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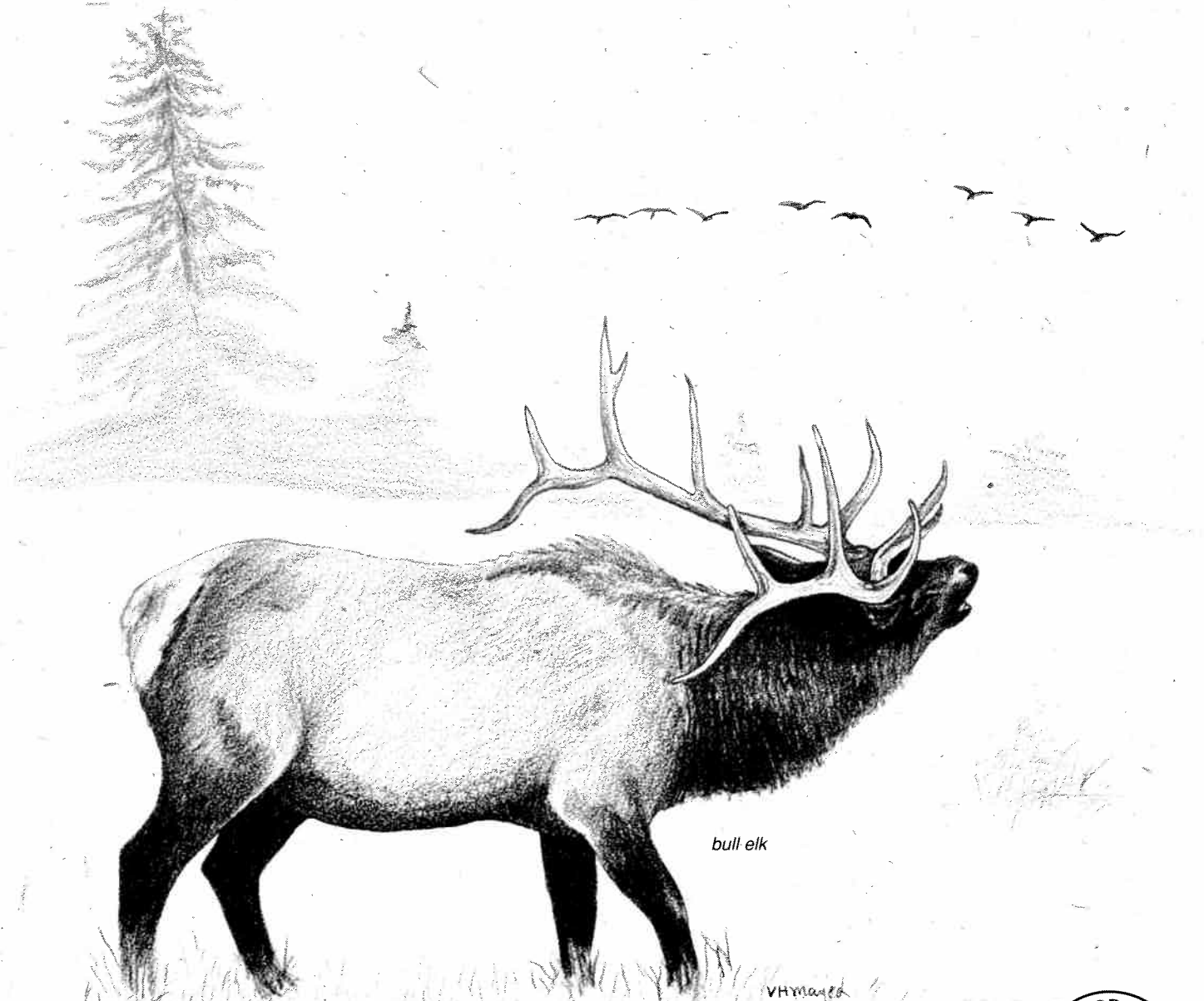
1989 Fall Compendium of Wildlife Appreciation Opportunities

Colorado's Wildlife Company

COLORADO DIVISION OF WILDLIFE

 Nongame and Endangered
Wildlife Program

 Watchable Wildlife Program



bull elk

VH Mayer

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/Sights and sounds of autumn



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Sights and Sounds of Autumn

by Mary Taylor Gray

The eerie bugle of bull elk ghosting among the pines, the clatter of antlers, the crash of horns, harems of female antelope, mysteriously slashed willows . . . from the prairie to high mountains, a host of sights and sounds await the wildlife watcher during the autumn breeding season.

Autumn heralds a dynamic phase in the annual cycle of Colorado's ungulates (hoofed mammals) — the fall rut, or breeding season. Careful wildlife watchers have the opportunity to observe a variety of interesting behaviors as elk, bighorn sheep, whitetail and mule deer, moose, pronghorn antelope, and mountain goats carry out the essential rhythms of mating.

During the rut, male ungulates become hyperactive, belligerent and competitive with other males. Sparring matches using horns and antlers may occur. Other behaviors, like scent marking and shadow boxing with trees, will not likely be observed, but the signs and markings left behind can give intriguing clues regarding the animals that made them.

Listening for the Bugle

The bugle of the bull elk is truly the music of autumn in Colorado's high country. The rut occurs mid-September to October, though bulls may begin to bugle as early as mid-August and continue through November. Once heard, the haunting call is not easily forgotten. It starts as a low pitched bellow, rising to a high, clear bugle tone, and ending with a series of grunts.

Bugling advertises the male's readiness to breed, challenges or warns other males, collects single cows, and sometimes just lets off a little emotional steam. Mature bulls gather "harems" of cows; they stay busy driving away competitors and keeping cows together. Occasional battles between males may occur, combatants sparring with their impressive headgear, but most encounters consist mainly of bluff with much noise and display of antlers.

Look for elk in mountain parks and clearings and on open slopes throughout the Colorado mountains. Safe viewing during hunting season can be enjoyed in Genesee Park west of Denver; along the Mt. Evans Highway; Guanella Pass/Geneva Basin between Georgetown and Grant; Rocky Mountain National Park (probably the best year-round viewing in the state, especially the Kawaneche Valley. Avoid the crowded Horseshoe Park area.)

Watching Bighorn Rams

One of the most impressive shows of the fall season is about to begin. For those lucky enough to see it, the "battling rams" offer an unforgettable sight for the wildlife watcher.

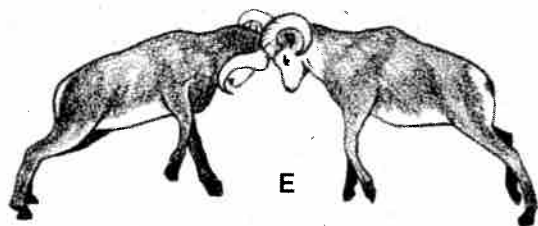
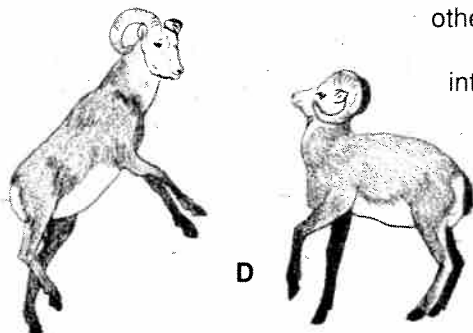
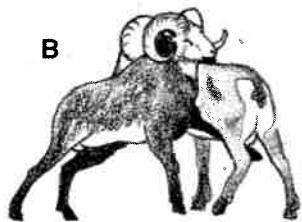
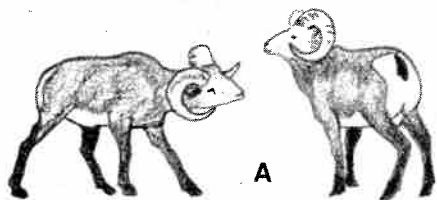
During most of the year, bighorn sheep rams live in bachelor groups. But during the rut, from late November through early December, rams join groups of ewes, lambs, and subadults on the rutting grounds. Here the rams battle each other for dominance and carry out the mating ritual with ewes in estrous.

Watching bighorn rams during the breeding season gives the viewer an intriguing glimpse of age-old behavior patterns. The largest horned ram will follow an estrous ewe, trying to keep other rams away from her. There is much jostling, slashing, and butting as rams challenge one another.

Males approach each other with necks extended in a low stretch (A), heads lowered in threat, and may kick at their opponent with a foreleg (B).

Once the challenge is met, rams move apart in a low stretch (C), whirl around and rear slightly (D), then charge toward each other, butting heads with a tremendous force (E).

Watch for bighorn sheep on steep slopes, often at high elevation. They can be viewed safely during hunting season in the lower end of Big Thompson Canyon along Highway 34 west of Loveland; the Fall River entrance to Rocky Mountain National Park and the Horseshoe Park area; Along Highway 14 in Poudre Canyon northwest of Fort Collins; along I-70 at Georgetown; along Highway 285 near Grant; on Pikes's Peak; and along Highway 172 west of Buena Vista.



from Mountain Sheep, V. Geist

Birds on the Move

by Judy Sheppard, Nongame Wildlife Specialist

Fall migration is beginning. Birds are moving to their wintering grounds, and you live in a great place to watch them.

Colorado, due to its location within a major flyway, is an ideal spot to see many kinds of birds during their migration. Within the past 22 years, over 427 different bird species have been sighted in the state. Approximately 35% of these species are considered "fairly common" or "abundant" migrants in Colorado.

Look for migrating birds flying, resting, and feeding. Most long-distance migrants, especially smaller birds, fly by night and feed or rest during the day. (At night they are safer from predators, and the air is generally more stable.) Larger birds—such as hawks, eagles, and cranes—migrate by day and rest by night. Other birds, including gulls, ducks, geese, and many shorebirds migrate either by day or by night. Of course, some bird species just stay put. Some of our grouse species, several species of owls and woodpeckers, and numerous other species are non-migratory.

In North America, most migrating birds fly south in the fall and north in the spring. Some birds, however, stay in the same geographic area and migrate to lower altitudes in the fall and to higher altitudes in the spring.

The Clark's Nutcracker, Rosy Finch, Pine Grosbeak, some jays, nuthatches, chickadees, juncos and kinglets often migrate from their breeding sites in the alpine or subalpine zones of the Rocky Mountains to lower elevations only a few miles away in the winter.

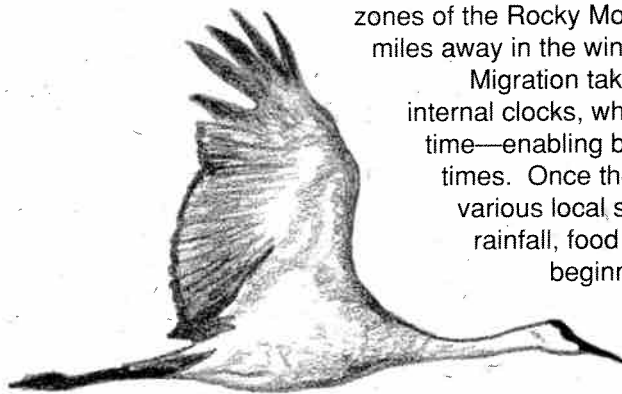
Migration takes place according to the species' internal clocks, which have been set over evolutionary time—enabling birds to migrate and breed at optimum times. Once the birds are prepared physiologically, various local stimuli (wind direction, temperature, rainfall, food availability) may trigger or retard the beginning of the migration. Once the migration is underway, birds are deterred from their destination only by extremely adverse weather. Weather alone, however, cannot initiate migration in a bird that is physiologically unprepared for it.

Most observers wonder how birds find their way between breeding and wintering grounds. It appears that birds rely on a number of information sources, not just one kind of cue or sensory system. Orientation (taking a direction) and navigation

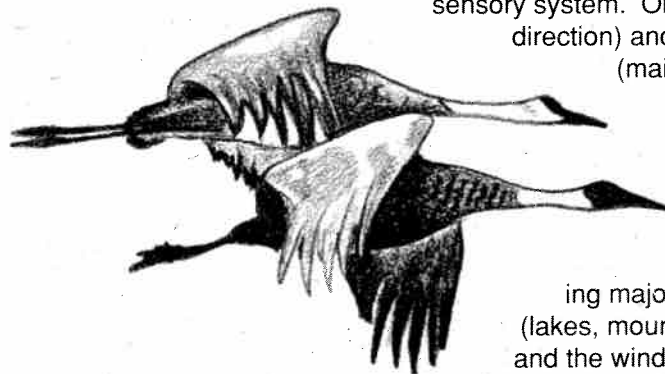
(maintaining a direction while traveling) seems to be assisted by the topography of the land, including

major land forms (lakes, mountains, even cities) and the wind turbulence they influence; orientation of the sun; orientation of the stars; and the earth's magnetic field.

Watching birds will increase your awareness and enjoyment of the seasonal changes. Best of all, you can do it right in your own back yard.



greater sandhill cranes



more inside

Hunting and Watching Wildlife

Fall hunting seasons are upon us, but that doesn't mean nonhunters have to hang up their camera and binoculars until winter. Fall is the time when hunters, fishermen, and nonhunters alike can enjoy the wildlife they support throughout the year with their license purchases and contributions. Everyone should be able to safely view wildlife during the fall if they preplan, use a little caution, and respect the rights of other people.

- Be aware of the various hunting seasons (see chart below). It's probably wise to avoid the backcountry on the opening weekend of each season.
- Wear fluorescent orange when watching in hunting country.
- Respect the rights of hunters by avoiding areas where they are stalking or waiting for game.
- Visit some of the areas offering viewing opportunities where hunting is not allowed (see chart below).
- Watch and photograph wildlife from a distance; stay on designated trails and roads; do not approach wildlife so closely that they stop feeding or resting.

Wildlife Watching Areas Where Hunting is Not Allowed

All national parks and national monuments, including:

- Rocky Mountain National Park (off-road hiking is restricted from 9/10 - 10/20 in Horseshoe Park to protect the elk)
- Mesa Verde National Park
- Great Sand Dunes National Monument
- Dinosaur National Monument
- Black Canyon of the Gunnison National Monument
- Colorado National Monument
- Florissant Fossil Beds National Monument

Many state parks and recreation areas are closed to hunting:

Inquire at each area for specific regulations.

Most open space and mountain park areas operated by county and city governments, including:

- The NCAR area in Boulder County's Open Space System
 - White Ranch Park, Matthews/Winters Park, Hogback Park,
 - Meyer Ranch Park, and Elk Meadow Park in Jefferson County
 - Horsetooth Mountain Park, Carter Lake, and Horsetooth Reservoir in Larimer County.
- Check with your local county government offices.

Your regional Division of Wildlife office can also give you assistance on where to watch wildlife safely in your area:

- Central Region (303)291-7227; NE Region (303)484-2836; NW Region (303)248-7175; SE Region (719)473-2945; SW Region (303)249-3431.

1989 COLORADO HUNTING SEASONS

ARCHERY

Deer & Elk	Aug. 23 - Sept. 25
Plains Deer	Oct. 7 - 20
	Nov. 4 - 29
Antelope	Aug. 15 - Sept. 20

MUZZLELOADING RIFLE

Deer & Elk	Sept. 15 - 25
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REGULAR RIFLE

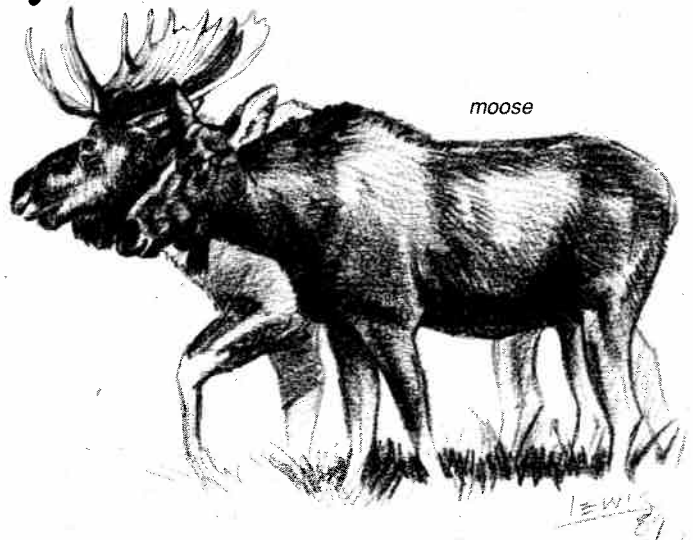
Combined Deer & Elk	
First	Oct. 14 - 18
Second	Oct. 21 - Nov. 1
Third	Nov. 4 - 12
Plains Deer	Oct. 21 - Nov. 1
Antelope	
N of I-70	Sept. 30 - Oct. 6
S of I-70	Oct. 7 - 13
Moose	November 13 - 28



pronghorn antelope

MOOSE: Colorado's Eminently Watchable Wildlife

by Andre' Duwall, Wildlife Biologist, NE Region



I'll never forget the time I saw my first moose. I was part of a fire fighting crew in Wyoming back in 1970. We were hiking toward a fireline deep in the forest when suddenly we came upon a large cow moose standing shoulder-deep in a small lilypad-covered pond. Dappled sunlight danced across her back, and for awhile, we forgot the fire as we watched her feed and slowly move to shallow water.

She was beautiful. Her upper body was a deep shining, jet black with lighter brown sides blending downward to warm buff-colored legs. Alternately, she ducked her head under the surface

of the water for another mouthful of food and then raised it to chew and to watch us. Her manner was unafraid, but she wagged her ears as a sign that we should come no closer. The entire crew stood entranced for several minutes, just watching quietly. Then, having urgent work elsewhere and not wanting to disturb the moose in her tranquil setting, we slipped off and left her alone.

In 1970, there were very few moose in Colorado. Today, however, you have a good chance to enjoy watching *your* first magnificent moose in the north central mountains of your home state.

During the winters of 1978, 1979, and 1987, biologists from the Colorado Division of Wildlife brought moose from Wyoming and Utah to Colorado. Twenty-four moose were released in southeastern Jackson County, and twelve were released into the Laramie River Valley. All moose in these original populations were collared with radio transmitters and ear tagged so their movements could be studied. If you ever see a moose in Colorado wearing this kind of paraphernalia, you'll know you are looking at one of the first moose brought to the state.

The Wyoming or Shiras moose is the smallest North American subspecies of moose, but probably the most beautiful. Large bulls may weigh 1000 pounds and stand 6 feet at the shoulder. Cows weigh around 600 pounds and stand 5 feet. Adults in full coat are a glossy jet black on the upper body with lighter brown sides and light tan or buff-colored bellies and legs. Adult bulls carry the conspicuous shovel-type antlers and dangling bell (a beard-like decoration). Cows do not have antlers, but do have bells.

Moose mate in the early fall. The bulls seek individual cows and stay with them for up to a week before successfully breeding. Each bull will breed with one to three cows during the rut. Adult bulls usually intimidate lesser bulls but occasionally fierce conflicts arise when bulls of equal size and strength compete for a cow. Look for bulls thrashing willow thickets with their antlers and shaking their heads. Never approach a moose closely, especially during the fall breeding season.

Look for moose this fall in the following areas. Because both areas are hunted, watching from the road will be safest during moose, elk, and deer hunting seasons:

The Illinois River drainage in southwestern Jackson County. From Walden, Colorado, travel south on Highway 125 for 24 miles. Turn left at the Old Homestead Lodge. Continue some 6 miles to the southeast on Routt National Forest Road #740 to the Illinois River bottom. Look for moose in the extensive willow bottoms during mornings and evenings, and look in the nearby pine forest during the main daylight hours.

The Laramie River Valley on the western side of Larimer County. From Fort Collins, Colorado, go west on Highway 14 up Poudre Canyon approximately 55 miles to the turnoff for Laramie River/Woods Landing (Arapaho-Roosevelt National Forest Road #190). Travel north on #190 for about 5 miles. You will start to see large willows and mixed stands of evergreen along the Laramie River. Look for moose all along this area for the next 10 miles. The best spots to find moose are the Tunnel Campground, West Branch Trail Head, Browns Park, and Stub Creek.



Keep Your Eyes Peeled

by Bud Smith and Glen Hinshaw, Watchable Wildlife Coordinators

September/October

Waterfowl Migration—A variety of ducks and geese begin showing up on ponds, lakes, streams, and reservoirs in Eastern Colorado.

Brook Trout Spawning—Mid-September to late October is the best time to watch for bright red males in clear, mountain streams.

October

Sandhill Cranes—Watch for them in the San Luis Valley around Monte Vista and the Monte Vista National Wildlife Refuge.

November/December

Bald Eagles—Wintering bald eagles usually arrive right behind the migrating waterfowl. Look for them along the South Platte, St. Vrain, Big Thompson and Poudre rivers and around Jackson, Prewitt, and Jumbo reservoirs in the NE part of the state. They also gather in open water areas throughout the San Luis Valley and can be seen easily at the Monte Vista National Wildlife Refuge.

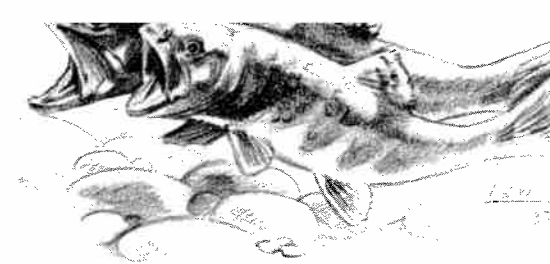
Mule Deer—The rut period usually brings large bucks out of seclusion. Watch for them in the Estes Park, Rocky Mountain National Park areas, in the Big Thompson and Poudre canyons and in the Cherokee Park area.

Wintering Raptors—Watch for unusual raptors on Colorado's eastern plains. Depending on the weather, you might see gyrfalcons, snowy owls, and merlins.

Unusual Gulls—The late fall and winter months are good times to watch Colorado's large eastern reservoirs for gulls not usually seen in Colorado.

Fall Wildlife Specials

- October 7 Autumn Images Photography Workshop
Barr Lake Nature Center
Barr Lake State Park
(303) 659-1160
- October 14 Winter Bird Feeding Program
Barr Lake Nature Center
Barr Lake State Park
(303) 659-1190
- October 27 Halloween Program on Animal Myths
Barr Lake Nature Center
Barr Lake State Park
(303) 659-1190
- November 1 Entry Deadline
Nongame Photo Contest
Colorado Division of Wildlife
(303) 291-7272, Judy Sheppard
(303) 291-7273, Jim Bennett
- November 3 Call to the Wild
Patricia Burge and friends in concert
Piano compositions with recorded wildlife calls
The Stewardship Community
Boulder, Colorado
(303) 679-4200
- November 15 Announcements available for Small Grants Proposals
Colorado Natural History Project Funding
(Submission Deadline, February 1)
Colorado Natural Areas Program
(303) 866-2836 Dave Kuntz
- November 18 Earth in Transition: On the Threshold of Change
Symposium on the human and wildlife connection
The Stewardship Community
Boulder, Colorado
(303) 679-4200
- November Operation Osprey organization meeting
Colorado Division of Wildlife, NE Region
(303) 484-2836, Bud Smith
- December Waterfowl Identification Field Trip
Colorado Division of Wildlife, NE Region
(303) 484-2836, Bud Smith
- January Birds of Prey Class and Field Trip
Northern Colorado Raptor Center
Colorado Division of Wildlife, NE Region
(303) 484-2836, Bud Smith
- February Nature Photography Class with Perry Conway
Denver Audubon Society
(303) 757-8376, Peggy Lehmann



brook trout

Fish Do It Too!

by Jim Bennett, Nongame Wildlife Specialist

While elk bugle, sheep posture, and aspen show their yellow and orange leaves, our high mountain streams and ponds show flashes of red, orange, and crimson all their own. In countless headwater streams and beaver ponds in Colorado, brook trout in the fall season show an intricate assemblage of color and behavior as old as their species . . . it's time to spawn!

Brook trout, native to the eastern drainages of North America, are fascinating to watch during the spawning season. How these fish "know" what to do and when to do it is largely a matter of conjecture. We see evidence that photoperiod and water temperature have marked effect on fishes' biological functions.

Typically, males will precede females from ponds or lakes into tributary streams. They move upstream to lay claim to and defend prime spawning areas called "redds." The bright orange-crimson color on males' sides and bellies appears to serve several functions. It identifies the fish as male, and, depending on the intensity and expanse of color, may discourage smaller, less resplendent males from challenging for the rights to prime spawning areas. Males more evenly matched in size and color may nip at each other, rush head-long at an aggressor, or whip their tails at intruders . . . all in an effort to reserve prime habitat and to attract the larger, more desirable female trout.

How can you watch this fascinating display? Sometime from mid-September through late October, locate a suitable stream having both pool and riffle areas and enough bank cover for you to approach and hunker down inconspicuously while you watch the show. Dress like a spawning Brookie . . . that is, wear bright reds and be aware of hunting season. Remember that these are wild trout, and they are often able to see your shadow on the horizon or sense the vibrations of your approach on foot. Be sneaky! If your timing is good, you will be able to see large aggregations of brightly colored males facing upstream, jockeying for position to seek some advantage over their neighbors. Smaller groups of males may be sparring over choice real estate or attempting to accompany a female in the egg-laying and fertilizing activity . . . be discrete.

Where are some suitable streams? Near Denver, try Caribou and Horseshoe creeks, tributaries to the North Fork of Boulder Creek near the Rainbow lakes; Jenny Creek, tributary to South Boulder Creek near Rollinsville; and Bear Creek on the Mount Evans State Wildlife Area near Idaho Springs. In other parts of the state, look for the smaller, clear tributaries to major creeks in mountain areas.

Thank You Nongame Supporters!



Annual Contributions to the Nongame Income Tax Check-off

Contribution Year	Amount	Number of Contributors	Average Contribution
1978	\$350,000	89,477	\$3.92
1979	501,000	118,600	4.22
1980	647,000	129,300	5.00
1981	740,700	139,850	5.30
1982	692,000	123,394	5.61
1983	552,449	103,000	5.36
1984	458,758	83,712	5.48
1985	397,533	61,553	6.54
1986	372,660	56,610	6.58
1987	407,000	55,900	7.61
1988	371,782	54,607	6.81
1989	514,799	63,816	8.07

Colorado residents have shown their support for the Nongame and Endangered Wildlife Program for over a decade. Contributions received during 1989 will help biologists carry out management objectives in the coming year. Thank you to everyone who donated part of their tax refund or added to their tax bill. (We're betting that includes most of you Compendium readers. Thanks!) We'd also like to extend our appreciation and recognition to the following companies for helping to promote this year's Check-off:

**Robinson Dairy
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Do You Hunt, Fish, and/or Watch Wildlife?

Preservation and management of wildlife and habitat are not financed by Colorado taxes. The Colorado Division of Wildlife is supported primarily through the sale of hunting and fishing licenses. The Nongame Income Tax Check-off, individual contributions, and federal matching funds also help finance the Division's work.



yellow-bellied racer

Colorado's Wildlife Company

Colorado Division of Wildlife 6060 Broadway Denver, CO 80216

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