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Daily Camera, 5 March 1992, p. 1B

From "From Grassland to Glacier," Cornelia Fleischer Mutel and Jonh C. Emerick, Johnson Books (1984)

Pikas may outlast civilization

By BRUCE BYERS
For the Camera

IN OUR PLACE

Pikas are small, short-eared relatives of rabbits that live in the rock piles near and above tree line throughout the Rockies and other mountains of western North America. I have a special fondness for pikas. In fact, if I could choose an animal lifestyle to try for awhile, I think I'd be a pika.

Maybe what's appealing is the pace of pika life. If I were a pika, I'd spend the long summer days cutting sweet alpine plants, drying them on the talus rocks each sunny morning, filling a big underground burrow with dry flower-hay. When not bustling around the flower meadows, I'd lounge on a big talus block, looking over the cubic acres of air across my high valley home.

When the snows began, I'd go underground to wait the winter out, savoring slow feasts of summer flowers — alpine avens, bistort, old-man-of-the-mountain, rose crown, thistle, maybe a paintbrush or Parry primrose for special occasions. Anthropomorphizing, I imagine sitting in a comfortable old armchair with a winter's worth of good books, sipping columbine tea and maybe a nip of buttercup brandy now and then. No newspaper, television or radio to keep me up to the minute on the worries of the world.

If I were a pika who *could* read the news, I'd be worried. Pikas like it cool. With humans pouring greenhouse gases (like carbon dioxide from burning fossil fuels) into the atmosphere, most scientists are betting that Earth's climate will warm up. As it does, the cold mountain "islands" of habitat suitable for pikas will shrink, some until they are just a summit, or a single rock. On those mountains, the last pika will have nowhere to go but up — up to pika paradise, that imaginary, eternal land of cool tundra meadows between talus slopes.

But pikas don't strike me as creatures of worry. They seem like creatures who know, deep in their genes, that Mother Gaia has some tricks up her sleeve — some greenhouse surprises. Pikas have been around for about 40 million years, a very long time by human standards. Ice Ages have come and gone, and come again. During the glacial periods pika habitat expands; during the warm interglacial times, the pika tribes once again retreat to their cool mountain islands. Living through these climate changes may have bred into pikas a patience slow as the flow of glaciers, a trust that things will work out.

As we humans hurry around changing Earth's climate, are pikas more endangered by our actions than our own species? For all we really know, long after our industrial civilization has crumbled and faded into memory, and maybe even after humans have become extinct, pikas will squeak their cries of delight during the spring blizzards, waiting patiently for the snows to melt and the flower meadows to green and bloom.

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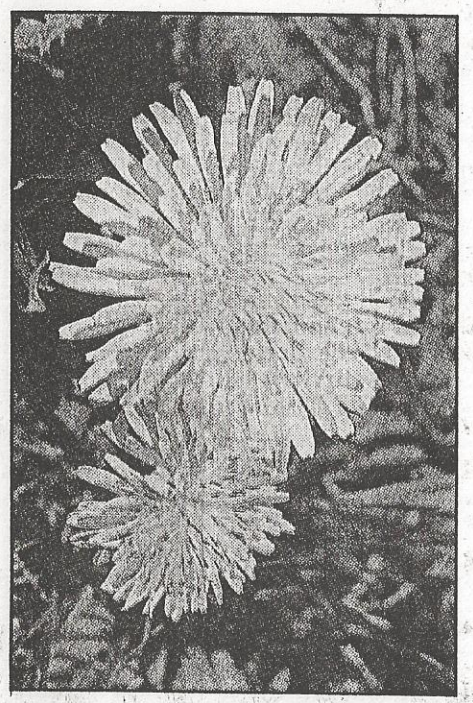
Bruce Byers is the director of the Environmental Studies Program at the Naropa Institute in Boulder. His column about the natural world appears monthly.

A bullish idea for getting rid of dandelions



Camera staff photo

LION'S TOOTH: The name dandelion comes from the French "dent de lion," which literally means "lion's tooth," from the jagged edges of the leaves.

By BRUCE BYERS
For the Camera

IN OUR PLACE

Thanks to us it is probably the most widespread plant in the world. A native of Europe and Asia, the common dandelion, *Taraxacum officinale,* is now found almost everywhere. A lover of ecological disturbance, dandelions have followed humans wherever we have gone, because wherever we have gone we have disturbed ecosystems.

Look in the natural meadows and prairies around Boulder. You will seldom find dandelions among the perennial native grasses there, although you might find a few along trails and roads. Look in your lawn, and you're bound to find a few, or more than a few, of these ubiquitous "lion's teeth." (The name dandelion comes from the French "dent de lion," which literally means "lion's tooth," from the jagged edges of the leaves.)

Our lawns, monocultures of non-native grasses, are a prime habitat for dandelions. If you find a lawn that is *not* sprinkled with their sunny yellow blooms at this time of year, you are almost sure to find another bit of yellow sprouting from it — one of those little yellow flags warning that weed poison has recently been applied.

I like dandelions. Every spring the bees from my backyard hives are busy harvesting the "dandelion flow," the most important spring source of nectar and pollen in our area. I make a batch of dandelion wine — which requires gallons of dandelion blossoms. I enjoy the buzzing, happy calls of siskins — goldfinch-like birds — feeding on dandelion seeds in early summer. My kids love to blow dandelion seedheads and watch those tiny parachutes drift off across my neighborhood.

Some of my neighbors don't share my fondness for dandelions, however. They seem to prefer little yellow flags to little yellow flowers. Spraying has always made me nervous, so I was elated last year when I discovered an ecologically sound way to get rid of "lion's teeth."

I got the idea during a visit to Yellowstone National Park. While I was inside the small park museum at Norris, a huge bison bull came to graze just outside the door, trapping me and about a dozen other tourists inside. We had plenty of time to watch the shaggy beast at close range through the windows. It was early spring, and the dandelions were lush and tall around the building. Watching the bison eat, it was clear that dandelion flowers were like buffalo lollipops; where the bull had grazed none remained.

So, if you don't keep bees, don't make dandelion wine, don't like siskin songs, hate to blow dandelion seeds and think that the world's most successful weed doesn't belong in the artificial and alien ecosystem (i.e., "lawn") around *your* house — *please* don't panic and call EverChem, ToxiGreen or one of those other "lawn care" companies! Use an ecologically sophisticated method of weed control — borrow a buffalo, and in just a day or two your lawn will be dandelion-free! Please note: bison have sharp horns, and are wild and unpredictable animals ... but they can't be any more dangerous than the poisons that would otherwise have to be used.

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Bruce Byers is the director of the Environmental Studies Program at the Naropa Institute in Boulder. His column about the local natural world appears monthly.

Daily Camera 30 April 1992

Spraying spruce trees is an insult to nature

By BRUCE BYERS
For the Camera

IN OUR PLACE

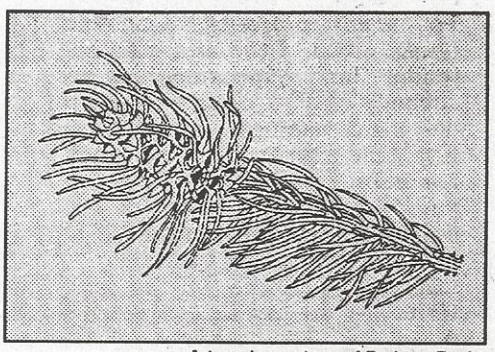
It's that time of year again. One of the surest signs of spring in Colorado Front Range cities is the spraying of blue spruce trees with insecticides to kill an aphid-like insect that causes spiny, cucumber-shaped growths called galls on the tips of spruce branches. Homeowners who find galls on their spruces usually worry that their trees are sick. According to the Colorado State University Cooperative Extension Service, however, "The galls cause little or no harm to the health of the tree." Even when they learn this, many spruce owners have their trees sprayed anyway because they consider the galls ugly.

The galls are caused by *Adelges cooleyi*, the Cooley spruce gall adelgid. These insects have a fascinating and complex life cycle, details of which are still not completely understood by scientists. They are quite common in the wild on both blue and Englemann spruce, the two species native to our mountains.

Spruces and gall-forming adelgids have been evolutionary partners for millions of years, and wild spruces have evolved chemical defenses that keep adelgids from doing any significant damage. The chemical compounds in spruce needles that give them their wonderful, pungent smell are natural insecticides.

In the wild, some individual spruces have almost no galls, while others nearby have galls on up to half of their branch tips. Genetically controlled differences in susceptibility to adelgids could explain this pattern. This observation suggests that an ecologically sophisticated way to eliminate the "need" to spray would be to choose trees with a high level of natural resistance for ornamental planting.

Blue spruce grows naturally at elevations between 7,000 and 10,000 feet. For those who think that the perfectly natural galls on spruces are so "ugly" that they need spraying, another ecologically sophisticated solution would be simply not to plant spruces in our cities, which are far below their normal altitude. A study last fall by ecology students from the Naropa Institute showed that galls were significantly less common on wild spruces in the mountains than on unsprayed trees in Boulder. Trees planted below their normal range may be stressed, and therefore more susceptible to adelgid attack. Or perhaps the natural predators of adelgids are less common in cities than in the mountains.



Art work courtesy of Barbara Bash

UGLY?: An insect creates galls on the outside of spruce branches.

To spray or not to spray — that is the question. As an action, spraying spruce trees has a minor environmental impact, but as a symbolic statement it is significant. Spraying shows an unwillingness to accept nature the way it comes. On the other hand, choosing *not* to spray signifies an acceptance of natural ecological relationships, a willingness to work with nature rather than against it. Such an attitude is a big and essential step toward saving the Earth.

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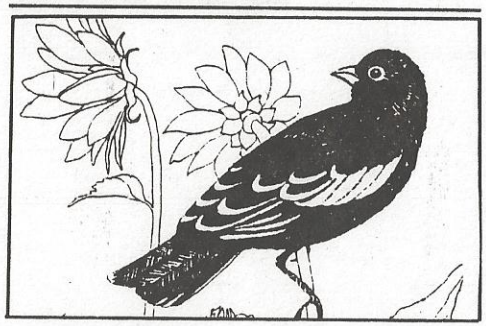
Bruce Byers is the director of the Environmental Studies Program at the Naropa Institute in Boulder. His column appears monthly.

Daily Camera 2 April, 1992

Ecological politics lead to odd choice of state bird

By BRUCE BYERS

IN OUR PLACE



I recently made my spring pilgrimage to Bonny Reservoir, a reservoir on the Republican River just on the Colorado-Kansas border. I go out every year to celebrate the coming of spring by relaxing and looking at birds. About an hour's drive out, with the Front Range fading into the haze and the treeless, rolling grassland expanding my horizons, I saw the first lark bunting.

You know — the Colorado State Bird. Actually, I wonder how many Coloradans have ever seen *Calamospiza melanocorys*, the lark bunting. A bird of grasslands, it is abundant on the eastern plains of our state. Although it can be found in some other parts of Colorado, it is not common there.

Even those Coloradans who have driven east on the interstate are not likely to have noticed this sparrow-sized bird, although the male is almost pure black except for striking white wing patches. You have to take smaller, slower roads for that, the old roads that pass through fading towns like Last Chance, Joes, Cope and Idalia.

With no trees around to sing from, this prairie bird has hit upon a beautiful alternative. During the breeding season, males launch themselves up out of the grass and begin to sing their long and varied song, warbling as they climb to the top of their arc, and trilling as they flutter and glide back to earth. Even on the back roads, you have to stop, turn the engine off, and get out of your car to appreciate this aerial ballet.

It's interesting that a grassland bird, found mainly in the eastern half of Colorado, was chosen as the state bird of such a mountainous state. Industrial societies have been somewhat thoughtless in drawing political boundaries. Colorado spans several ecological regions — the eastern prairies, the mountains, and the western plateaus and canyons, for example. We prefer straight lines, and ecological boundaries are seldom straight.

The mismatch between ecological regions and political boundaries is common all over the world now, where colonial powers and industrial societies took over from native peoples. The lark bunting might have been an appropriate national bird for the Arapahoe Nation: It would have been found throughout the grassland territory of the Arapahoes. As a state bird for Colorado, it is incongruous.

When different ecological regions come under a single political jurisdiction, but high population densities concentrate economic and political power in one of those regions, strange things can happen, ecologically speaking. Like the fact that a significant amount of the water that falls west of the Continential Divide is diverted over the mountains to the thirsty cities and farms east of the Front Range. Money and population exert a more powerful pull than gravity.

Colorado's incongruous state bird serves as a reminder that until we create political systems that reflect ecological realities, we will continue to do things that, like the trans-mountain diversion of water, are ecologically insensitive at best, and unsustainable and destructive at worst.

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Bruce Byers is the director of the Environmental Studies Program at the Naropa Institute in Boulder. His column about the natural world appears monthly.

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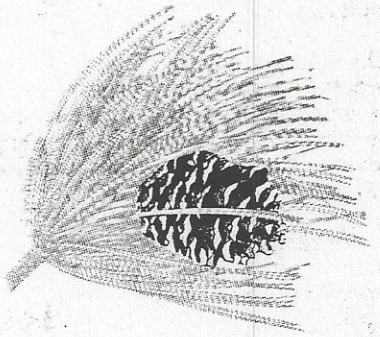
Ponderosophily

Loving trees can mean allowing fires

By BRUCE BYERS

IN OUR PLACE



For me, a place wouldn't feel like home without ponderosas. I grew up playing under them, climbing them, peeling their puzzle-piece bark, smelling their resinous smell, and hearing the wind sing through them. For people who grew up under blue gums in Australia or baobabs in Angola, ponderosa music might sound as alien as the wind through telephone wires. For me, the wind doesn't sound quite right in a forest of loblolly, lodgepole, limber, pinon, pitch, Apache, or any of the many other pines. John Muir, although he spent his youth in Wisconsin where there are no ponderosa pines, developed a love for ponderosa music later in life. "Of all Pines," he wrote of ponderosas, "this one gives forth the finest music to the winds."

Pines are wind-pollinated. Rather than relying on bees or butterflies to carry pollen from flower to flower, pines depend on the breeze. Recently the breezes have been blowing clouds of pollen from our foothills forests. After a rain, a yellow scum of ponderosa pollen collects at the edges of puddles. Even in town, my car's windshield is coated with yellow dust. In botanical terminology, "anemophily" — which means "wind-loving" — is the term for pollination by the wind. A lover of wind in the pines, I think "anemophily" could sometimes describe my condition, too.

The same winds that can sing in the needles of ponderosas, carry their pollen, and disperse their winged seeds can dry them out and drive fires through them. *Pinus ponderosa* has evolved in places where natural fires burned frequently — every 15 years at some sites here in the Front Range foothills. Their characterstics have been so thoroughly shaped by fire that ecologists call them "fire adapted."

A natural ponderosa forest actually *benefits* from periodic fires. Lightning starts most forest fires, and before humans began suppressing them, ponderosa forests burned so frequently that most fires were of low intensity. Mature ponderosas resist low intensity fires well. Their bark insulates their growing tissues from all but very hot fires. The wide spacing of trees and their self-pruning habit, where lower limbs lose their needles and die back, prevents surface fires from climbing into the tree crowns and becoming much more intense and destructive. Fire thins the forest, and recycles the nutrients locked in wood and needles, fertilizing the soil. Ponderosa seedlings need sunny sites and relatively bare soil to germinate, so they do well following a fire. Maybe we could even call ponderosas "pyrophilous" — "fire loving" — although some other pine species, like lodgepole and jack pine, are more so.

We love to build our houses and cabins among pines. But we seem to have forgotten, until recently, that fires in the pines are as natural as winds. Exactly three years ago, beginning on July 9, 1989, the "Black Tiger" fire reminded us, burning 2100 acres and 44 homes around Sugarloaf Mountain just west of Boulder.

If we want to live among ponderosas, we must learn to live with forest fires also, recognizing them as a natural and necessary part ecosystem of our place. That's the price we must pay for the finest wind-music anywhere.

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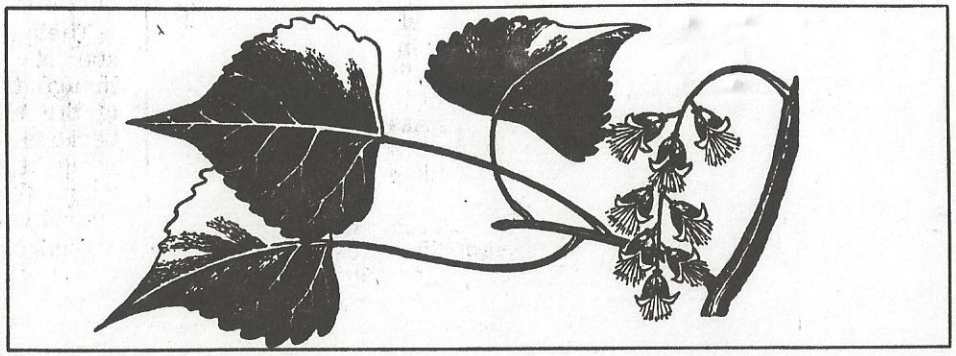
Daily Camera 9 July 1992

Cottonwoods and contentment



By BRUCE BYERS

IN OUR PLACE

The world's biggest Plains cottonwood grows along St. Vrain Creek just 15 miles from Boulder. Listed in the National Register of Big Trees, it is one-third of a football field tall; its trunk is nearly 12 feet in diameter and 36 feet around. This grand old tree is nearly as broad as tall, its shade covering one-sixth of an acre.

Cottonwoods are fast-growing trees. A sapling in an ideal streamside site often grows six feet taller each year, and sometimes twice that. I counted the rings on one old cottonwood that had died and been cut down near South Boulder Creek. It was five and a half feet across, but only about 75 years old; on the average it laid down nearly half an inch of new wood each year. The giant cottonwood on the St. Vrain is twice as big as this tree was, and so may be twice as old. In its youth, buffalo might have rested in its shade.

The seed pods of female cottonwoods look like a string of green pearls. Just at the peak of snowmelt in the mountains, formerly the time of the spring floods, they pop open and release a host of seeds. Cottonwood seeds are so light that it takes 400,000 to make one pound. Each is attached to a tuft of cottony fibers that can catch the wind, carrying them for miles. To grow, a seed must settle on the wet sand or mud of an uncrowded riverbank or sandbar, newly scoured by the spring floods.

By taming the flow of our creeks and rivers we have changed the rules of the ancient game that cottonwoods knew how to play so well. Trapped by reservoirs all along the way to water thirsty lawns, crops, and non-native trees, most of our rivers seldom rise enough to scour their banks or build the new sandbars needed for cottonwood seeds to germinate. Cattle grazing along the streams kill many of the cottonwood seedlings that do sprout. So cottonwood groves along plains rivers are maturing faster than they are being replaced.

As I stood in the cool shade of the giant cottonwood on the St. Vrain recently, a breeze whispered in its leaves like an ancient voice. I thought of one of my favorite photographs of all those taken by Edward Curtis of American Indians in the early 1900s. It shows Porcupine, an old Cheyenne, wearing a crown of cottonwood leaves as a sun hat. At summer gatherings for such occasions as the Sun Dance, Plains Indian men sometimes wore such hats to protect their heads from intense sun. Niwot, the Arapahoe chief whose band often camped along St. Vrain Creek, also may have worn such a cottonwood-leaf hat, perhaps made from the leaves of the giant.

What I especially like about the photograph is that Porcupine looks deeply familiar with his place, and deeply contented in it. His hat of cottonwood leaves is a perfect symbol of that familiarity and contentment. When Curtis made this picture, the wild bison herds, and with them a whole way of life for the plains tribes, were completely gone. Porcupine's calm gaze appears to be searching the horizon for clues about the future, as if wondering when, or if, people again would be familiar with and deeply contented in their place.

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