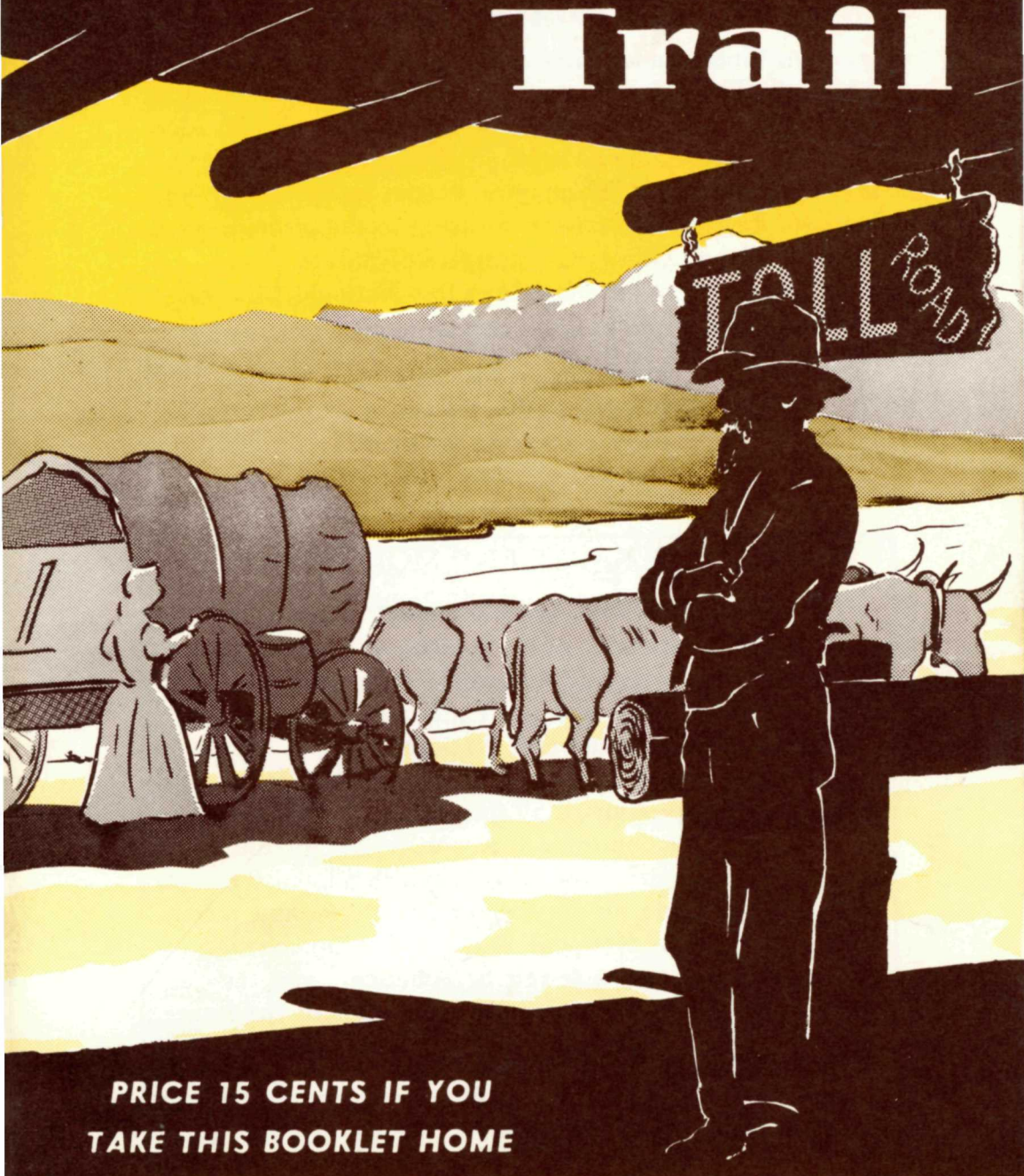


Montville Trail



PRICE 15 CENTS IF YOU
TAKE THIS BOOKLET HOME

GREAT SAND DUNES NATIONAL MONUMENT
COLORADO

WELCOME

. . . . to Great Sand Dunes National Monument and the Montville Trail. As you stroll along, numbered stakes mark the features of interest which are described in this booklet. The trail is one-half mile in length. Take your time and you will return in about 30 minutes. Pause frequently as you walk, to look at the scenery, to listen to the birds, to take pictures, and to ponder the wonders of nature.

Nothing is to be removed from this National Monument except

Nourishment for the soul,
Inspiration for the heart,
Provocation for the mind.

NATIONAL PARKS AND MONUMENTS

The National Park Service was established as an agency of the U. S. Department of the Interior in 1916 to preserve the marvels of nature's handiwork, such as Great Sand Dunes National Monument. Yellowstone National Park, created in 1872, was the first National Park in the world to be dedicated to the principle of preservation for the enjoyment and inspiration of all the people of this and future generations. This continues today to be the guiding principle of the National Park Service, which administers over 260 areas set aside for their natural, historic, and recreational values. The National Parks and Monuments have been called the "crown jewels of America," and they are yours to protect and treasure for Americans of the future.

KEEP AMERICA BEAUTIFUL!

MONTVILLE TRAIL

1 Ahead of you loom the walls of Mosca Canyon, long a pioneer route through the Sangre de Cristo Mountains. One hundred years in Mosca Canyon has seen the pendulum swing from untouched nature to toll road traffic and back to nature once more. A toll house and stage station was maintained here when the Mosca Pass toll road was in operation. Even after the charter was bought by the state of Colorado and tolls were no longer collected, a post office by the name of Montville continued to serve local residents until its doors were closed about 1898.

“I am an Old Time Country Lane
Now I have been
Officially Vacated and Closed . . .
I invite you to walk - as folks
have walked for generations
and be friendly with my trees
my flowers and my wild creatures.”
— Bob Mann

2 Rabbitbrush is a very common and widespread member of the sunflower family, found through much of the Southwest. The bushes are quite attractive in late summer, when they are covered with small, bright-yellow flowers. True to the common name, its twigs and foliage are browsed by rabbits, as well as by deer and pronghorn.

Painted-cup or “Indian paintbrush,” with its red-tipped upper leaves, blue penstemon, the blue and yellow fleabanes, “daisies,” and yellow groundsels, are some of the annual flowers that grow among the rabbitbrush plants.

3 During the days of the Mosca Pass toll road, a store was located here. Probable size of the building can be seen by noting the leveled area marked by the four white stakes and comparing it with the photograph, taken about 1927.



Mr. and Mrs. Walter Holeman pose for a snapshot in front of the store formerly operated by her uncle. Tolls collected were 75¢ for a man on horseback, \$1.50 for a wagon and team.

4 Rushing Mosca Creek provides water for the mule deer that live in the nearby forest. Along the trail ahead of you, look for places where deer have made paths through the vegetation in their trips to and from water. Deer shed their antlers in late winter and grow a new set each spring. In late summer just before the breeding season, bucks use small trees such as these to scrub off the "velvet" covering of the antlers. Bucks have killed some of the small aspens by destroying the bark around their trunks. Deer are browsers rather than grazers, feeding more on twigs and leaves than on grass. Many bushes in the canyon show evidence of deer browse.

5 The dense clusters of minute pink flowers of the bush rock spirea have earned this member of the rose family many of its common names, such as: foambush, cream-bush, mountain-spray, and bridal wreath. The flowers are

followed by plumed seeds, which helps the bush to retain its good looks through most of the year.

6 This Rocky Mountain maple dramatically emphasizes the power of growing plants. The rock held in place by the tangle of roots may weigh a hundred pounds. This species, which has the leaf shape and typical winged seeds of a maple, is usually shrub-like, but under favorable conditions may reach tree size.

It and the rock spirea seen earlier are found at higher elevations, but grow here because the cool, north-facing slope of Mosca Canyon provide a similar climate.

7 Common chokecherry prefers the moist soil along creeks and canyon bottoms. The small, black, cherry fruit which ripens in late August is edible, but when not fully ripe will pucker your mouth. If you wish, you may taste the fruit of this and the gooseberry along the trail. Fruits may be eaten, but not taken out of the National Parks.

Here along the trail you will easily recognize the wild roses, for they are much the same the country over.

8 Trumpet gooseberries are excellent to eat, either fresh, cooked, or made into jams and jellies. Blister rust fungus, which kills the five-needled pines, must spend one stage of its life cycle on some relative of this plant before it can spread to the pines. Through control of gooseberries and currants near our forests the spread of blister rust can be limited.

9 Just beyond, you can see traces of the old toll road, built over Mosca Pass by Frank Hastings in 1871. T. B. Seeley and D. Holly, later owners, sold the charter to the State in the late 1800's. The road gradually fell into disuse and a severe thunderstorm washed it out completely in 1905 or 1906. Today the encroaching vegetation has all but reclaimed the road.

Many early explorers and settlers used Mosca Pass, including Captain John C. Fremont in 1848. At that time the

pass was called Roubideau's Pass, as Antoine Roubideau was supposed to have driven two-wheeled carts over it to his fur trading post on the Gunnison in 1837. Failures and successes of early explorers who used the mountain passes enroute westward make exciting historical reading.

The bronze marker was donated by the Native Daughters, Chipeta Club, of Alamosa, Colorado. The plaque is mounted on granite, so common to the Rockies.

10 Mosca Creek, which derives its water from the snow-capped heights of the Sangre de Cristo Mountains, provides moisture for plants of the canyon, and a home for many animals. Compare the abundance of plants found along the moist creek bottom with that of the canyon slopes on either side.

Take the fork to the left ahead, to continue on the Montville Trail. The right hand fork follows the south slope of the canyon to the summit of Mosca Pass, 3.3 miles from here.

“Climb the mountains and get their good tidings. Nature's peace will flow into you as sunshine flows into trees. The winds will blow their own freshness into you, and the storms their energy, while cares will drop away like the leaves of autumn.”

—John Muir

11 Forces of nature are continually tearing apart and wearing away the mountains. Sometimes, as with the pinyon growing out of the rock above, it is a difficult struggle. The niche in the rock was large enough to trap some dust and soil, and support some grass or small plants which trapped more soil. Then, perhaps a bird dropped a pine seed to give the tree its start. While the tree thrives where apparently it shouldn't, the roots have entered a crack in the rock and eventually will help to split it apart.

12 Five years before Great Sand Dunes was made a National Monument, cattle ranching was the chief industry of the area. Irrigation water was needed to increase grass available for grazing. The old ditch along which we have been walking was built by hand, in 1927, to carry water from Mosca Creek to the dry slopes north of the canyon mouth.

Other ditches were dug, cabins were built and mines developed, in this vicinity, in man's unending struggle to wrest a living from the land. Today, Great Sand Dunes is a National Monument. As such, the highest purpose for this land is to provide Americans with an untouched scenic landscape in which to renew their acquaintance with nature.

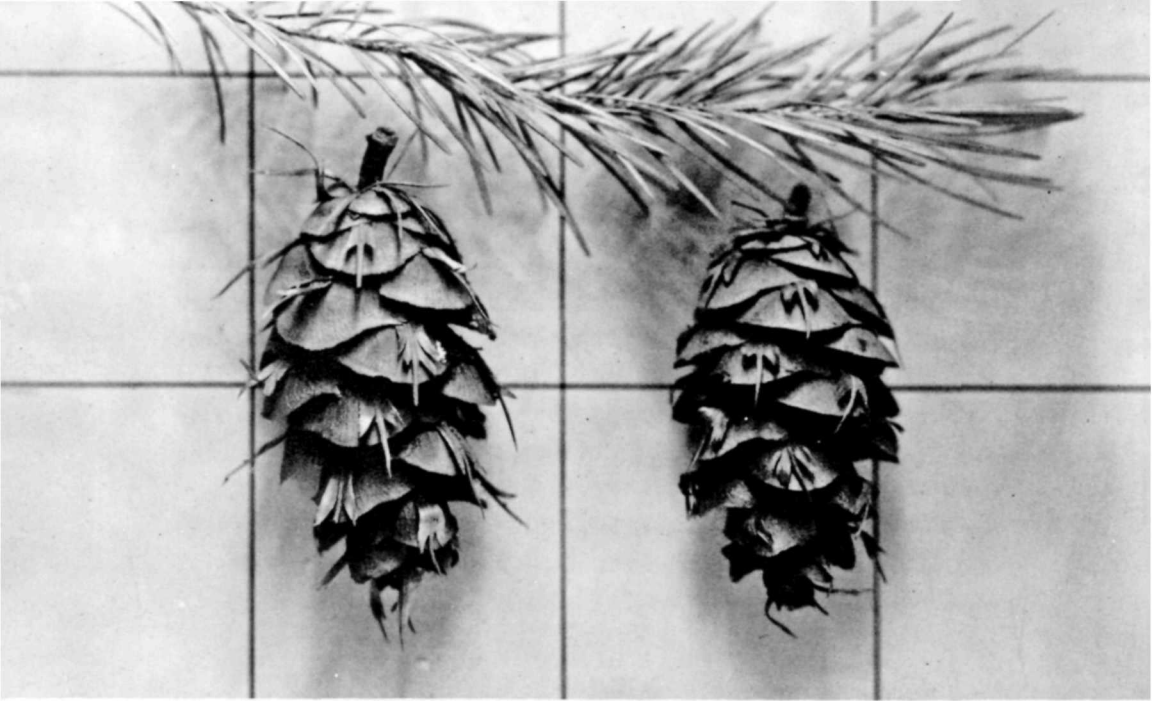
13 Quaking aspen, a beautiful member of the willow family, is the most widespread tree in North America, and common throughout the Rockies at this elevation. It is one of nature's pioneers, one of the first trees to grow after a fire. Eventually, the sun-loving aspens are crowded out by pines and firs, which grow taller and cut off the light. Thus, aspen groves are sometimes temporary, and in time will be replaced by various kinds of cone-bearing trees.

In autumn the leaves turn a brilliant yellow, and it is **not** uncommon to see them, trembling in the breeze, covering whole mountainsides.

The natural beauty of the delicate white bark of these trees has been destroyed by individuals of the species *Homo sapiens* — sometimes called the most intelligent of nature's creatures.

14 Step off the trail and rest awhile on the bench below.

We live in a harried, hurried world of asphalt and concrete, mass transportation and mass production, artificial flowers and instant foods. Man's headlong struggle to free himself from the bonds of nature has only made him need it more. No one can estimate what the automobile and television have cost us in muscle, or our noisy, neon jungles in serenity.



*Douglas-fir cones and foliage on back ground of 2-inch squares.
Note three-pointed bracts on the cones.*

The greatest cathedrals can be found in wilderness landscapes. In your National Parks you can find adventure, solitude, and refreshment in the natural world.

If only the wind rustling in the trees, the refreshing sound of water tumbling down a canyon, the song of the birds drifting through the forest canopy overhead, or the stillness and peacefulness of such a place as this could be bottled and sold — it would certainly be the best selling tranquilizer on the market!

“If you keep your nose on the grindstone rough,
And you keep it down there long enough,
In time you forget there are such things,
As brooks that babble, and birds that sing;
And these will all your world compose:
Yourself, the grindstone, and your poor old nose!”

—Enos Mills

15. In the towering forests of the Pacific Northwest the Douglas-fir grows to more than 300 feet in height. Here, without the extremely moist climate, the trees are not as

tall. Look at one of the small cones and notice the papery, three-pointed bracts between the scales. Their presence is the best means of identifying Douglas-fir.

As with all forest plants, Douglas-fir has its role in keeping the "balance of nature." The small, winged seeds are important food for squirrels and other rodents, and in winter the needles provide food for blue grouse.

16 Small soapweed is the high country yucca of the desert Southwest. Several hundred feet across the canyon, on the shaded, moist, north-facing slope, we saw plants typical of higher elevations. Here on the south-facing slope where the soil is dryer and the warming rays of the sun more intense, grow the soapweed and cactus. By walking from one side of the canyon to the other, we have gone from mountain to high desert environment.

Indians crushed the roots and central stalks of the soapweed and then rubbed them in water until soap-like suds developed. Fiber from yucca leaves was used for making rope, mats, sandals, and cloth. In June and early July beautiful, wax-white flowers are borne on a central stalk.

17 Pinyon trees don't like wet feet. They prefer dry, well-drained slopes. Seepage from the ditch above, even though it was only used for a few years, has killed these unlucky ones. Juniper trees, on the other hand, are more water tolerant, and have continued to thrive alongside the stark skeletons of the pinyons.

18 There is incredible activity in the rich forest soil near the stream below. A handful may contain millions of microscopic creatures each breaking down the litter of leaves and dead branches so that they may be used by growing plants.

Likewise, a close look at the rocks before you reveals a whole community of plants and animals living here. The many-colored crust-like growths on the rocks are lichens, a cooperative relationship between fungi and algae. Lichens survive on bare rock, slowly eating it away, with acid they produce, to help reduce the rock to soil. Pricklypear



These dunes are among the highest in the world. Medano Peak rises to more than 13,000 feet, part of the Sangre de Cristo Range.

cactus (the one with the flat pads) and claretcup cactus grow among the rocks. A tiny spider may be spinning a web across a crack to catch its meal; and you might catch a glimpse of a small lizard, the many-lined skink, darting among the rocks in search of food. Each living thing has its niche in the community of nature.

The banded rocks are typical of the igneous rocks of the Sangre de Cristo range.

19 Beyond the pinyon-juniper forest, you can trace the course of cottonwood-lined Mosca Creek through the grass and brush prairie to the base of the Great Sand Dunes. Most of the streams from the Sangre de Cristo range flow but a short way, if at all, into the vast San Luis Valley. Only during the spring of wet years does Mosca Creek flow to the edge of the dunes.

Three kinds of plants have found it possible to survive on the shifting sands. The prairie supports a greater diversity of plants and animals that are adapted to live in the loose, infrequently watered soil. The mountain slopes and canyons with their rushing streams provide yet another environment. You can see, in the space of a mile, a dramatic

change from the forest-clad mountain slopes and their lush canyons, to the almost barren sands piled 700 feet above the bed of Medano Creek.

20 You are now in the midst of a pinyon and juniper woodland. Small nut pines and scraggly barked junipers form pygmy forests of small trees on slopes and plateaus of the Southwest. Sparse vegetation like this is common in dry climates. The lack of deep, fertile soil and rainfall does not permit lush growth as in the creek bottom below. These trees obtain needed moisture by developing wide, shallow root systems which gather water from infrequent rains. Smaller, annual plants grow and mature quickly when the weather is favorable, then survive the winter as dormant seeds.

21 Many plants make the most of a short water supply by conserving it. True mountain-mahogany is one of these. Small, leathery and "varnished" leaves are protected by a coating of tiny hairs which help to reduce water loss. Each seed bears a corkscrew plume which twists during a rain and forces the seed into the moist ground. As you might suspect, wood of the mountain-mahogany is very hard, and was used by Indians for digging-sticks and tool handles.

22 Skunkbush sumac grows here in the pinyon-juniper forest and below in the prairie, where it is the commonest bushy plant. Its unflattering name is from the smelly foliage. Although a close relative of poison-ivy, it is not poisonous. Indians ate the fuzzy red berries, used them in making dyes, and used the stems in basketry. Pioneers made a lemonade-like drink of the berries.

23 White firs are usually quite common at elevations of 8,000 to 11,000 feet, and with spruce form dense forests. Here in the moist soil along the stream it grows right to the very edge of the forest, in association with aspens and alders.

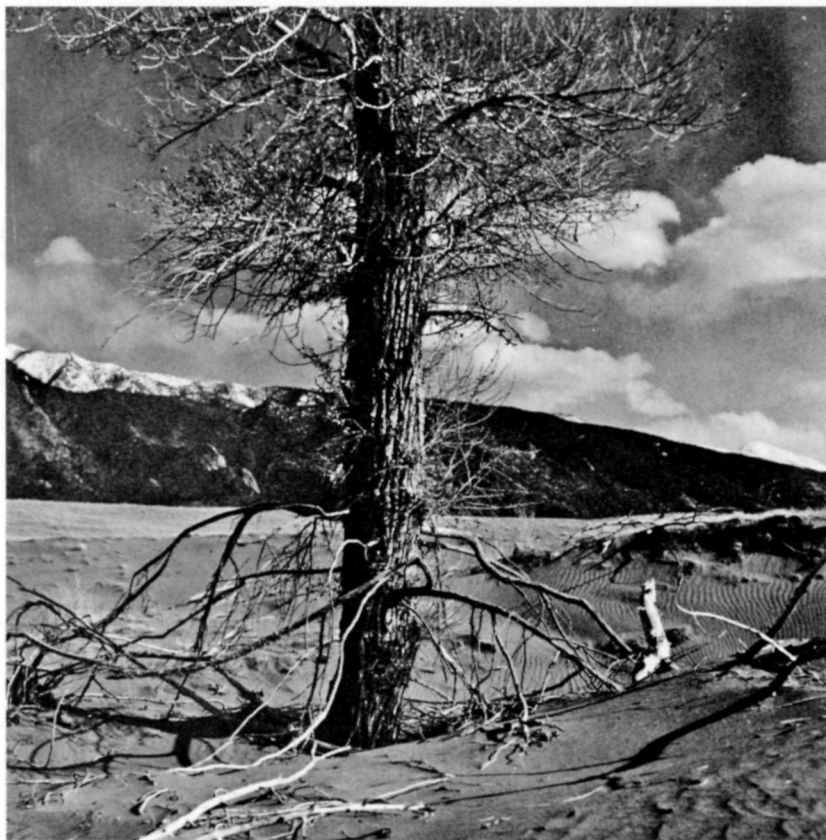
You can always tell firs from other evergreens if you will remember that needles of firs are flat and flexible. Instead

of hanging down as do most cones, fir cones stand erect on the upper branches like candles on a Christmas tree. Cones are almost never found on the ground, as they break apart on the tree, and fall scale by scale, leaving only the central spike projecting from the branch.

24 Thinleaf alder and narrowleaf cottonwood, both water-loving trees, crowd the banks of Mosca Creek. Alder is the gray-barked shrubby tree above the bridge, and is commonly found along streams. Again we see the difference in vegetation which the presence of the stream has allowed.

25 Mr. Coley King, the last postmaster of Montville, has identified the short juniper stub marked by the white

A narrowleaf cottonwood fights a losing battle with relentless moving dunes by sending out supporting roots.



stake as the remnant of one of the toll gateposts. During the later years of the post office, Mr. King and his brother and deputy postmaster, Will King, kept a small grocery store and a team of horses to help pull wagons over the pass. At that time a fruit orchard thrived just to the east of the present road and south of the parking lot.

26 Mosca Canyon is an intimate place. A spot where pioneers once tamed the land only to allow nature to return and dominate again. In our short walk we have stepped into history, and been guests in nature's house — peeking into corners to discover her ways. Man, today, has the power to change or even destroy the natural world around him. We must ask ourselves: Would it be better some other way? Probably not.

We sincerely hope that you have enjoyed the Montville Trail. Please return this leaflet to the register stand or, if you desire, **YOU MAY PURCHASE IT BY DROPPING 15c IN THE SLOT IN THE REGISTRATION DESK.**

CONSERVATION—YOU CAN HELP

If you are interested in the work of the National Park Service and in the cause of conservation in general, you can give active expression of this interest, and lend support by alining yourself with one of the numerous conservation organizations which act as spokesman for those who wish our scenic heritage to be kept unimpaired for the enjoyment of future generations.

Names and addresses of conservation organizations may be obtained from a ranger.

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by the
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