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Watchable Wildflowers

A Columbia Basin Guide



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Spring wildflowers— John Marshall

EASTERN WASHINGTON—FLAT, DRAB & DRY, RIGHT? **WRONG!**

From the freeway, the eastern half of the state may appear to be an endless open space to speed through without stopping, rather than a destination. As you look out the car window, an occasional splash of color or a soaring raptor may distract you momentarily; or if you are lucky, you might hear the song of a meadowlark.

But what if you were to slow down? What if you decided to explore an unpaved back road? What if you chose, this time, to stop and walk among the sagebrush, grasses and wildflowers?



Arrowleaf balsamroot— Andy Sawyer



Are you in
for a surprise!

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Watchable Wildflowers

A Columbia Basin Guide



SITE LOCATIONS



Douglas' brodiaea— John Hamilton

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Watchable Wildflowers



Bitterroot— David Hagen



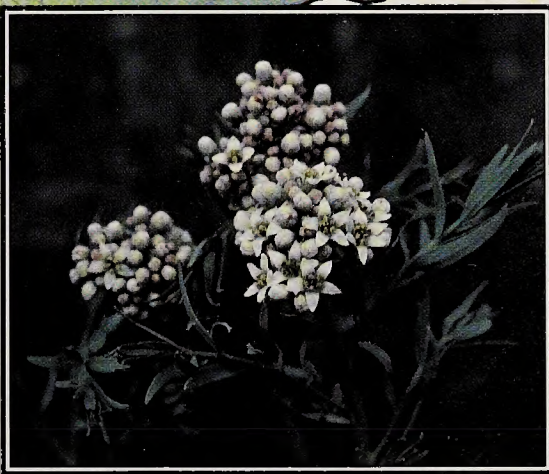
Woolly-pod milk vetch

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John Hamilton

Wild blue flax



John Hamilton

Bastard toadflax



Andy Sawyer

Cryptantha



WELCOME TO THE COLUMBIA BASIN...

...a 1.3 million acre tribute to the powerful forces of nature! Here multiple lava flows, glaciers and catastrophic floods have left their legacy in coulees, potholes, rugged cliffs and deep canyons.

Behind every bush and beneath every boulder of the Basin country, the stories of plants, animals and rocks are woven together in an ancient, intricate web. Reach down and pick up a rock. If it is a solid, dark color, perhaps it is a worn piece of once-molten lava that oozed up from a fissure in the earth's crust, then cooled and hardened. If it is light in color with black speckles, it may be a piece of granite that rafted in on an iceberg from as far away as northern Canada. Broken down by wind and water, rocks will eventually become soil. What kind of soil depends upon all sorts of environmental factors: topography, elevation, water availability, and climate. The deep, moist soils on north-facing hillsides are the preferred environment for some plants and animals, while others have successfully adapted to the dry, crumbly shallow soils of windy ridge tops. Here in the Columbia Basin, every living thing has its own special home.

The diversity of plants found in these environments offer food and shelter to a variety of animals. If you are observant, you may see butterflies, pocket mice, kangaroo rats, marmots, rabbits, finches, fish, many species of waterfowl, deer, golden eagles, prairie falcons, great blue herons, coyotes, and maybe even a badger. The dense vegetation along stream banks often rings with the chatter of songbirds and is a favorite daytime hiding spot for deer. Lakes and ponds support waterfowl, herons and shorebirds. Few

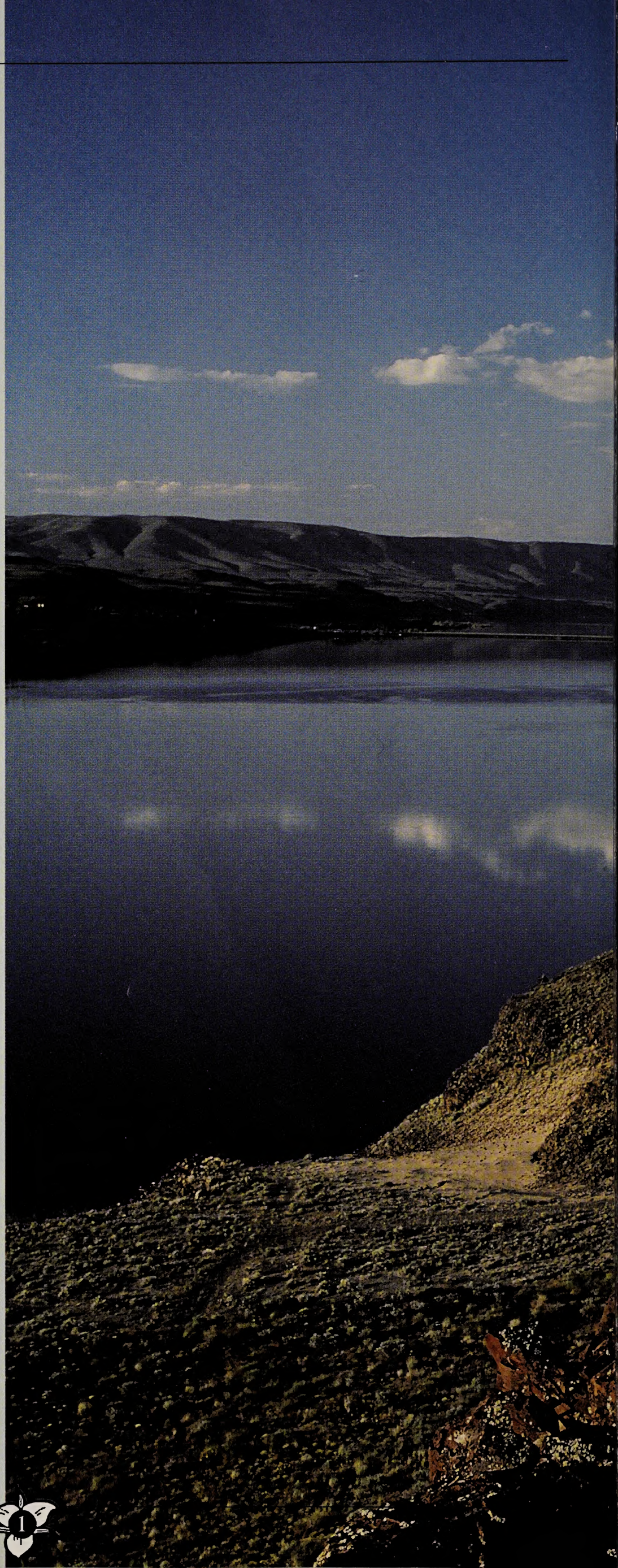


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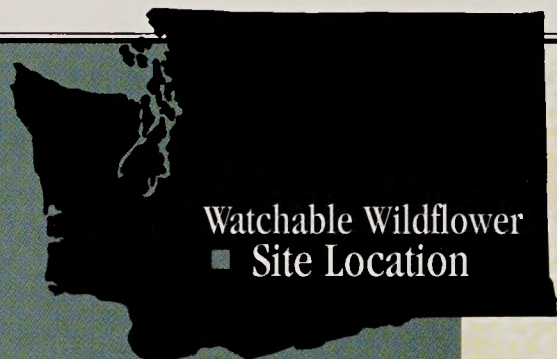
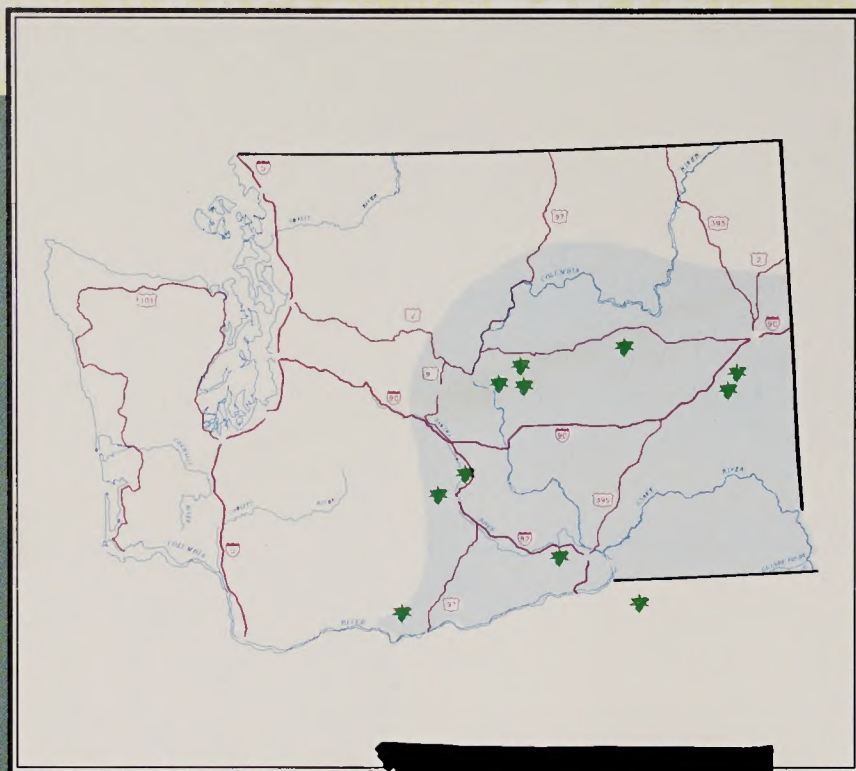
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ABOUT THIS GUIDE



John Marshall

Brilliant balsamroot and lupine color springtime hillsides

VIEWING TIPS

For your well-being, and for that of the plants and wildlife you are about to visit, we invite you to consider the following suggestions:



Choose your season

Wildflowers only bloom at certain times of the year, so use this guide to help you plan your trip into the Columbia Basin. May through September is beautiful across eastern Washington, and mornings and evenings offer the most pleasant temperatures to explore.



Come prepared

The weather is unpredictable. Bring appropriate clothing to protect yourself from sun, wind and rain. Since the Columbia Basin is a semi-arid region, sun screen and plenty of water are highly recommended. Wear sturdy shoes if you plan to hike. A camera and binoculars are also handy for viewing scenery or wildflowers. Most Watchable Wildflower sites are accessible by 2-wheel drive vehicles. In wet conditions however, a 4-wheel drive vehicle may be necessary. At each site, you can hike and explore large areas, or wander close to your car.

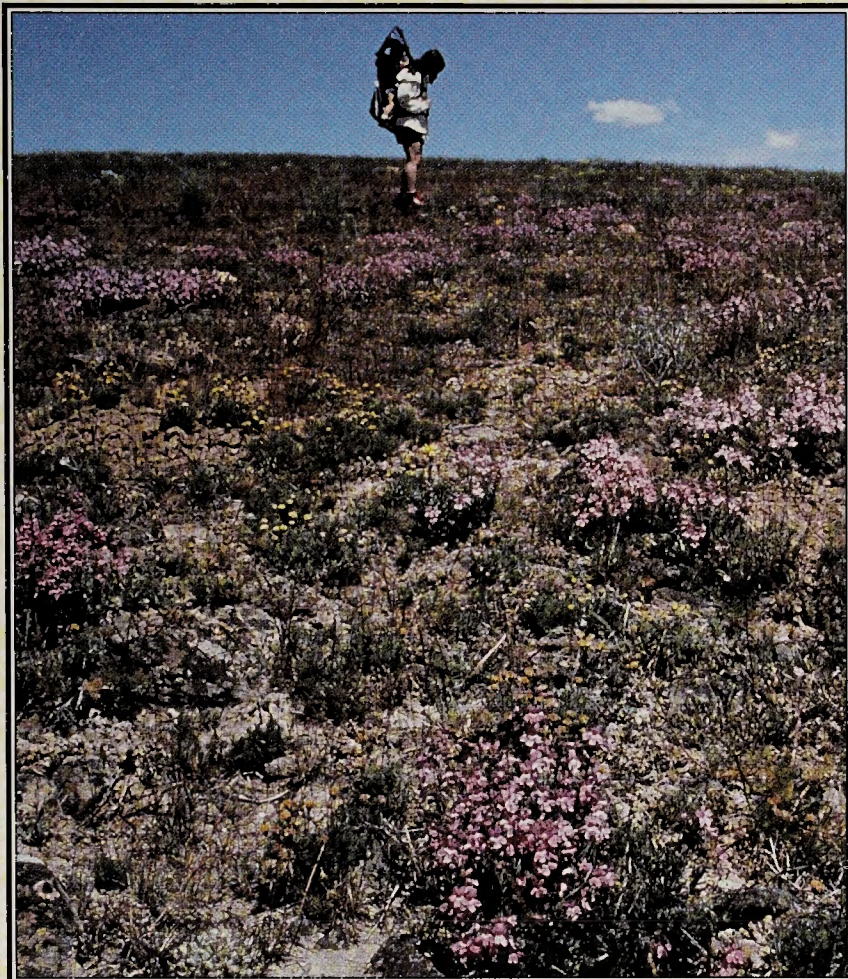


Use field guides

This booklet is intended to be used with a plant field guide. The plant detail and imagery offered by a field guide will greatly enhance your wildflower viewing opportunities. A few resources are recommended on page 35. Many others are available in your local library and bookstore.

WATCHABLE WILDFLOWERS— A COLUMBIA BASIN GUIDE will lead you through the unique ecology, geology and stunning floral display of this region. A brief overview of the natural history of the Columbia Basin and of the most common habitats of the wildflowers you may see are illustrated inside. Take the opportunity to learn about the special plant communities and habitats that characterize this area.

Ten Watchable Wildflower sites have been selected to represent the diversity of environments that are found throughout the Columbia Basin. At each site, the legend indicates which specific plant communities are found there. Each site also features directions and a map, a description of the natural history of the area and photos. "Flower Facts" introduces you to amazing plant adaptations to this harsh, dry world. "Can You Find?" proposes a fun challenge for you and your family, and "Plants and People" reveals ways people use plants. For a more in-depth look at each site, use the individual checklists included with this guide. Make the time to stop and smell the flowers in this extraordinary corner of Washington!



Michael Muscari

High on top Selah Butte, a hiker enjoys the views.



Mike Tonseth

Encounters with the western rattlesnake are not common



Dwarf Hesperochiron— David Hagen

No modern facilities



The ten Watchable Wildflower sites are situated away from conveniences such as running water or toilets.

Be considerate

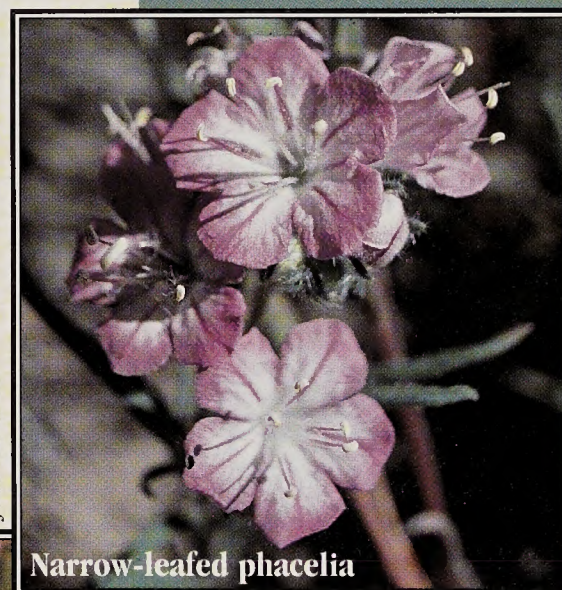


Leave flowers for others to see; take only photographs. Where there are flowers, there are also birds, mammals and insects. You may not see them, but they are there. Please take care not to disturb these creatures or their homes. Stay on any trails, always respect the rights of private land owners and please pack out your trash. Parking may be limited at some sites.

Watch out for ...!

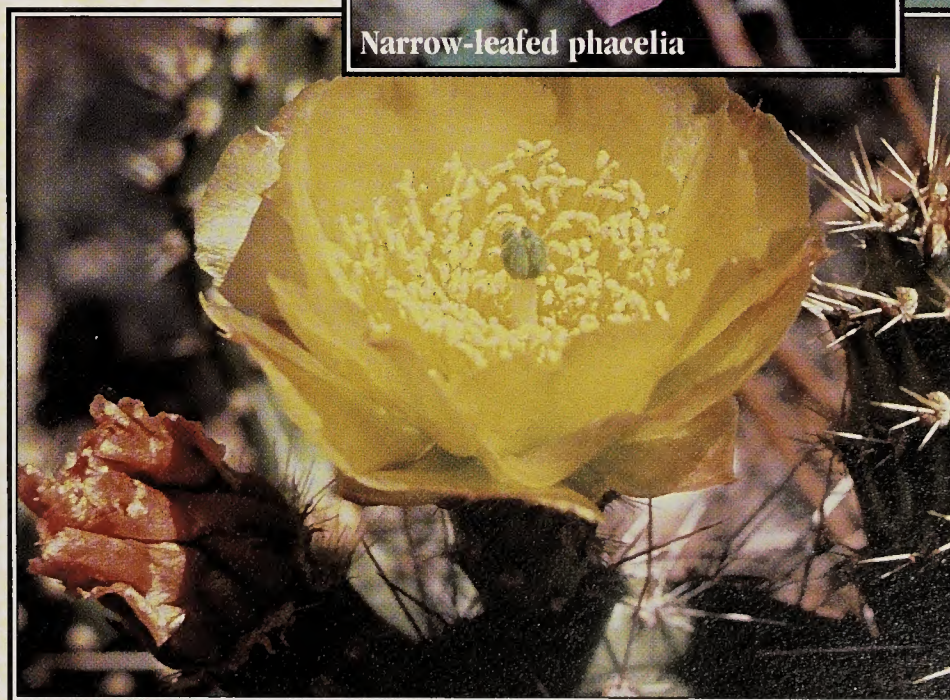


Yes, the Columbia Basin is home to the western rattlesnake. Far from being aggressive toward humans, they will usually flee if given the chance. Rattlesnakes generally hunt from dusk until dawn. They will usually give a light, rustling sound from their rattles as a warning to intruders. Simply avoid them and please, never harm them. Be sure to check your hair and clothing for ticks, especially when walking through shrubs. It is also a good idea to learn how to identify poison ivy and poison oak ahead of time, as you might encounter them in any riparian area (see page 32 for photo).



John Hamilton

Narrow-leaved phacelia

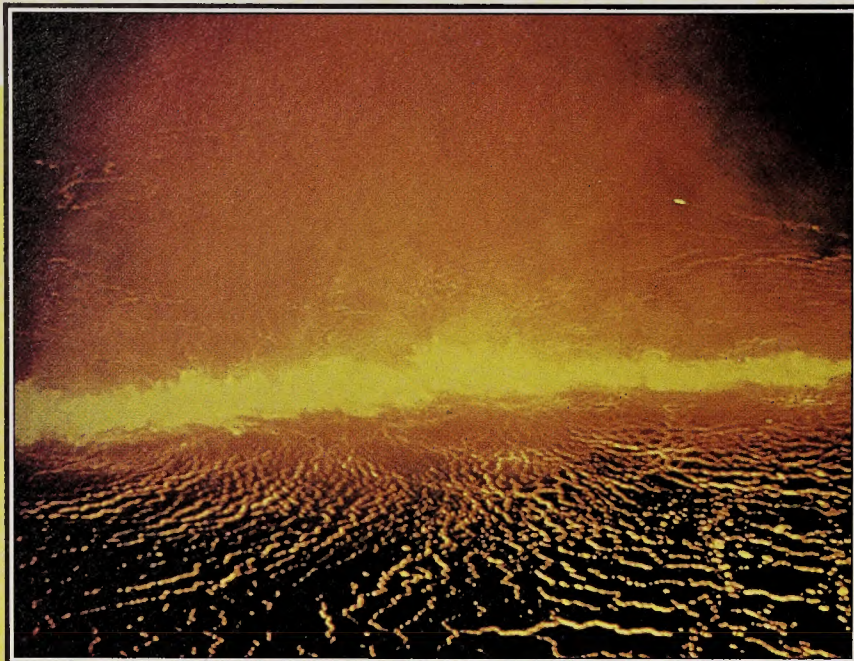


Joe Duft

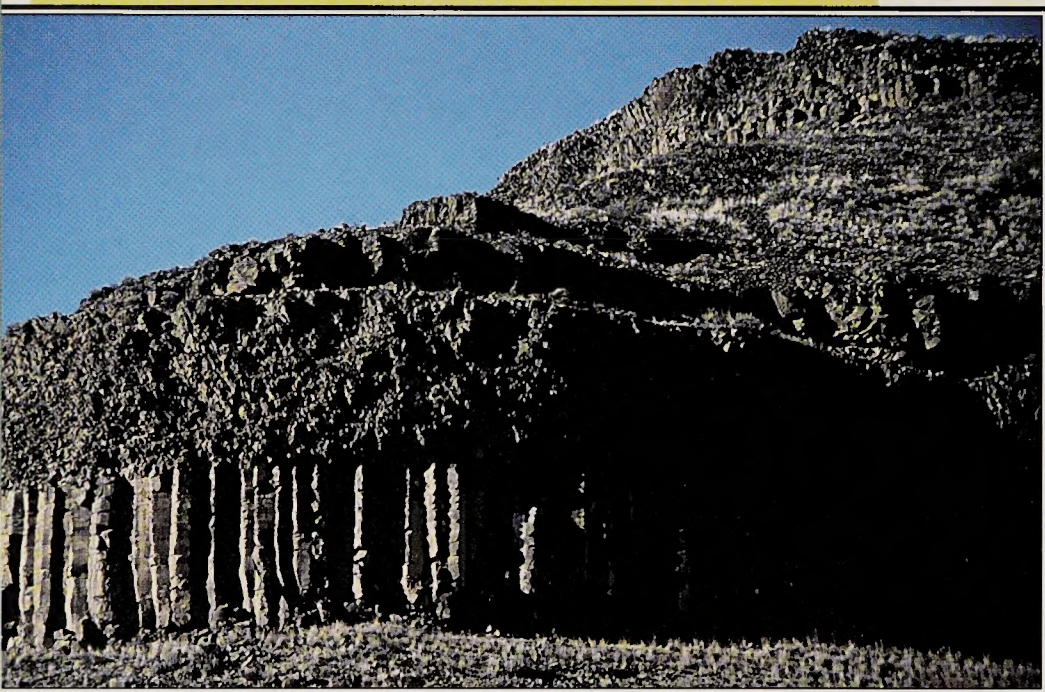
Prickly pear cactus

IN THE BEGINNING. . .

National Park Service



Volcanic eruptions like this one (in Hawaii) helped shape the Columbia Basin



The volcanic lava cooled and hardened, forming rocky ridges and outcrops— Neal Hedges



15,000 years ago, cataclysmic floods reshaped the landscape— John Marshall

THERE WAS ROCK!

Over a ten-million-year period, the area we call the Columbia Basin was dramatically, sometimes cataclysmically, transformed from a humid subtropical forest to a dry sagebrush-steppe grassland.

West of the Columbia Basin, the Cascade Mountains were forming, gradually altering the climate. Further east molten lava, or basalt, poured out again and again from mile-long cracks or fissures in the earth's crust. Rising from below like thick molasses, bubbling lava spread out to bury more than 200,000 square miles of this region under layer after layer of dense, black rock. An individual flow might spread over a 100-mile area leaving a layer of lava 200 feet thick. These basalt flows seared the landscape, filling valleys and covering most of the lower hills. The lava cooled and then, over a period of hundreds of thousands of years, surface rocks were broken down by a combination of lichens, wind, water, sunlight, and freeze-thaw cycles until new soils formed. Plants that took root accelerated the soil formation process. Eventually forests grew, then fresh new flows of molten lava burned and buried everything and the long, long cycle began again. The exact number of these cycles is not known.

Near Yakima, a well drilled almost three miles deep did not reach to the bottom of the basalt flows. In canyons and coulee walls, where the layers are visible, colors tell the geologic history; black for basalt, white for lake sediment or ash beds, and red for ancient moist tropical remnants known as laterite soils.

THEN CAME WATER....

During the last Ice Age, 12,000 to 15,000 years ago, the Spokane Floods created the Channeled Scablands of the Columbia Basin. Evidence has shown that at least forty times, advancing glaciers blocked the Clark Fork River in Montana to form ancient glacial Lake Missoula. Behind a glacial ice dam, Lake Missoula would periodically fill to gigantic proportions, then burst open its confining ice dam, and race across the Columbia Basin in the most dramatic and cataclysmic floods ever recorded on the face of the earth. Imagine a 500-foot-deep wall of water with a volume equal to half of Lake Superior sweeping, roaring, and scouring across the thin soil and flat lava bedrock of the Columbia Basin. This powerful, almost instantaneous, wall of water swept the lava bare, leaving rocky "scabs" behind. The raging flood gouged deep coulees, or steep-sided valleys, into the bedrock and scoured out chunks of lava to create potholes that later filled with water. Today, we know this unique area as the Channeled Scablands, where summer heat, flowing water, wind, and winter frosts continue slowly to chisel away at the ever-changing landscape. Examples of the Channeled Scablands can be seen at Wilson Creek, Hog Lake and Fishtrap Lake sites.



THE ENVIRONMENT TODAY

Now, in the aftermath of lava flows and cataclysmic floods, the Columbia Basin topography is varied and interesting; rolling plains and hills, coulees and plateaus, potholes, cliffs, creeks, meadows, lakes, and of course, the Columbia River. This variety in topography, especially when combined with harsh extremes in weather and climate, creates opportunities for a diversity of specially adapted plants to thrive.

Dryness characterizes this "rainshadow" east of the Cascade mountains. Wet marine air flowing eastward over the Cascades cools and drops most of its moisture in the form of rain on the west side of the mountains. There, normal rainfall is thirty-three to forty-two inches per year. Having left most of its rain on the ocean side of the mountains, a drier wind descends into the Columbia Basin depositing a mere nine to sixteen inches of precipitation per year. Even so, the Columbia Basin receives a little too much rain to qualify as a true desert!

Most of the Basin's precipitation falls as snow during the winter months when the ground is frozen solid. Winter temperatures in the Basin routinely fall below 0° F. In the summer, when the temperature may exceed 100° F, hot dry winds turn the Basin into a dehydrating oven.

Both plants and animals adapt in surprising and interesting ways to the harsh, near-desert conditions. Cactus plants store water in fleshy stems. Other plants may go dormant in the hottest part of the summer. A waxy coating on bitterroot leaves limits water evaporation. Tiny, silvery hairs on sagebrush leaves deflect the drying wind.

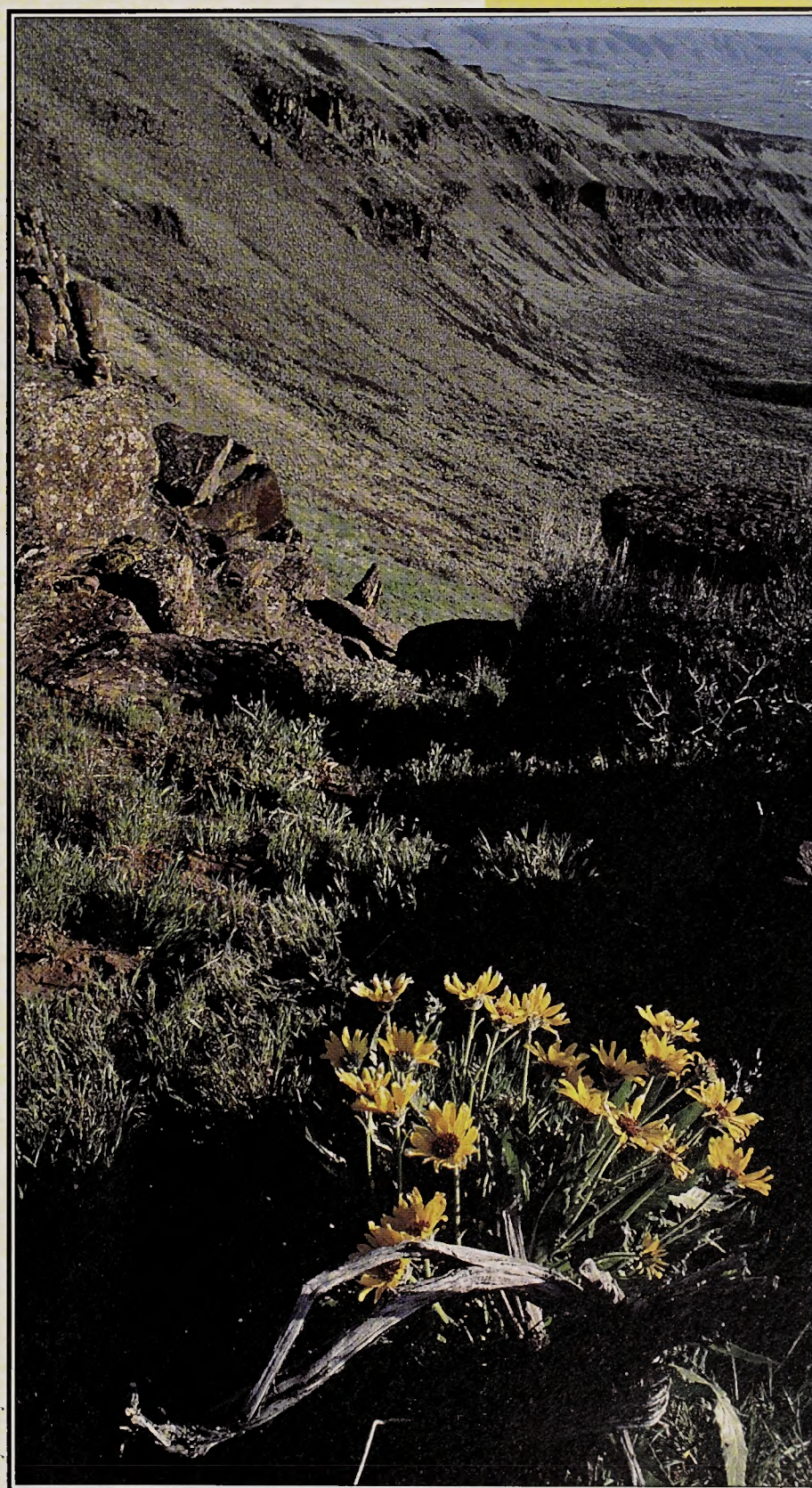
Special adaptations enable the Basin pocket mouse and the Ord kangaroo rat to thrive without having to drink water. They extract all the water they need from the plant seeds they eat. The highly concentrated urine they produce greatly limits water loss. Remaining inactive during the hottest part of the day also helps these rodents conserve precious water.

In the Columbia Basin, the most obvious plants you see from the highways are the scruffy, shrubby combinations of sagebrush, rabbitbrush and buckwheat interspersed with bright yellow balsamroot, purple lupine, and white phlox. These shrubs and flowers occur alongside bunchgrass of the grassland, or steppe, forming the shrub-steppe community.

Shrub-steppe is the most common community in the Columbia Basin, but a variety of other communities may also be found. Drier south or west-facing slopes covered by thin, rocky layers of soil are known as lithosol habitat and support plants known as the lithosol community. Rocky talus slopes and lush riparian habitats along streams are found throughout this area.

Plants grow in communities, or groups, which share similar needs and adaptations to their environment. Drier south or west-facing slopes covered by thin, rocky layers of soil host certain highly specialized plants. Other plants prefer north-facing slopes and depressions that have accumulated deeper, water-retaining soils.

The places where plant communities flourish are called their habitat. Shrub-steppe, Lithosol, Talus, and Riparian are the major habitats found in the Columbia Basin. Habitats and their common flowers are described and illustrated in pages 7-14.



Andy Sawyer

As a result of its unique natural history, the Columbia Basin is home to a diversity of plants and animals





SHRUB-STEPPE

John Marshall



Showy phlox

This is the most common habitat in the Columbia Basin, and includes areas where scattered shrubs form a layer rising above the bunchgrass. The relatively deep soils of this habitat can be found on slopes, the less barren portions of ridgetops, and in drainages.



Carey's balsamroot— John Hamilton

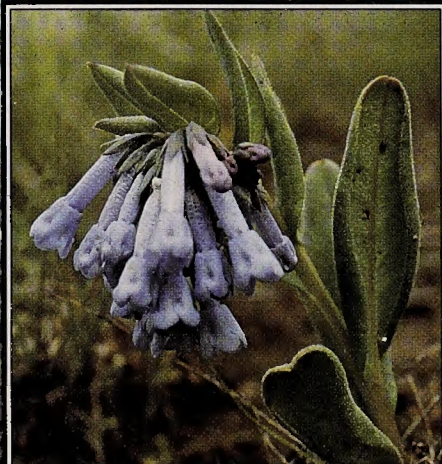




Lupine— John Marshall



Yellow bells— John Hamilton



Small bluebells— Barbara Benner



Sagebrush mariposa lily— John Hamilton



LITHOSOL



John Marshall

Hooker's balsamroot

Lithosol, or “rock-soil”, refers to crumbly, dry habitat characterized by only a thin layer of soil. On ridgetops and exposed areas across the Columbia Basin, plants of the lithosol grow low to the ground and often form mats to protect themselves from the hot sun and drying winds.



Robinson's onion - Andy Sawyer



Cushion phlox— David Hagen



Canby's desert parsley— David Hagen



Rock penstemon— David Hagen



Showy townsendia— John Marshall



TALUS



John Marshall

Buckwheat

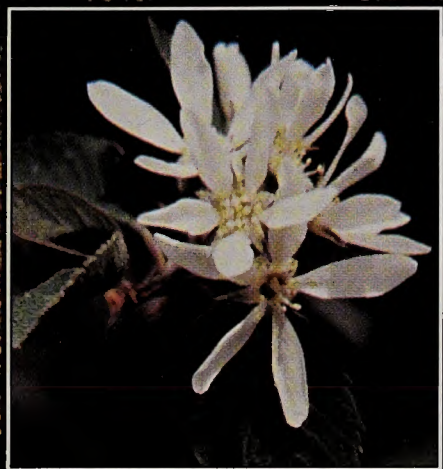
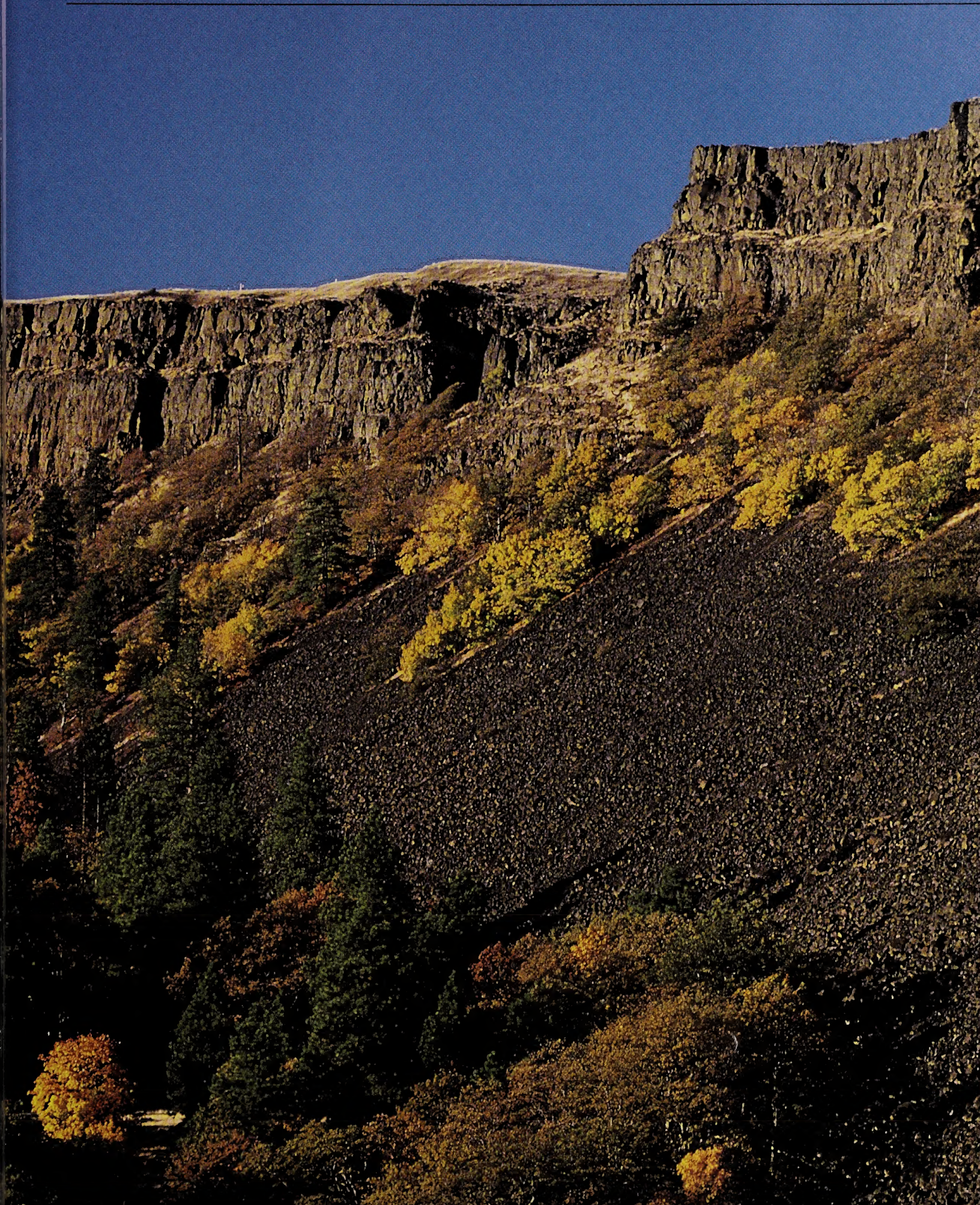
The slopes of many hills, coulees and canyons of the Columbia Basin are covered with rocky outcrops and talus, a mixture of coarse gravel and small boulders. Because these areas are unstable, they favor a particular combination of plants, most of which are shrubs.



Oregon sunshine— Joe Duft

Photo: Hardy plants cling to the shifting talus on the Saddle Mountains— BLM





Serviceberry— Jim Barrett



Roundleaf alumroot— Terry Lillybridge, Chokecherry— Andy Sawyer



Richardson's penstemon— Terry Lillybridge



RIPARIAN



David Hagen

Sticky geranium

Riparian areas are characterized by lush vegetation growing alongside creeks, lakes and seeps. Here, trees, shrubs, grasses and flowers provide food and shelter for wildlife. The vegetation helps to stabilize the streambank, preventing damage from soil erosion and cooling the water for fish.



Mock orange— David Hagen



Golden currant— David Hagen



Wood's rose— Barbara Benner

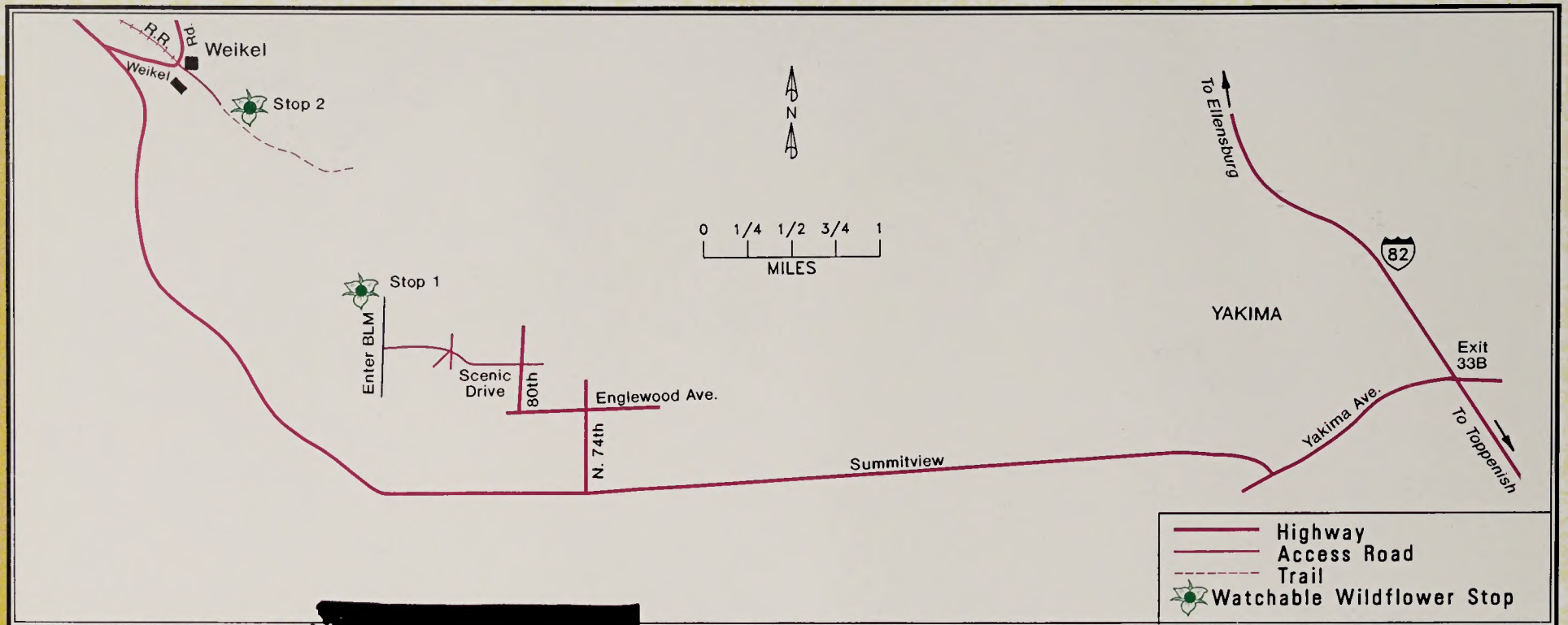


Blanket flower— BLM



Western spring beauty— David Hagen

COWICHE CANYON



◆ Details

Location: Yakima Co., T13N R18E Sec. 12,14,18

Elevation: Ranges from 810 to 2,046 feet. Hike and explore, or wander close to your car.

Habitat: Shrub-steppe/Lithosol/Talus/Riparian

Landscape: Upland ridgetop trail descending into the lush, riparian corridor of Cowiche Creek and connecting with a trail tracing the old railroad grade along the stream.

◆ Directions

Upper Cowiche Trail Stop 1: From I-82, take the E. Yakima Avenue Exit 33B to Summitview Avenue. Follow Summitview to N. 74th, take Englewood Avenue, to N. 80th and turn on Scenic Drive. The Watchable Wildflower site will be on your right.

Lower Cowiche Trail Stop 2: Continue on Summitview Avenue and turn on Weikel Road. There is a marked parking area to the right of the Weikel Railroad Station. A 3.2 mile long path winds along the creek, and connects with the Upper Cowiche trail.

◆ Description

Spectacular Cowiche Canyon lies along the western margin of the Columbia Basin, only seven miles northwest of downtown Yakima. This ridgetop site includes views of the two largest volcanoes in the state, Mt. Rainier and Mt. Adams, and of a sweeping 360-degree panorama of the entire Yakima River valley.

Layered beneath Cowiche Canyon and its north-facing walls are 6,000 feet of ancient Columbia Basin basalt flows. The south-facing walls of the canyon reveal a different type of volcanic rock, called andesite. Lighter in color than basalt and often porous with white crystals, andesitic lava flowed down from volcanoes in the Cascade Mountains. Throughout the Yakima Valley, andesite is a popular building material for rock walls and fireplaces.

While certain plants prefer the iron-rich soils of the dense, black basalt, other plants thrive in the more silica-rich andesite soils. As you walk the trail between the ridgetop and the canyon bottom, notice the difference between the vegetation around you and that on the slopes across the creek.

Although precipitation is the same on both sides of the drainage, the deeper soils of the north-facing slopes are host to a community that includes tall sagebrush (*Artemisia tridentata*), bitterbrush (*Purshia tridentata*), and mock orange (*Philadelphus lewisii*). The sunbaked, south-facing slope hosts a community that includes an assortment of species of desert parsley, or biscuitroot (*Lomatium* spp.).

In contrast, the canyon bottom harbors a lush riparian community with abundant year-round moisture. Here in midsummer, the annual berry extravaganza encourages a symphony of songbirds and offers the hiker a refreshing break from the heat in the uplands above.



David Hagen

Looking out over Cowiche Canyon

◆ Flower Facts

Related to the carrot, the desert parsleys, or biscuitroots (*Lomatium* spp.), are easily identifiable by the tiny yellow or white flowers growing in umbrella-like clusters called umbels (see photos on pages 10 and 18). A quick pinch to the soft leaves will yield a fragrant confirmation. Well adapted to the thin, rocky soils of the shrub-steppe, desert parsley stores energy as starch in a thickened or tuberous root just a few inches below the ground surface. The plants “sleep” through the summer drought, as well as through the winter freeze, then draw on their underground bank account to finance a burst of new growth each spring.

◆ Plants & People

The name “Cowiche” comes from the Yakama Indian word “kwai-wy-chess,” meaning “good ford” or “crossing on.” From seasonal encampments at both ends of Cowiche Canyon, the Yakamas made food gathering forays to the surrounding slopes to harvest desert parsley or biscuitroot. They harvested the stems of some species of desert parsley before the flower opened and ate these as raw greens, rich in Vitamin C. From another species, they devised a type of fish poison. Protein-rich roots were also harvested, dried, ground and the flour was mixed with water to make small finger cakes that they baked in the sun.



David Hagen



David Hagen

Large-flowered collomia

Note: Some of the flowers common to this site are illustrated in the community descriptions (pgs.7–14). For a more complete checklist of plants, see the individual checklists included with this guide.

Can You Find...?

Grass Widow (*Sisyrinchium inflatum*)— Also called “Blue-eyed Grass,” this delicate purple-to-blue flower blooms early to welcome in the spring. This member of the iris family stands three to twelve inches tall, with one or two flowers atop grass-like stems.

Large-flowered Collomia (*Collomia grandiflora*)— If you’re out in May or June, look for salmon-colored blossoms with blue stamens at the center, arranged in many-flowered heads. Five petals fuse into a long, narrow tube concealing nectar at each flower’s base. Only longer-tongued insects such as butterflies and moths can drink this concentrated snack.

DOUGLAS CREEK — NORTH



John Marshall

View looking up Douglas Creek Canyon

◆ Description

The trail follows the canyon bottom, tracing the route of Douglas Creek as it cuts a wide bend past towering basalt cliffs and steep talus slopes. From this vantage point, a variety of wildflowers may be found between early spring and midsummer. Listen for the songs of canyon wrens, cliff swallows and meadowlarks that accompany the constant burble of the water as it flows south toward Moses Coulee, and eventually into the Columbia River.

On both sides of Douglas Creek, forty-foot spires of columnar basalt tower in contrast to the fifteen million-year-old layers of rounded, “puffy” pillow basalts. Pillow basalts form when molten lava sizzles to a stop, then cools and hardens into assorted shapes and sizes under water.

Evidence of recent flooding along Douglas Creek is highly visible. Shrubs appear matted down, and clumps of vegetation may be caught high in the tree branches. These weedy and scruffy looking sights remind us that the plants along a riparian corridor must often tolerate entirely different circumstances from plants found in the drier soils just a few feet uphill.

◆ Details

Location: Douglas Co., T23N R23E Sec. 10, 11

Elevation: Ranges from 1,600 to 1,800 feet. Hike and explore, or wander close to your car.

Habitat: Talus/Riparian/Shrub-steppe

Landscape: Douglas Creek winds through a lush, riparian corridor below steep talus slopes and canyon walls.

◆ Directions

Drive east from the town of Douglas on Highway 2 for 4.5 miles, and turn right onto “H” Road, SW. Follow this gravel road for 6.4 miles, then take the first spur road to the right, just past the large BLM sign. Park at the locked white gate and walk along the old railroad bed.

◆ Flower Facts

What are those rounded swellings, lumps and bumps you may discover on certain leaves, stems and stalks? If you look closely at the goldenrod, willow, wild rose and sagebrush, the chances are good you will find a variety of “galls”.

A gall is a swelling produced when a chemical is injected into a plant, either by an insect when laying eggs, or sometimes by the larvae as they bore into the plant for shelter. Plant cells multiply



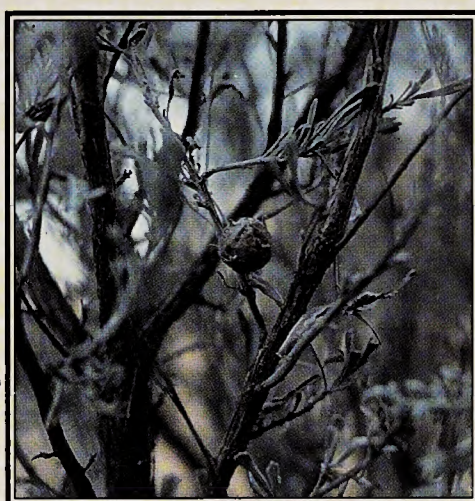


BLM

Fern-leaf desert parsley

around a developing larva, giving it a secure home and a constant food supply. The gall shelter keeps its occupant safe from predators and harmful weather. Best of all, the presence of a gall usually doesn't harm the host plant.

Galls vary enormously in texture and shape. They may be papery, woody, smooth, sticky, scaly or even hairy! Now, take another look... find any galls?



Susan Ballinger

Insect galls on sagebrush



Andy Sawyer

Sticky geranium

◆ Plants & People

In much of the Columbia Basin, agriculture, grazing by livestock and the introduction of numerous weedy species has had profound changes on the native vegetation, especially in riparian areas. While this area still contains native trees and shrubs, weeds have displaced many of the original species along the Douglas Creek channel. First a wagon road, then a railroad and attempts at homesteading have broken and disrupted the surface crust of the soil. When this protective crust is broken, many invasive weeds like cheatgrass, reed canary grass, knapweed and Russian thistle invade. Once established, these weeds often successfully outcompete native plants, eventually forcing them to the fringes of their original habitat.

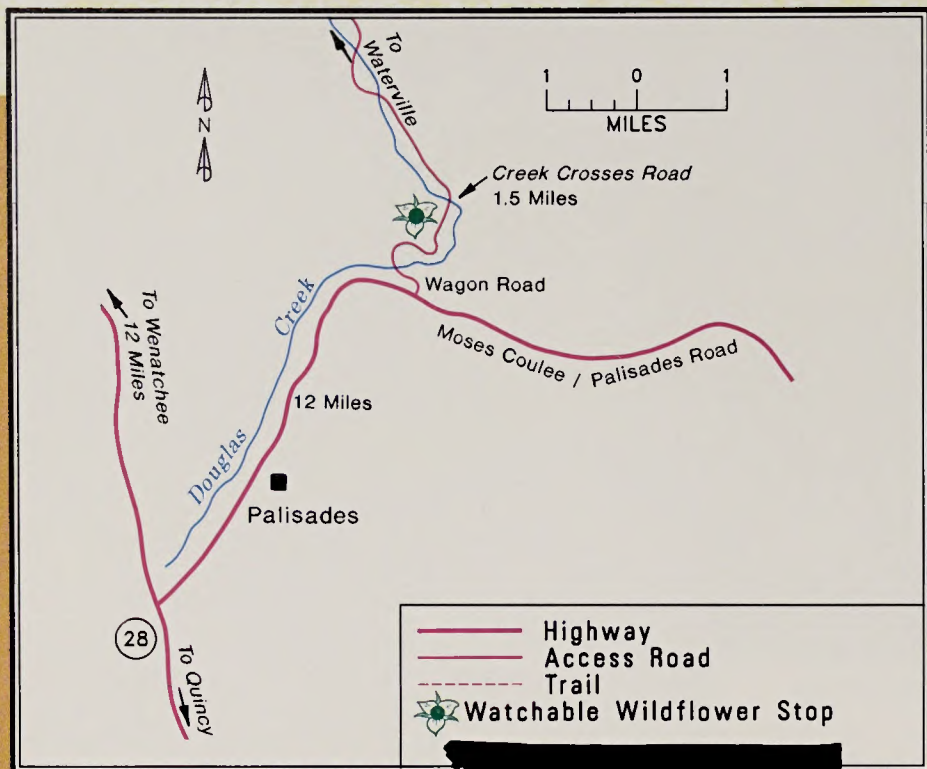
Note: Some of the flowers common to this site are illustrated in the community descriptions (pgs.7-14). For a more complete checklist of plants, see the individual checklists included with this guide.

Can You Find...?

Fern-Leaf Desert Parsley (*Lomatium dissectum*)— Up to four feet tall, this is one of the most robust of all the desert parsleys. The large leaves are divided into many small segments. The deep purple to pale yellow flowers form multiple umbrella-like clusters on a long, leafless stalk. Though it is distributed broadly throughout the Columbia Basin, you are most likely to find fern-leaf desert parsley blooming along dry, rocky slopes in May.

Sticky Geranium (*Geranium viscosissimum*)— Sticky hairs cover this two-foot tall, branching plant, giving it a pungent odor as well as its name. Geranium is derived from the Greek word *geranos*, or crane. This aptly describes the center of the mature flower which looks like the bill of a crane. The deep pink to purple flowers are common in riparian areas in early summer.

DOUGLAS CREEK — SOUTH



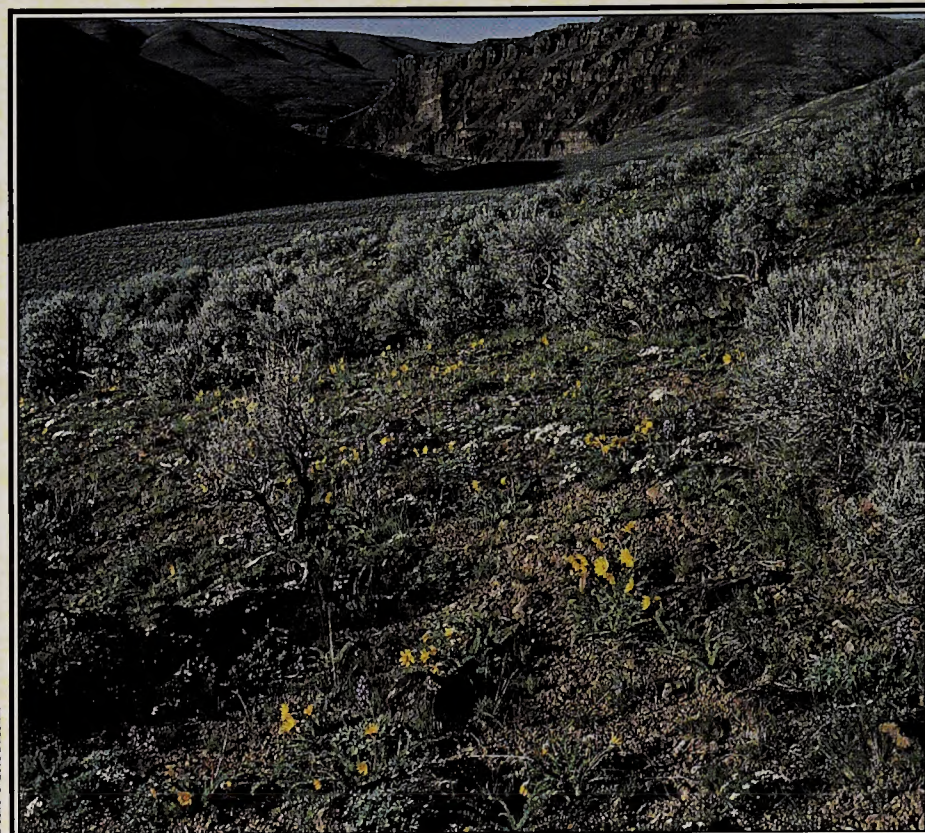
◆ Details

- Location:** Douglas Co., T23N R23E Sec. 25
- Elevation:** Ranges from 1,400 to 2,000 feet. Hike and explore, or wander close to your car.
- Habitat:** Shrub-steppe/Lithosol/Talus/Riparian
- Landscape:** Douglas Creek flows through a canyon with towering basalt cliffs to the east. Hiking up the slope to the west of the creek leads to spectacular ridgetop views of Moses Coulee.

◆ Directions

Follow Highway 28 to Palisades Road and then turn left onto graveled Wagon Road and drive for 1.5 miles. Park at one of the pullouts before the creek. The wildflower viewing area includes the slopes and ridge to the left of the road.

Note: Do not attempt to drive across Douglas Creek, as it is much deeper than it appears. To access the other side of the creek, follow the directions for visiting Douglas Creek—North.



John Marshall

Douglas Creek uplands

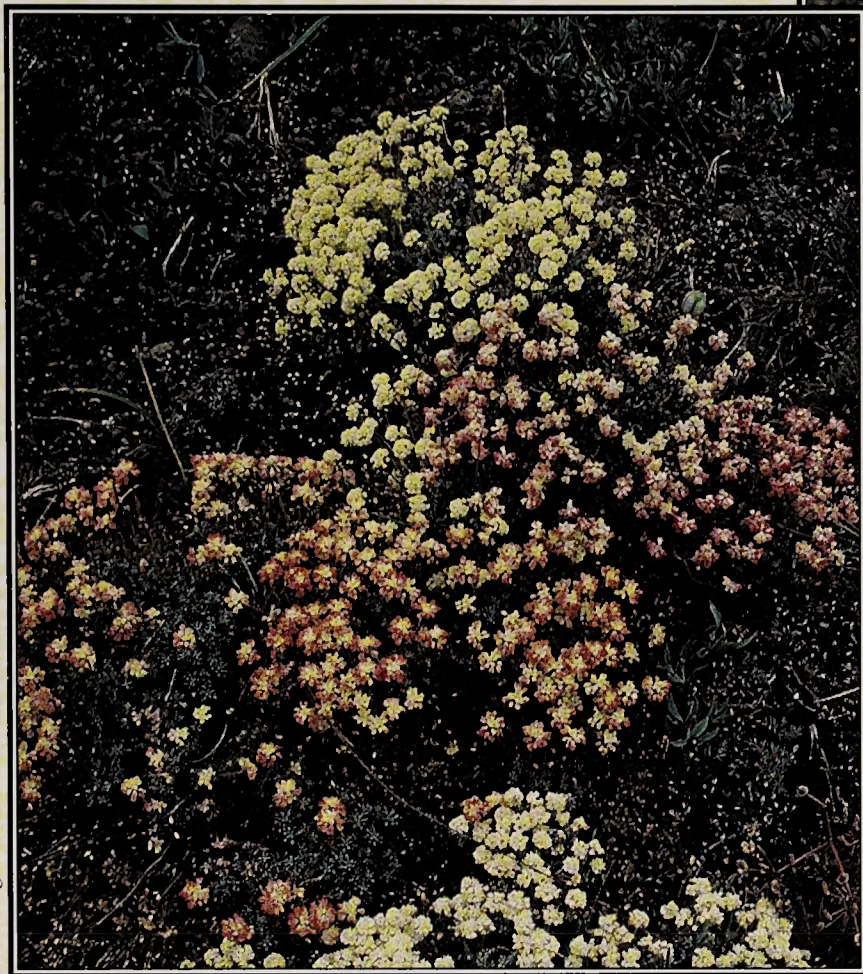
◆ Description

Douglas Creek is one of the few perennial (flowing year round) creeks in the Columbia Basin. This segment flows through a deep canyon, carving cliffs in the iron-rich basalt layers left by ancient lava flows. At the base of the cliffs, serviceberry (*Amelanchier alnifolia*), squaw currant (*Ribes cereum*), mock orange (*Philadelphus lewisii*) and purple sage (*Salvia dorrii*) have anchored themselves in areas of loosely fractured rock, or talus. Hike up the slope through low-growing plants that thrive in spite of the extreme weather. From the ridge, enjoy grand views of Douglas Creek and Moses Coulee. Wildflower viewing opportunities are spectacular from early April to mid-June, when a flush of flowers spreads from the deep, moist soils of the shrub-steppe slopes to the shallow, drier soils of the ridgetop lithosol.

Unlike nearby Moses Coulee, which was formed by the sudden, overwhelming force of the Spokane Floods (see *In the Beginning*), Douglas Creek was channeled over thousands of years by the ice and snow melt from nearby Badger Mountain. Springs continue to feed the creek today, as it cascades in and out of a dozen shimmering sandstone pools on its way down through Moses Coulee to the Columbia River. To explore riparian plant communities along a more easily followed trail, use the Douglas Creek—North Watchable Wildflower site information.

◆ Flower Facts

A half-hour climb up the slope and along the ridgetop will lead you past a few of the five varieties of desert buckwheat (*Eriogonum* spp.) found here. Important dominants of the shrub-steppe, desert buckwheats are low rounded shrubs with numerous tiny flowers clustered at the tips of upright branches. The yellow or white flowers turn pink to rose-red as the plant



David Hagen

Thyme buckwheat



Goldenweed— Jim Farrell

ages. Blooming from early spring into late summer, depending on the species, desert buckweheats provide an important nectar source for shrub-steppe bees and butterflies. The seeds of desert buckweheats are a favorite food for many birds and rodents.

◆ Plants & People

It's easy to forget the importance of plants in our lives. The approach to the Douglas Creek–South Watchable Wildflower site takes you past fields of cultivated crops: orchards, alfalfa, and wheat. Where the land is more rugged, stock animals graze. An integral part of our lives, plants are vital for basic human activities like washing and eating, shelter, medicine, and clothing.

Humans have been recording the history of plant uses since early times. Expeditions to uncharted lands usually included botanists. Until recently, doctors of western medicine studied botany, because plants were the only source of ingredients for the most effective treatments. Enjoying the beauty of wildflowers is just one of many reasons why protecting native plant species benefits us all.

Note: Some of the flowers common to this site are illustrated in the community descriptions (pgs.7–14). For a more complete checklist of plants, see the individual checklists included with this guide.



Joe Duff

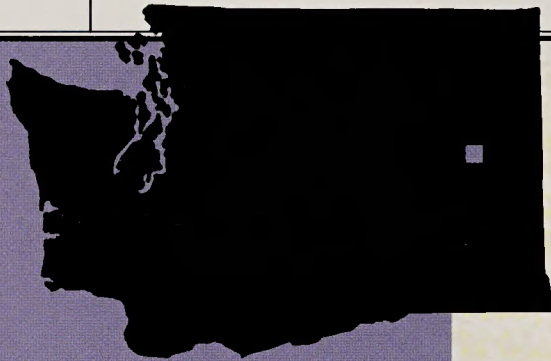
Puccoon

Can You Find...?

Goldenweed (*Haplopappus stenophyllus*) - Look for this plant in dry, rocky soils. Small, narrow leaves crowd the base of this plant, almost hiding the nearly leafless stems that bear vibrant yellow flowers in late spring.

Puccoon (*Lithospermum ruderales*) - The small, pale yellow flowers of puccoon appear in late spring, partially hidden at the base of the leaves. Puccoon is common in the shrub-steppe, and is easily identified by a cluster of long, leafy stems springing up from a solid, woody root.

FISHTRAP LAKE



◆ Details

Location: Spokane and Lincoln Cos., T22N R39E Sec. 19, 24, 25, 30

Elevation: 2,000 feet. Hike and explore, or wander close to your car.

Habitat: Shrub-steppe/Riparian/Talus/Lithosol

Landscape: Shrub-steppe transitions to ponderosa pine, interspersed with seasonal pothole ponds and basalt outcrops. The trail leads to a rocky lakeshore.

◆ Directions

From I-90, west of Spokane, take Fishtrap Exit 254. Drive 4 miles along the paved road and turn left at BLM sign onto an unpaved road, across from a ranch house. Then drive about one mile to park at the pulloff. Walk through the pedestrian gate to the 1.5 mile trail to Farmer's Landing.



Andy Sawyer

Meadows near Fishtrap Lake in bloom

◆ Description

The trail to Farmer's Landing, on the southern shore of Fishtrap Lake, offers a magnificent overview of the transition zone from a northern pine forest to the shrub-steppe of the Columbia Basin.

Beginning in shrub-steppe, the trail winds past robust clumps of tall, native giant wildrye (*Elymus cinereus*), a species that thrives in moist, alkaline soils. A large marsh, immediately to the east, is home to red-winged and yellow-headed blackbirds and is popular with a variety of waterfowl. Just before the trail leads to higher ground, it crosses an intermittent stream where you may see the splashy purple of wild iris (*Iris missouriensis*).

Nearing Fishtrap Lake, the trail drops into a dry, ponderosa pine forest where a variety of flowering shrubs provide shelter and food for many songbirds. The jumble of fallen trees is the result of a windstorm in the summer of 1995. If you explore the shaded, rocky side canyons nearby, you may discover floral treasures hidden in the rock crevices. Continue to Fishtrap Lake to enjoy the refreshing expanse of clear water and cool breezes.

◆ Flower Facts

Until it flowers in late spring, bitterroot (*Lewisia rediviva*) remains inconspicuous in the rockier soils and outcrops of the shrub-steppe and lithosol. First the small, succulent leaves appear, only to dry up and drop off before the numerous pale pink "roses" bloom.

Note: Some of the flowers common to this site are illustrated in the community descriptions (pgs. 7-14). For a more complete checklist of plants, see the individual checklists included with this guide.



As with cacti, bitterroot can survive extreme dehydration by storing water in their fleshy, club-shaped leaves and thick roots. The tenacity of the bitterroot was acknowledged by Captain Meriwether Lewis when he named the species *rediviva*, Latin for “reborn.”

◆ Plants & People

Traditionally, Native Peoples dug bitterroot early in the spring, before the plants became fibrous. The roots were peeled and boiled. Some of the bitterroot was eaten immediately while the remainder was dried and stored to be used later in soups or in “puddings.”

Bitterroot was also a valuable trade item, often exchanged for dried salmon. Around the turn of the last century, ten bundles of bitterroot were said to have an equivalent trade value of one large, dressed buckskin.



John Marshall

Wild iris



Bitterroot— Barbara Benner

Can You Find...?

Bitterroot (*Lewisia rediviva*) - Also known as “rock rose,” bitterroot often escapes notice until May, when its beautiful flowers appear in clumps along rock ridges and crevices. Bitterroot’s many inch-long petals vary in color from near-white to deep rose.

Wild Iris (*Iris missouriensis*) - The distinctive bluish-purple bloom of this native can be found in late April in the moist grassland meadows and low areas around Fishtrap Lake. The dense populations of irises spread by a system of underground stems, or rhizomes, which produce roots and upright branches to support the flower.



HOG LAKE



◆ Details

Location: Spokane Co., T22N R40E Sec. 30

Elevation: Ranges from 2,000 to 2,350 feet. Hike and explore, or wander close to your car.

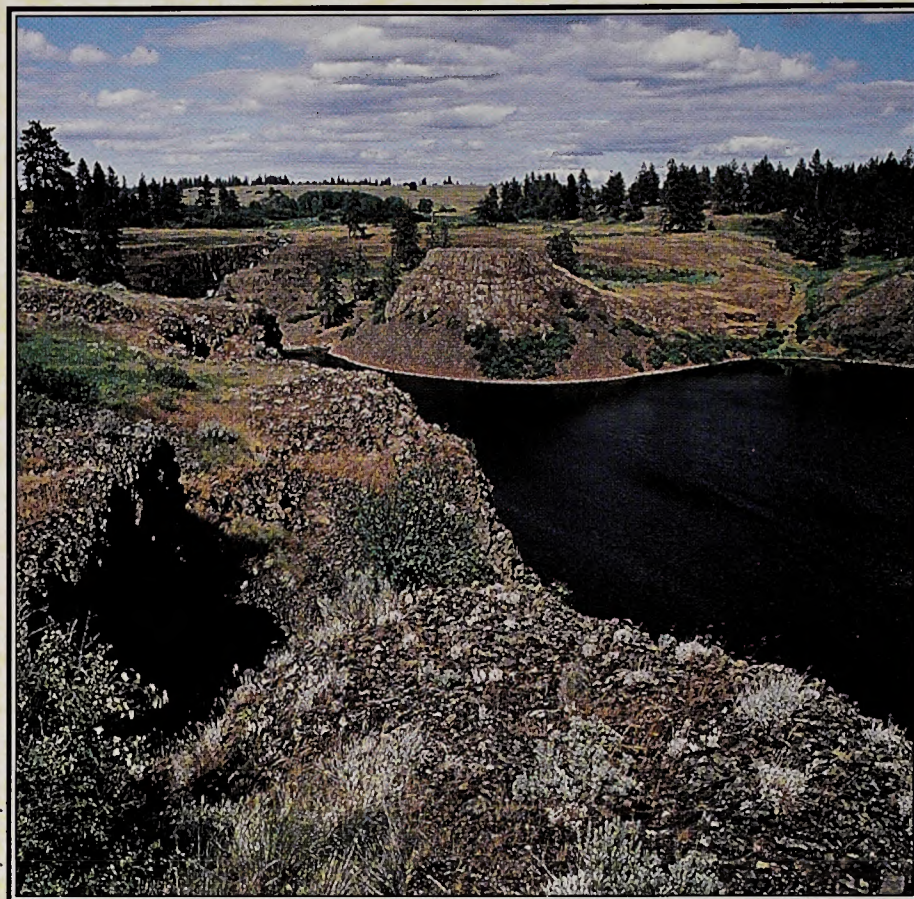
Habitat: Shrub-steppe/Riparian/Talus/Lithosol

Landscape: A mosaic of scattered ponderosa pines, brushy deciduous woodlands, and open grassy slopes overlooking a small lake and canyon.

◆ Directions

From I-90, west of Spokane, take Fishtrap Exit 254. Drive 0.8 miles, then turn left onto the first gravel road. Continue half a mile to a gate and a parking area. The gate is closed during fire season, but if it is open, drive down the road. If the gate is closed, park and walk 1.7 miles down the road to Hog Lake. Enjoy exploring the paths that branch off the road, or the more primitive trail along the west side of the lake. This trail has steep dropoffs which may be dangerous for small children and pets.

Note: At certain times of the year, parts of this road may be unsuitable for low clearance vehicles, so call the BLM Spokane office at (509)536-1200 for information.



Andy Sawyer

Hog Lake overview

◆ Description

Hog Lake is nestled in the transition area along the eastern fringes of the Columbia Basin. Here shrub-steppe from the west meets the open ponderosa pine forest from the northeast and grasslands from the south. In this lush area of woodlands and wetlands, the drainage pattern of the streams, marshes, and meadows reflects the invisible fractures and cracks deep in the basalt below.

When the ancient Spokane floodwaters ripped through this area, it eroded and enlarged cracks and fractures in the basalt. Today, a grid-like pattern of hills and depressions traces the ancient floodway and provides moist habitat for plant communities.

Immediately north of Hog Lake, spring runoff sends water down a steep slope, creating a scenic waterfall that flows between March and May. Throughout the spring, turtles line up, sunning themselves on logs in shallow water along the lakeshore. Wander through the gently sloping forests and meadows on this side of the lake, where a rich diversity of plants and flowers awaits you.

◆ Flower Facts

Brilliant rock garden-like displays of wildflowers grow in seeps along the rock ledges that border Hog Lake. In these moist microhabitats, water that has "seeped" out from the fractures of the basalt bedrock supports some unique plants one would not otherwise expect to find in the Columbia Basin. Yellow monkey flower (*Mimulus guttatus*), shooting star (*Dodecatheon* spp.) and the magenta-colored Richardson's penstemon (*Penstemon richardsonii*) are examples of some of the more colorful wildflowers found here.

◆ Plants & People

Camas, or “quamash,” was named by the Native Peoples who relied on the bulb of this lily family member as a source of food. Each summer when the meadows started to dry, people came and camped nearby. The women would dig the camas bulbs with sharpened sticks. Some of the starchy bulbs were steam roasted, while others were dried for later use. If great care was not taken, the similar looking, but very poisonous death camas (*Zigadenus* sp.) could be collected by mistake.

As conservation in food gathering was important, only the large roots were dug up, and some camas seeds were churned back into the soils, establishing new plants for future forays. The same meadow yielded camas continuously for hundreds, maybe thousands of years.



David Hagen

Camas

Note: Some of the flowers common to this site are illustrated in the community descriptions (pgs.7–14). For a more complete checklist of plants, see the individual checklists included with this guide.



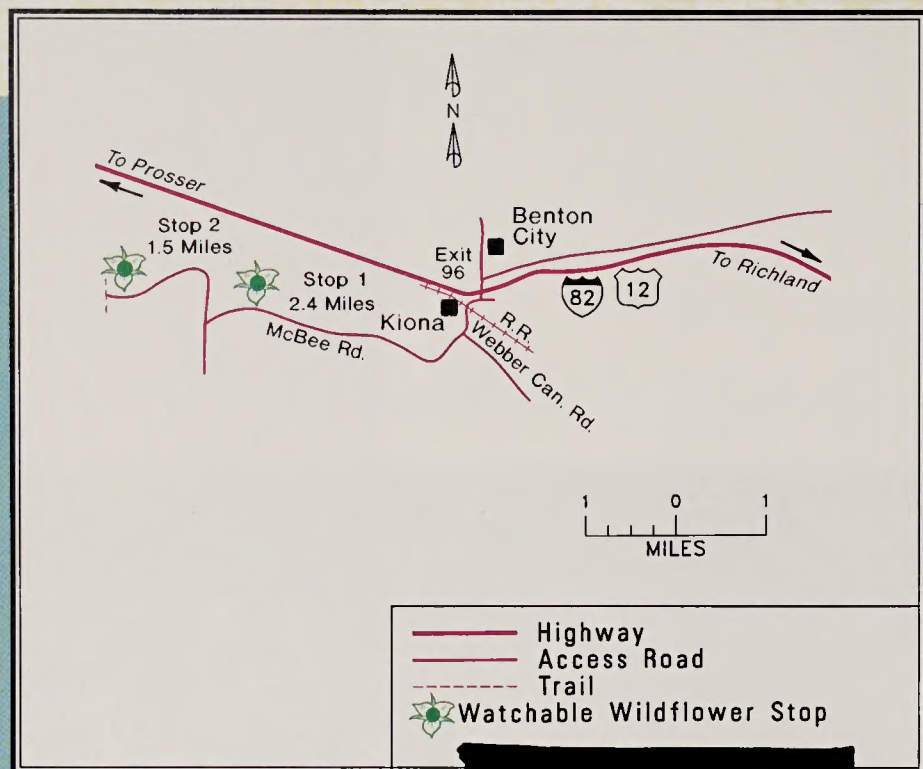
Small-flower prairie star— John Marshall

Can You Find...?

Camas (*Camassia quamash*)— Pale blue to deep purple flowers of camas flourish in the meadows, marshes and the moister pockets of the shrub-steppe. An easily recognizable plant with one to two-foot tall stems and fleshy, grass-like leaves, the large spikes of camas bloom as dense “fields” of brilliant blue in early May.

Prairie Star (*Lithophragma* spp.)— Among the first plants to flower in the spring, prairie star is commonly found in the open, grassy areas of the shrub-steppe. The lobed pinkish petals of the three species common here cluster in ‘stars’ atop leafless stems of six to twelve inches tall. The fibrous roots have small bulblets that are a popular food among rodents but produce toxins that may poison domestic livestock.

HORSE HEAVEN HILLS



◆ Details

Location: Benton Co., T9N R26E
Sec. 20, 21, 22, 23, 24

Elevation: Ranges from 810 to 2,046 feet. Hike and explore, or wander close to your car.

Habitat: Shrub-steppe/Lithosol/Talus

Landscape: Flat ridgetops with steep north and south-facing slopes.

◆ Directions

From Interstate 82, take Exit 96 south toward Kiona and follow McBee Road. For Stop 1 drive uphill 2.4 miles, and park near the gravel pit. Explore the grassland wildflowers on the north-facing slopes. For Stop 2, continue driving past the gravel pit and then turn right and park under the powerlines at the top of the ridge. Enjoy the views and wildflowers while exploring the rocky ridge.



John Marshall

Windswept Horse Heaven Hills

◆ Description

The Horse Heaven Hills are the result of enormous folds in the otherwise flat basalt layers of the Columbia Basin. The southern-most of a series of east-west ridges, these hills are young and still growing, geologically speaking. As the ridges grow, both the Yakima and Columbia rivers continue to carve channels through them, as seen to the north where the Yakima River has cut a gap through nearby Rattlesnake Ridge.

While the Horse Heaven Hills were high enough to escape the scouring of the ancient Spokane Floods, they have always been vulnerable to extreme, drying winds. Yet here on the rockiest, most windswept areas of the ridge, entire communities of tiny plants thrive. Close inspection of the crumbly, pavement-like ground reveals dense layers of colorful lichens and mosses.

In contrast, the pockets of deeper soil found along the ridgetop and on the south-facing slopes provide root anchorage for fragrant stands of tall sagebrush (*Artemisia tridentata*) and the smaller, shrubby purple sage (*Salvia dorrii*). Along the north-facing slopes, range fires have removed the sagebrush, leaving healthy stands of native bunchgrasses and rabbitbrush (*Chrysothamnus* spp.).



Pamela Camp

Rosy balsamroot

◆ Flower Facts

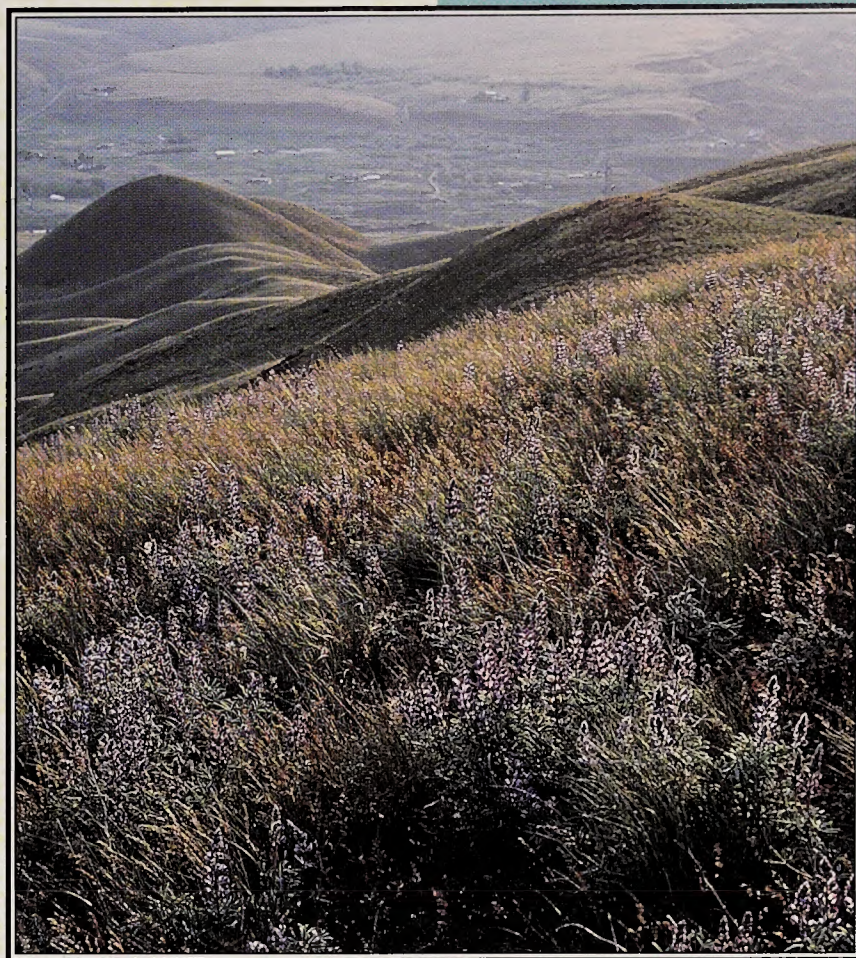
Visible from a mile away, lupine (*Lupinus sulphureus*) in bloom paints the shrub-steppe blue. The leaves' downy hairs help them conserve water; the silver sheen reflects away some of the sun's heat, while the soft fuzz deflects drying winds from moist leaf surfaces.

Like other legumes, lupines are nitrogen-fixing, and thus improve the soil. Because they contain poisonous alkaloids, hungry animals, particularly sheep, may become ill when they feed on the lupine's toxic seeds and pod-like fruit.

◆ Plants & People

Beginning shortly after the Civil War, the bunchgrasses of the Horse Heaven Hills were such prime forage that ranchers ran enormous herds of tens of thousands of horses throughout them. Large scale horse ranching ended by the turn of the century, but many herds of wild and semi-wild horses still roamed the hills. These wild horses were seen as a nuisance by the wheat farmers and cattle ranchers who moved into the area. By the end of the first decades of the 20th century, the wild horses were gone, and all but the steepest and rockiest slopes of the Horse Heaven Hills had been converted to agriculture.

Note: Some of the flowers common to this site are illustrated in the community descriptions (pgs. 7–14). For a more complete checklist of plants, see the individual checklists included with this guide.



John Marshall

Fields of lupine



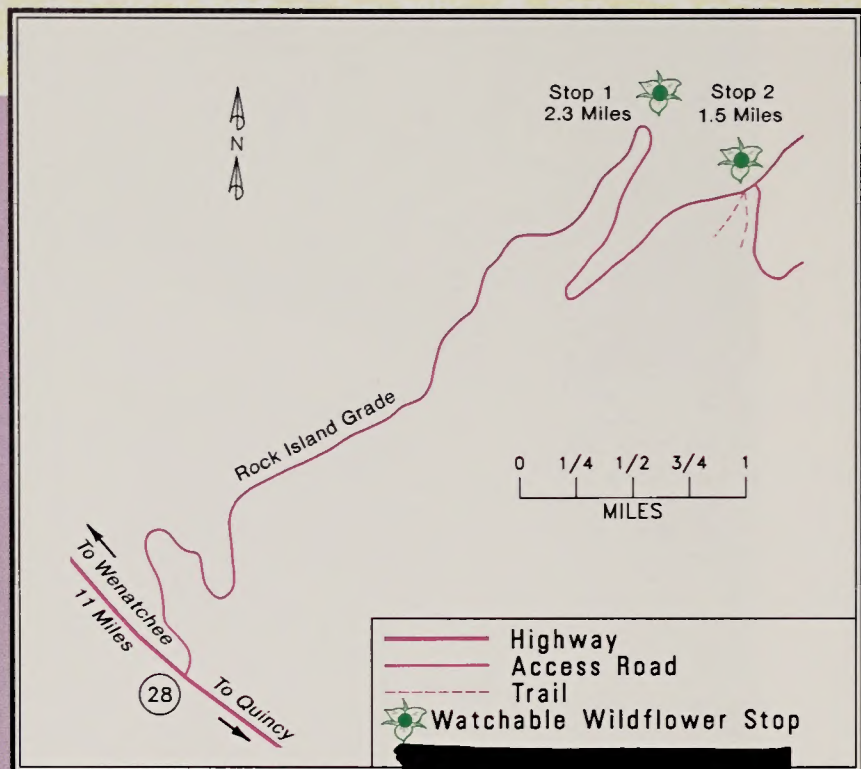
Cusick's shooting-star— David Hagen

Can You Find...?

Rosy balsamroot (*Balsamorhiza rosea*) - This miniature plant is only found on these windy ridgetops. Yellow flowers carpet the lithosol in April. As the season progresses, the blossoms will turn a brick-red color. Their petite size is due, in part, to their stems lying flat against the ground to conserve precious moisture.

Cusick's shooting star (*Dodecatheon cusickii*) - Although not abundant, this flower blooms in April and can be found in the moist seeps along the north-facing slopes. The unusually shaped flower is easily identified by the five pink petals pulled back from five colorful stamens, nodding toward earth like a "shooting star."

ROCK ISLAND CREEK



Andy Sawyer

Rocky cliffs shelter a variety of flowers

◆ Details

- Location:** Douglas Co., T22N R22E Sec. 28
- Elevation:** Ranges from 300 to 2,000 feet. Hike and explore, or wander close to your car.
- Habitat:** Shrub-steppe/Lithosol/Talus
- Landscape:** Ridgetop and slopes overlooking a V-shaped valley with a perennial creek below (creek not on BLM property).

◆ Directions

Take Highway 28 southeast from Wenatchee for 11 miles, and turn left on the Rock Island Grade Road (not the road to the town of Rock Island). Stop 1 is 2.3 miles up this grade, at the bend of the switchback. Park on the pullout on the left, and walk up the canyon.

For ridgetop views, continue 1.5 miles uphill to Stop 2, just past the Sachs Road turnoff. Park along the road. The site is on the left side of the road. Respect private property on the opposite side of the road.

◆ Description

About 10,000 years ago, as the last of the glaciers receded, ice and snow carved meltwater channels into the lower slopes of Badger Mountain. The force of the water gouged a steep V-shaped valley, leaving a mosaic of plant habitats that differ in soil depth and water availability.

More than a hundred different species of wildflowers may be found between the relatively protected, north-facing slope, and the windy, rocky ridgetop. As you explore the slope at Stop 1, look for clues indicating that this plant community is relatively undisturbed. These clues include the even spacing between the bunchgrasses and the shrubs, the black to green lichen and moss crust on the soil surface, and the diversity of wildflowers.

Besides floral beauty, at 2,000 feet above Rock Island Creek, Stop 2 commands a breathtaking view of the city of Wenatchee and Mt. Stuart. The plant communities found here thrive in the dry, crumbly ruggedness of the lithosols.

◆ Flower Facts

After shrubs, grasses are the dominant plants found in the Columbia Basin. Indispensable as the major food source for herbivores and instrumental in preventing soil erosion, grasses successfully tolerate the intense climatic extremes of eastern Washington. In the Columbia Basin, most native grasses grow as a tuft of above-ground stems. Precious moisture is trapped and stored near the dense base of the plant. In the search for water, each bunchgrass sends an extensive network of fibrous roots in hundreds of directions. While the blades of the bunch grass wither during dry periods, below the ground, the root system remains alive, waiting for a summer shower or for you to accidentally spill your water bottle!





Sagebrush buttercup— WSU

◆ Plants & People

Because the plant communities at Rock Island Creek are relatively undisturbed by livestock, vehicular traffic or people, they host a healthy ground layer of microbiotic crusts. Not readily obvious to the casual observer, these crusts form when a combination of tiny organisms (algae, moss, fungi, lichens and bacteria) bind soil particles to develop a distinctive rough, scaly surface. At Stop 1, look closely at the ground. Chances are you are standing on or very near a patch of microbiotic crusts. Usually black, grey, red or green-blue in color, microbiotic crusts can tolerate extreme environmental conditions. They influence soil stability, help regulate soil moisture, filter water, cycle nutrients and provide better growing conditions for the native plants. Once this crust is broken, it can take many years for it to grow back.

When disturbed by compaction or tearing, the loss of the slow-growing crust communities has an extensive impact on the well being of all Basin plants, insects and wildlife. Step softly!



Joe Duff

Fragile Microbiotic crust— step softly

Note: Some of the flowers common to this site are illustrated in the community descriptions (pgs.7–14). For a more complete checklist of plants, see the individual checklists included with this guide.



John Hamilton

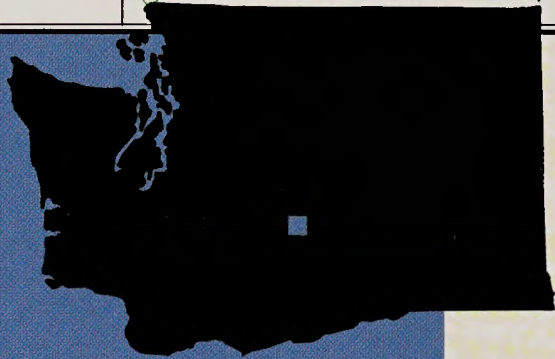
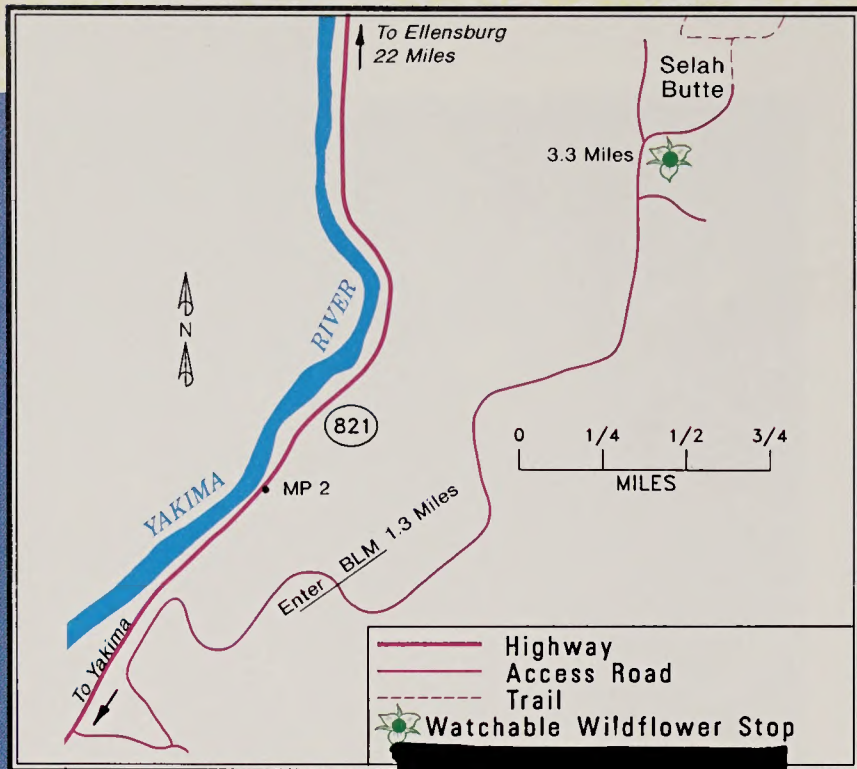
Common larkspur

Can You Find...?

Larkspur (*Delphinium nuttallianum*) - A long, nectar-bearing spur gives the dark blue larkspur its descriptive name. Flowering in May and found throughout the Columbia Basin, this versatile plant also grows in moist mountain meadows and open forests. Although beautiful, larkspurs produce toxic alkaloids that are harmful to domestic livestock.

Sagebrush buttercup (*Ranunculus glaberrimus*) - Showy and widespread throughout the Columbia Basin, the sagebrush buttercup is one of the spring's first arrivals. Frequently growing beneath large shrubs such as sagebrush or bitterbrush, the bright yellow, shiny petals of the flowers contrast sharply with their backdrop of dark green, fleshy lobed leaves.

SELAH BUTTE



◆ Description

Between the Kittitas and Yakima valleys, the Yakima River cuts a narrow canyon through the folded basalt of Umtanum Ridge. Selah Butte, one of the highest points along this ridge, offers a birds-eye view of the rugged beauty of the Yakima River Canyon, as well as easy access to an astonishing variety of Columbia Basin wildflowers.

Umtanum Ridge is an enormous fold in the otherwise nearly “flat” basalt layers of the Columbia Basin. It is one of a series of ridges stretching east from the Cascade Mountains, all of which are slowly being uplifted by shifts in the earth’s crust. As the Umtanum Ridge ages, the rocks below will continue to buckle upward. This fracturing will eventually cause Selah Butte to erode and crumble down its own slopes. But that’s something we don’t need to worry about for the next few million years, at least!

The lower slopes of Selah Butte are dominated by non-native plants and noxious weeds. As you go up the hill, note the change from introduced plants to native vegetation. Near the top, the weedy, introduced plants are restricted to the disturbed areas along the roadside.

Throughout the spring, your return trips to Selah Butte are enhanced by an ever changing wildflower display. Colorful blooms begin in early April at the lower elevations and progress up the Butte as the summer unfolds.

◆ Details

- Location:** Kittitas Co., T15N R19E Sec. 34
- Elevation:** Ranges from 1,200 to 3,024 feet. Hike and explore, or wander close to your car.
- Habitat:** Shrub-steppe/Lithosol/Talus
- Landscape:** Gently sloping hillsides with rocky, west-facing cliffs overlooking the Yakima River Canyon.

◆ Directions

Just north of milepost 1 on Highway 821, turn off onto the first gravel road. Follow this gravel road uphill, and continue to the left when the road forks. Proceed 1.3 miles from Highway 821, you will enter the wildflower viewing area, please close the gate. At 3.3 miles, the road bends sharply to the right. Park along the roadside and explore the ridge on foot, or continue half a mile to the top of the Butte.

Note: The road is passable for 2-wheel drive vehicles when dry, but when muddy, travel is not recommended for any vehicle.

◆ Flower Facts

April to May across the Columbia Basin, balsamroot blossoms appear in clumps across the hillside. Sometimes called “sunflowers,” two distinct balsamroot species splash a brilliant display of yellow across Selah Butte. Carey’s balsamroot (*Balsamorhiza careyana*) is found in the deep soils of the slopes (see photo on page 7), and Hooker’s balsamroot (*Balsamorhiza hookeri*), grows in the shallow, rocky soils near the ridgetop. (See photo on page 9)

Each species also has its own distinct leaf form. Carey’s balsamroot has entire and smooth-edged leaves, while Hooker’s leaves are deeply dissected. Where these two habitats come together, the species hybridize, producing distinctive “hybrid” leaves. As you traverse Selah Butte, look closely for these peculiar looking hybrids.

Andy Sawyer



Majestic view from Selah Butte

◆ Plants & People

Traditionally, Native Peoples have depended on the plants they gathered for herbal medicine. It was the women who were mainly responsible for this task, and who served as the primary source for knowledge of herbs and their healing properties. Some formulas for curing ailments were sacred and passed down within a family. The women of these families either sold the mixture or administered it themselves. Other cures, such as the effectiveness of boiled willow bark as a gargle or of balsamroot as a poultice for infection, were more commonly known.

David Hagen



Sagebrush violet

Andy Sawyer



Large-headed clover

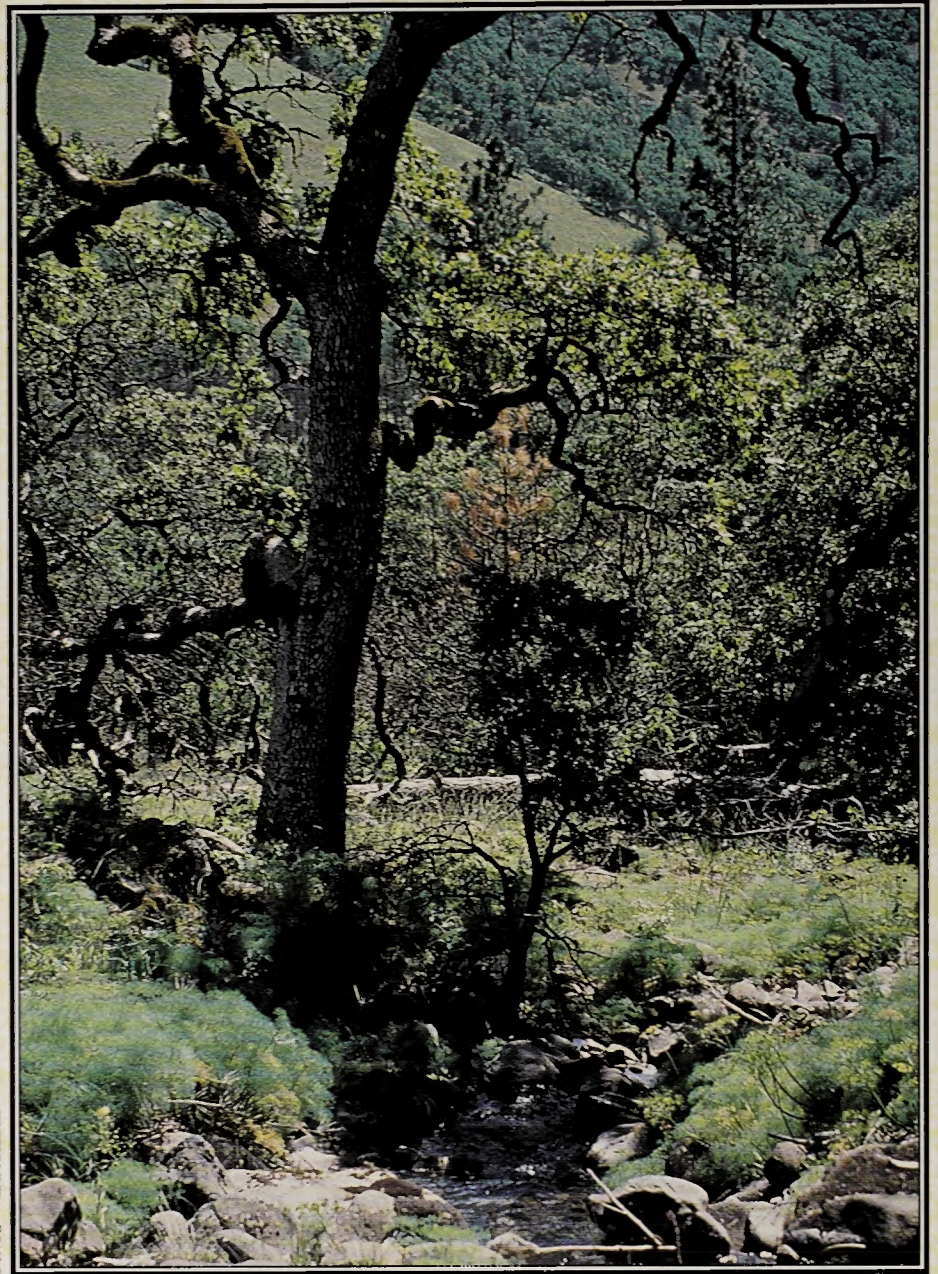
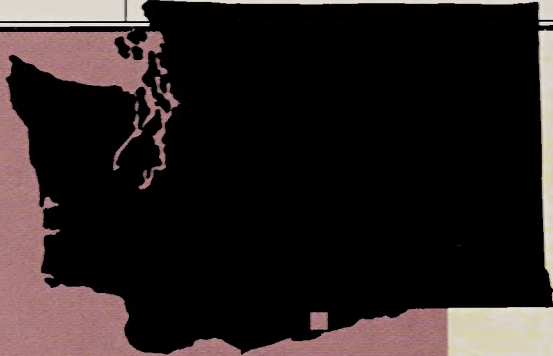
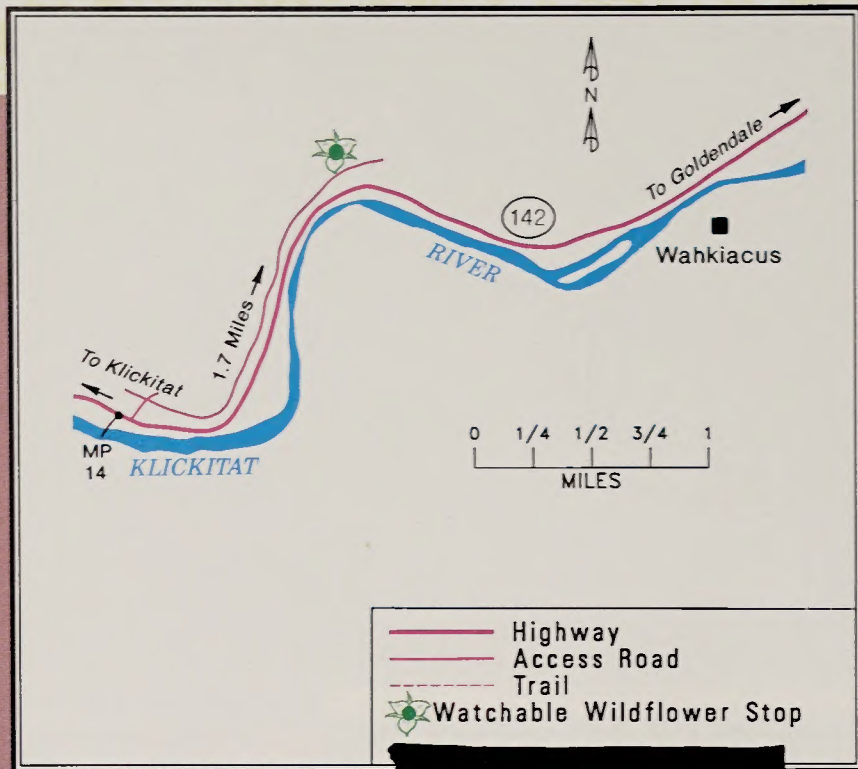
Can You Find...?

Sagebrush Violet (*Viola trinervata*) - Across the crumbly lithosol in April, look for the violet and lavender petals of this colorful plant. In the center of the flower, dark purple lines called nectar guides lead to a yellow base. These guides direct pollinating insects to the nectar, much like landing lights on an airfield direct incoming flights.

Large-headed Clover (*Trifolium macrocephalum*) - Unlike most clovers, which prefer moist soils and disturbed areas, large-headed clover thrives in the shallow soils of open rocky meadows. Here its pink to lavender colored pea-like flowers are clustered densely into large, showy heads. The flowers can be seen in early May.

Note: Some of the flowers common to this site are illustrated in the community descriptions (pgs.7-14). For a more complete checklist of plants, see the individual checklists included with this guide.

WAHKIACUS CANYON



David Wilderman

Springtime in Wahkiacus Canyon

◆ Details

Location: Klickitat Co., T4N R13E Sec. 13

Elevation: Ranges from 400 to 1,400 feet. Hike and explore, or wander close to your car.

Habitat: Shrub-steppe/Riparian

Landscape: A narrow canyon with steep northeast and southwest-facing slopes above a lush, intermittent creek.

◆ Directions

Follow Highway 142 to Milepost 14 near the town of Klickitat. Just beyond the milepost, turn left onto a well-maintained gravel road. Follow this uphill to a "T" junction, and turn right onto a paved road. Drive 1.7 miles to where the road crosses the Wahkiacus drainage. Park on the roadside just before the crossing. Access the site along the flat west side of the drainage, near the trail. This site covers 80 acres to the west.

Note: There are short sections of barbwire fence near the road.

◆ Description

Situated along the extreme southwestern edge of the Columbia Basin, the steep slopes of Wahkiacus Canyon straddle the transition zone between a shrub-steppe landscape to the east and the forested Cascade Mountains to the west. Wahkiacus Creek, a beautiful tributary of the Klickitat River, traces the canyon bottom until its waters dry up in mid- to late June, leaving behind a bed of smooth cobbles.

Because of a unique combination of landform and winds, Wahkiacus Canyon offers easy access to a mosaic of plant communities found nowhere else in the Columbia Basin. Strong, persistent winds from the Columbia River Gorge funnel exceptionally hot, dry air to the area in the summer and cold, wet air in the winter. More commonly found in Oregon, these conditions are ideal for the oak-pine woodland community found here.

On the northeast-facing hills where the soils are more moist, the oak-pine stands support shrubs in the understory. In contrast, the vegetation on the drier, southwest-facing slopes approaches "savannah" conditions, with widely scattered oaks and pines in a grassland setting. In the lush riparian corridor along the rocky creek bed, a canopy of broadleaf trees shades a variety of moisture-loving shrubs and wildflowers.



David Hagen

Naked broomrape

◆ Flower Facts

Commonly found in moist areas, naked broomrape (*Orobanche uniflora*) is a root saprophyte, a plant that depends completely on a host plant for food, nutrients and water. Saprophytes do not get food from the sun, they lack the chlorophyll pigment responsible for the green color of plants.

From mid-April until early May, look in the riparian area of Wahkiacus Canyon for the three to six-inch tall single stems of broomrape, each bearing a pale purple flower with a distinctive yellow throat. Growing nearby you will undoubtedly find its host plant, prairie star (*Lithophragma* sp.).

◆ Plants & People

The only native oak in Washington, Garry's oak (*Quercus garryana*) is restricted to the southwestern edge of the Columbia Basin along the eastern Cascade foothills. While trees were not often used as sources of food by Native Peoples, the acorns of Garry's oak were highly prized and great attention was paid to their preparation. Because this oak belongs to the bitter white oak group, a leaching process was required to eliminate the acrid tannins before the acorns could be eaten. Ripe acorns were buried in a specific kind of mud found at certain spots along the Columbia River. The acorns were baked underground for several days, then dug up, ready to eat immediately or store for future use.

Note: Some of the flowers common to this site are illustrated in the community descriptions (pgs.7-14). For a more complete checklist of plants, see the individual checklists included with this guide.



Yellow Monkey-flower- WSU



Shannon Roys

Poison ivy, with its smooth leaved margins is a close relative of poison oak.

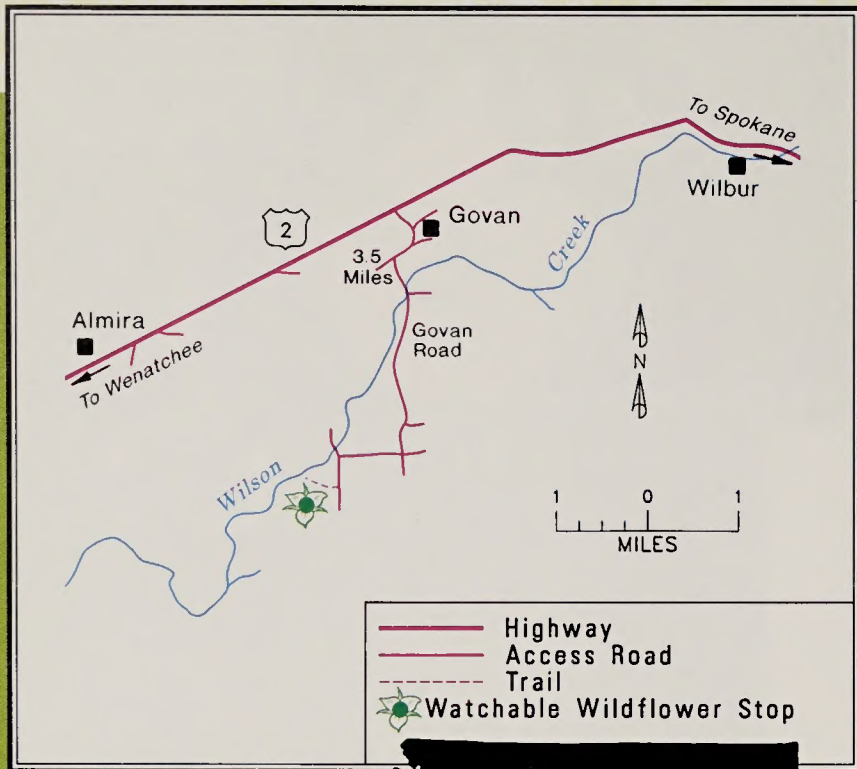
Can You Find...?

Yellow Monkey-flower (*Mimulus guttatus*) - Dense clusters of this eye-catching yellow flower appear from mid-May to early June in the gravel alongside slow-moving Wahkiacus Creek. Notice the distinctive red dots and splotches that guide bumblebee pollinators toward the sweet nectar in the center of each flower. The Latin name for monkey flower, "Mimulus" (or mimic), refers to the playful, monkey-like faces of these blossoms.

Poison Oak (*Rhus diversiloba*) - Because it is common throughout the area, be certain you can identify and avoid patches of this notoriously itchy plant! The two to five-inch long leaflets usually appear in groups of three leaves. The new foliage is reddish and glossy in spring, becoming duller and green as the season progresses. Most mature plants have coarsely lobed (oak-like) leaves with yellow flowers. Later in the season, waxy white berries appear in loose hanging strings. These straggly shrubs grow two to six feet high, or sometimes climb as a vine up to forty feet on trees.



WILSON CREEK



John Marshall

Birds' eye view of Wilson Creek

◆ Details

- Location:** Lincoln Co., T25N R31E Sec. 12
- Elevation:** Ranges from 1,830 to 2,124 feet. Hike and explore, or wander close to your car.
- Habitat:** Shrub-steppe/Talus/Riparian/Lithosol
- Landscape:** Terraced shrublands overlooking a perennial stream, with 360-degree views of classic Channeled Scabland landscape.

◆ Directions

From Highway 2 turn on to Govan Road, drive 3.5 miles and stay to the left where the road forks. Then turn right onto a gravel road and drive for one mile. Take a left just before the bridge, and drive half a mile. The trailhead is on the right, with parking available along the road. Respect private property adjacent to the bridge.

◆ Description

Situated just south of the grain silos of the tiny town of Govan, this northern stretch of Wilson Creek winds like a shiny ribbon past acres of gently rolling wheatfields and sagebrush-studded slopes. Here, the sense of space is magnified by the Okanogan highlands to the north and the sweep of sagebrush terraces above Wilson Creek to the west. An abandoned homestead across from the parking area pays a quiet tribute to the early settlers who farmed this land.

From the road, follow the viewing trail as it meanders through the open shrub-steppe landscape to a vista point. While your focus may be on wildflowers, also notice the magnificent variety of Columbia Basin shrubs. Close inspection will reveal three kinds of sagebrush, two kinds of rabbitbrush, and several different species of buckwheat.

For a breathtaking bird's eye perspective of the area, continue off-trail from the vista to a high spot on the bluff overlooking Wilson Creek. Here, exposed layers of ancient lava flows appear as columnar cliffs or basalt benches, which are now richly vegetated. Occasional aspen groves mark the location of springs. Healthy thickets of water-loving plants provide habitat for birds and fish along the creek.

Over the years, many stream corridors in the Channeled Scablands have lost their woody vegetation due to a combination of past railroad and homestead activities, and present grazing and irrigation practices. However, this stretch of Wilson Creek still has its remnant shrubs and small trees. This is a prize birdwatching site because of the wide variety of migratory and resident birds who find shelter in the trees and shrubs along the creek corridor. As you explore this Watchable Wildflower site, you are likely to be serenaded by dozens of melodious birds.





◆ Flower Facts

On the benches above Wilson Creek and throughout the Columbia Basin, one cannot help but marvel at the unique water-retaining strategies of sagebrush. A close inspection of tall or big sagebrush (*Artemisia tridentata*) in the spring will reveal the larger three-lobed leaves as well as a set of softer and smaller non-lobed leaves. These smaller leaves appear along the branch tips in early winter, only to be shed in summer.

Why have two sets of leaves and then drop one? The simple answer is that more leaf surface area during the moister conditions of early spring results in more rapid plant growth. As the summer heat intensifies, tall sagebrush drops the soft leaves and conserves the water the plant would have lost through them.

◆ Plants & People

Every language has its own nomenclature, or set of names, for individual plants. Often highly descriptive and quick to trigger the imagination, these names suggest the common delight wildflowers evoke among people everywhere. For example, in the Sahaptin dialect spoken by Native People along the Columbia River, shooting star translates to "curlew's beak," Indian paintbrush translates to "Thunder's flower," globe mallow translates to "salmon eyes," and scarlet gilia translates to "hummingbird's foot."

Note: Some of the flowers common to this site are illustrated in the community descriptions (pgs.7-14). For a more complete checklist of plants, see the individual checklists included with this guide.



Brodiaea— John Hamilton



Mariposa lily— John Hamilton

Can You Find...?

Brodiaea (*Brodiaea douglasii*) - To see the brodiaea or wild hyacinth, look for a cluster of pale to dark blue, tubular flowers with six way lobes or "petals" atop spindly stems. These stems can grow up to three feet tall and you'll find one or two long, grass-like leaves toward the base. Brodiaea blooms from late-April into mid-May and is common throughout the drier areas of the shrub-steppe.

Mariposa lily (*Calochortus macrocarpus*) - Blooming in early June into July, the elegant mariposa lily is one of the most spectacular wildflowers found in the shrub-steppe. Preferring dry, sandy soils, each 18-24 inch tall stem yields one to three pale to dark lavender flowers and thick, grass-like leaves. Beneath the ground, a round, starchy bulb anchors each plant.



RESOURCES & SUGGESTED READINGS

- BLM: Cowiche Canyon Self-Guiding Brochure
by Andy Stepniewski
- The Channeled Scablands of Odessa, WA
by Mark Orsen (brochure)
- Flora Of The Pacific Northwest
by C. Leo Hitchcock and Arthur Cronquist
- 55 Hikes in Central Washington
by Ira Spring & Harvey Manning
- The Great Northwest Nature Fact Book
by Ann Saling
- How Indians Use Wild Plants For Food, Medicine &
Crafts by Frances Densmore
- Landforms of Washington
by D. Easterbrook and D. Rahm
- Roadside Geology of Washington
by David Alt & Donald Hyndman
- Sagebrush Country: A Wildflower Sanctuary
by Ron Taylor
- Sagebrush Wildflowers
by J.E. Underhill
- Thompson Ethnobotany: Knowledge and Usage of
Plants By the Thompson Indians of British
Columbia— by Nancy Turner et al.
- Trees, Shrubs & Flowers of Washington
by C.P. Lyons

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Photo: Showy Phlox, North Columbia Basin—David Hagen