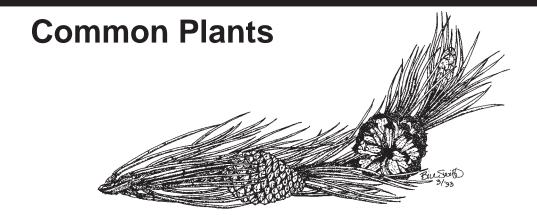
John D. Rockefeller, Jr., Memorial Parkway

National Park P.O. Drawer 170 Moose, Wyoming 83012 307 739—3300



Wildflowers color the Tetons as the snow melts. Warm weather arrives first in the Jackson Hole valley. Snow level gradually retreats up the mountain canyons throughout the summer. Behind the melting snow come the wildflowers, brightening valley then canyon. Eventually snow leaves areas above treeline, allowing dwarf alpine plants their time to flower.

# **Growing Zones**

#### ALPINE (above 10,000 feet)

Above treeline, plants adapt to wind, snow, and lack of soil by growing close to the ground. Alpine plants take advantage of a brief growing season by flowering soon after the snow melts. Some species grow only in the alpine area; others grow tall at lower elevations but are dwarfed in the alpine.

# CANYONS AND SUB-ALPINE (7,000 – 10,000 feet )

Between the crags of the Tetons, Ice Age glaciers have carved deep canyons. Today the canyons contain dense conifer forests and open meadows of wildflowers. As elevation increases, wildflowers abound while trees become stunted and eventually shrublike. "Krummholz" (German for "crooked wood") plants are dwarfed forms that are treelike at lower elevations.

#### VALLEY (6,400 - 7,000 feet)

Porous valley soils support plants able to tolerate hot and dry conditions. In addition to abundant sagebrush, numerous wildflowers and grasses grow. During June and July, a profusion of color enlivens the valley: the yellow of balsamroot, the blue of lupine, and the red of gilia. During August, sunflowers replace balsamroot.

## **Common Trees**

Most of the trees in the park are conifers because of the short growing season. Conifers retain their leaves (needles) throughout the year and can produce food (photosynthesize) on warm spring days. Deciduous trees shed their leaves in the fall and must grow new ones each spring before they can photosynthesize. Aspens and cottonwoods have chlorophyll in the bark and so can photosynthesize before producing leaves.

**Lodgepole pine**, the most obvious and abundant conifer in the park and parkway, grows on the lower slopes of the Tetons and on well-drained glacial soils throughout the valley. Needles are 2-3 inches long, clustered in bundles of two; cones are 1-2 inches long.

**Douglas fir** inhabits dry, south- and eastfacing slopes, although dense stands of young trees grow on some north-facing slopes. Large diameter trees have coarse, furrowed bark.

**Subalpine fir** occurs on wetter north-facing valley sites and at higher elevations in the mountains. Smooth bark and spire-like growth form identify subalpine fir. Needles occur singly and feel soft. Cones grow upright on branches.

Engelmann spruce occurs with subalpine fir, especially along creeks in the canyons between Teton peaks. Rough bark and abundant cones hanging down from upper branches identify Engelmann spruce. Cones have papery scales and are 1 1/2 inches long.

**Blue spruce** lines rivers and creeks in the valley. Cones have papery scales and are twice as large as those found on Engelmann spruce. Spruce needles occur singly and are sharp to the touch.

Individual **limber pines** grow on open, dry valley sites. Needles grow in bundles of five. Cones are 4 – 8 inches long.

Whitebark pine grows above 8,000 feet in the mountains. Needles are in bundles of five. Cones are purple and shorter than those of limber pine.

Aspen grows in stands on level, moist sites and on dry slopes. Aspen bark is smooth and cream-colored. Reproduction is primarily from shoots sprouting from horizontal roots.

Cottonwoods, close relatives of aspens, grow along rivers and creeks in the valley and lower parts of mountain canyons. Bark on mature trees is heavily furrowed. The species that occur in the park—lanceleaf cottonwood, narrowleaf cottonwood and balsam poplar—hybridize freely, so identification of individual species may be difficult.

#### **Common Shrubs**

Big sagebrush thrives in dry habitats and carpets most of the valley floor. Plants are one to five feet tall; leaves are grayish green. Tiny yellow flowers bloom in August. Antelope bitterbrush occurs with sagebrush in the southern half of Jackson Hole. Bitterbrush grows to three feet tall. Creamcolored flowers bloom in June.

**Huckleberry** grows two to four feet tall in lodgepole pine forests in the valley and mountain canyons. Purple berries are produced in August.

**Serviceberry** grows to ten feet tall. Showy white flowers bloom in spring, producing purple berries by late summer.

**Chokecherry** is a large shrub that grows to twenty feet tall. Cylindrical clusters of showy white flowers bloom in spring.

Utah honeysuckle grows in open lodgepole pine forests. Leaves are opposite. Paired cream-colored flowers bloom in early June, producing fused red unpalatable berries.

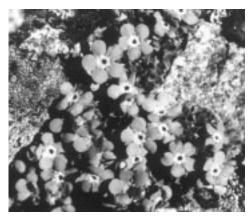
Mountain ash grows on the lower slopes of the Tetons. This tall shrub has compound leaves. Flat-topped clusters of white flowers bloom in June. In fall bright orange fruits complement vivid red leaves.

**Willows** occur in moist areas, especially along stream banks. Twenty species are found in the park and parkway.

**Snowbrush ceanothus** thrives in burned areas. Shiny, leathery green leaves are retained through winter. Clusters of aromatic white flowers bloom in June.

### Reminder

Enjoy the wildflowers but please leave them for others to appreciate also. Picking wildflowers is prohibited within Grand Teton National Park and the John D. Rockefeller, Jr., Memorial Parkway. Edible berries, plants and mushrooms may be gathered by hand for personal daily consumption. Please be certain of plant identification before eating parts of any wild plants.



Alpine Forget-me-not official parkflower

#### **Books on Plants**

For further information on wildflowers, consult *Plants of Yellowstone and Grand Teton National Parks* by Richard J. Shaw, *Vascular Plants of Grand Teton National Park and Teton County, An Annotated Checklist* by Richard J. Shaw and *A Field Guide to Rocky Mountain Wildflowers* by John J. Craighead, Frank C. Craighead, Jr., and Ray J. Davis.

# Flowering Times of Selected Flowers and Shrubs

	Valley	Canyons	Alpine
White Flowers	,	, <b>,</b>	
	'		
Huckleberry Mountain Ash			
Birchleaf Spirea			
Chokecherry		Jul	
Woodlandstar			
Richardson Geranium	Jun – Aug	Jun – Aug	
Thimbleberry			
Green Gentian		Jul – mid Aug	
Snowbrush Ceanothus			
Cowparsnip	_	Jul – Aug	
Serviceberry American Bistort		lul	Λυα
Ladies-tresses			Aug
White Bog-Orchid	-		
Manyflowered Phlox			
Colorado Columbine			
Marsh Marigold		Jun – mid Jul	Jun – Jul
Yampah	Jul – mid Aug	mid Jul – Aug	
Engelmann Aster		_	
Yarrow	Jul – early Aug	mid Jul – late Aug	Aug
Yellow Flowers			
Mules car Wyothia	mid lun lul		
Mules-ear Wyethia Hymenoxys			Jul – Aug
Sunflower			/ tug
Balsamroot	9		
Rabbitbrush			
Heartleaf Arnica	mid Jun – mid Jul	late Jun – late Jul	
Shrubby Cinquefoil	Jun – Sep		
Yellow Monkey-flower		mid Jun – mid Aug	
Lanceleaved Stonecrop	Jun – Aug		
Glacier Lily			Jul
Western Wallflower			
Subalpine Buttercup			
Deathcamas			mid Jul – Aug
Oregongrape			
Sulfur Buckwheat Bracted Lousewort		lot	
Yellow Columbine			
Yellow Fritillary		Jul – late Aug	
Butterweed Groundsel	-		
Pink – Red Flowers			
Springbeauty	-	Jun – mid Jul	
Sticky Geranium		Iul Aug	Aug
Parry's Primrose Prairiesmoke		Jui – Aug	Aug
Globemallow		mid .lul – Aug	
Steershead			
Subalpine Spirea			
Shooting Star			
Ladysthumb Knotweed	Aug		
Lewis Monkeyflower			
Mountain Snowberry		Jul	
Spreading Dogbane			
Mountainheather		Jul – Aug	Aug – Sep
Fireweed			leal
Moss Campion			Jul – mid Aug
Calypso Orchid		maid but Arres	
ElephantheadIndian Paintbrush			mid tul contracts
		Jul – Aug	mid Jui – early Sep
Striped Coralroot			
	I		
Blue – Purple Flowers			
Wild Blue Flax	, ,	hal	
Rock Clematis			July – Aug
Monkshood			July - Aug
Low Larkspur		This sai This Aug	
Mountain Bluebell	_	mid Jul – early Sen	
Fringed Gentian			
Harebell			
Lupine	, ,		
Mountain Bog Gentian		late Jul – early Sep	
Silky Phacelia			late Jul – early Sep
Blue Camas			
Alpine Forget-me-not			Jul – early Aug