## Why do leaves turn color?

very autumn, cottonwood, quaking aspen and willow are transformed into colorful hues of gold, orange and russet Before long, their leaves will fall and again become part of another cycle that feeds the soil. What causes this yearly cycle, and what determines which color the leaves turn?

During spring and summer, leaves actively produce foods necessary for plant growth. This food-making process takes place in the numerous cells within the leaf. Within these cells are Chloroplasts, which contain the chlorophyll pigments that are responsible for the green color of plants. The leaves also contain lesser amounts of other pigments, primarily xanthophylls (yellows) and carotenoids (yellows, oranges

Most of the year, these other pigments are masked by the greater amounts of chlorophyll present in the leaves. But in fall, when changes in temperature and the period of daylight occur, the leaves stop their food-producing activity. Soon the chlorophyll begins to break down, the green color disappears, and the yellows, oranges and reds slowly begin to emerge. giving the leaves their fall splendor.

The intensity of color is determined by the plant's response to complex gradients of temperature and moisture. Fall weather conditions favoring formation of brilliant autumn color are warm, sunny days followed by cool nights with temperatures below 45°F (7°C). Sugar production increases during the daytime, but cool nights prevent movement of sugar from the leaves. From the sugars trapped in leaves, the red pigment called anthocyanin is formed. When fall weather is consistently cloudy or rainy, and the nights warm, the leaves usually have less intense coloration. The smaller amounts of sugar made during periods of less sunlight moves out of the leaves during the warm nights, reducing the conversion of excess

sugars into pigments.

Before the leaves gracefully spin from their leafstalk, a special layer of cells develops and gradually severs the tissues that support the leaf. A small leaf scar is the only evidence that leaves once adorned these deciduous plants.

-Anne Halford, Botanist Bureau of Land Management, Bishop Resource Office

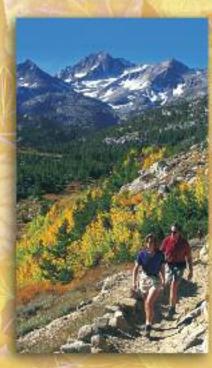




mmoth Lakes Tourism and Recreation Department **County Tourism and Film Commission** Area Chamber of Commerce and Visitors Bureau
Main Street, Bishop, CA 93514



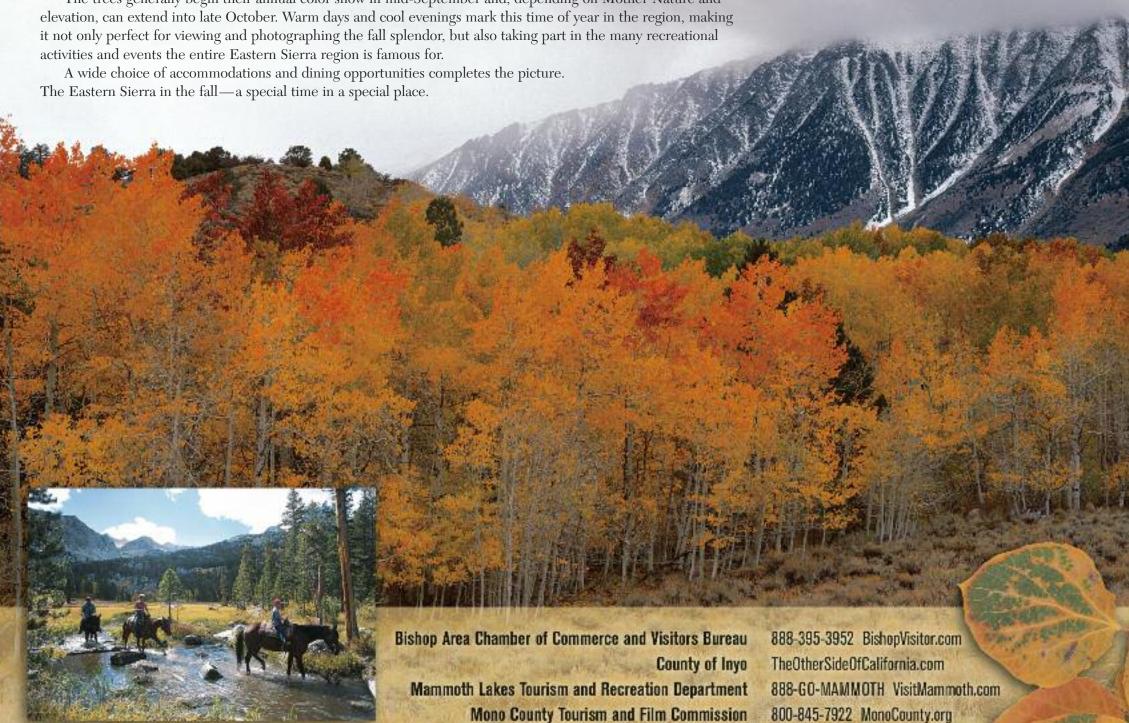
EASTERN HIGH SIERRA



CALIFORNIA

he Eastern Sierra region is laced with rugged canyons carved by rushing streams, and home to some of the finest fall color viewing anywhere. Autumn displays of golden aspen mingle with pine forest and contrast with stark granite walls. Cottonwood and willow line stream banks and border alpine meadows. Above it all looms the towering Sierra Nevada mountain range jutting into the azure sky.

The trees generally begin their annual color show in mid-September and, depending on Mother Nature and it not only perfect for viewing and photographing the fall splendor, but also taking part in the many recreational activities and events the entire Eastern Sierra region is famous for.



## EASTERN HIGH SIERRA FALL COLOR GUIDE **Lee Vining Canyon Big Pine Canyon** 10 Conway Summit 15 miles south of Bishop. From the community of 35 miles north of Mammoth Lakes. Take Hwy. 395 to the Tioga Pass/Yosemite Continue north on Hwy. 395 to Conway Summit. As you descend, look Big Pine, take the Glacier Lodge Road west. The National Park turnoff. Hwy. 120 climbs through a steep canyon, affording to the west to see expansive aspen groves below Dunderberg Peak, all road starts in scrub and sage, and wends its way from incredible views of the rugged landscape and the canyon's fall colors. If you within view of the highway. the valley floor up Big Pine Creek. Views of the continue on Hwy. 120, you'll reach Tioga Pass and the eastern entrance to 16 Bodie Palisades to the west mark the route up the canyon. Yosemite National Park. There is an entrance fee here to enter the Park. Just a few minutes north of Conway Summit you'll find the turnoff to As you gain elevation—you begin at about 4,000 feet Another alternative in this area is to take in magnificent Mono Lake. and climb to almost 8,000—the foliage comes into Bodie. Once notorious as the wildest town in the West, Bodie is now This ancient inland sea features mysterious tufa towers and is a sanctuary the West's largest unrestored ghost town, administered as Bodie State view. Aspen, cottonwood and willows hug the sides for millions of migrating birds. A visitor center just north of the town COLEVILLE Historic Park. There's not an abundance of fall color at Bodie, but there's of Lee Vining is well worth a stop. of the creek, and the canyon walls are magnificent. Little Antelop Valley The road ends near the old Glacier Lodge. The lodge plenty of wild west history and it's well worth the trip. A nominal fee is 13 Lundy Canyon charged to enter the park. (Bring water and a picnic lunch to Bodie, was destroyed by fire a few years back, but is being ☆ 45 miles north of Mammoth Lakes. Lundy Canyon and as no food services are available.) rebuilt. Hikers who choose to go farther up the Lundy Lake are reached by driving north on Hwy. 395 past canyon are rewarded with grand alpine scenery, 17 Green Creek Lee Vining and Mono Lake. Just before you begin the and views of the Palisade Glacier, the southernmost Walker 5 miles south of Bridgeport. Green Creek is located between Conway ascent over Conway Summit you'll see the turnoff (Hwy. glacier in North America. River Summit and the community of Bridgeport. The road is marked by a 167). The short drive leads to one of the most beautiful Canyon **2** City of Bishop yellow sign. Turn west on the graded dirt road and follow Green Creek autumn settings in the Eastern Sierra, and the trout Throughout the Owens Valley, large stands fishing here is very good, as well. approximately eight miles to the developed campground and trailhead. While the road can be a bit bumpy, those who venture up it are rewarded with views of beautiful meadows and canyon walls splattered of cottonwood grace the valley floor with **14** Virginia Lakes brilliant gold. Take any number of Continue north on Hwy. 395 past the turnoff roads east toward the Owens River with color. for a closer look, or travel just Sonora to Lundy Lake to Conway Summit. You'll Note: The road forks about three miles in. Take the right fork, a be rewarded with sweeping views of Mono sharp right hand turn to Green Creek. The left fork takes you eight **Pass** north of Bishop on Hwy. 6 to Lake along the way. At the top of Conway miles through high terrain and eventually ends at a junction with the Laws, where you'll also get Summit, take the Virginia Lakes Road Virginia Lakes Road. This road is graded dirt as well. a taste of Bishop's history at west into a canyon carpeted by aspen the Laws Railroad Museum. **18** Twin Lakes and cottonwood. The road follows (395) 3 Bishop Creek Twin Lakes Road begins near the north end of the town of Bridgeport. Virginia Creek up the canyon, West of Bishop. Follow West Travel west through expansive ranch lands and pastures to the Twin terminating at a campground Line Street (Hwy. 168 west) up Lakes Recreation Area. Some of the ranches have been here since the and trailhead near one of many 1860s. As the name implies, Twin Lakes is comprised of two lakes, Bishop Creek Canyon. South Lake, lakes in the area. Easy hikes H O O V E R upper and lower, and magnificent fall color viewing opportunities. Both Lake Sabrina, North Lake and Intake from the trailhead offer WILDERNESS lakes are lined with aspen and cottonwood, and the shimmering blue great fall color viewing II all offer fabulous fall color with (420) contrasted with the yellows and oranges of the leaves provides an golden aspen and red underbrush. and good fishing. almost surreal, natural setting. The canyon walls are dotted with color, Twin You'll experience an elevation gain of and views of the awesome Sawtooth Ridge to the west are spectacular. almost 6,000 feet, as Lake Sabrina lies at Bodie 16 Lakes There are facilities here, along with great camping, fishing and boating 9,800 feet. Early dustings of snow on the highest peaks over 13,000 ft. make for even more colorful at both lakes. scenery. Hiking trails, horseback riding and great Green 19 Sonora Pass fishing offer fun for the adventurous. Creek 15 Summit Conway (State Highway 108) 17 miles north of Bridgeport, take the turnoff 4 Buttermilk Country from Hwy. 395 west toward Sonora Pass. The sage-lined road gently Virginia makes its way through meadow areas crisscrossed by the West Walker West of Bishop. Along the way to the higher canyons along Hwy. 168 lies the Buttermilk Country. Dozens Lakes River. You pass the Marine Corps Mountain Warfare Training Center as you ascend the tree-lined road to Leavitt Meadow. Lodgepole pine nia Lakes of unpaved roads zigzag throughout this area—also a To Hawthorn Lundy popular rock climbing destination. Stands of aspen are interspersed with aspen create a magnificent fall color setting. The Canyon located along streams, and Basque sheepherders can road continues west to Sonora Pass, but is very steep, curvy and not Lundy Lake recommended for tow trailers. If you retrace your route back to Hwy. also be seen. During the 1800s, ranchers brought goat milk down to Bishop for sale, which turned to buttermilk 395, the Training Center emerges on the left in the distance. Lake along the bumpy route during warm, summer months. **20** Walker River Canyon YOSEMITE **5** Round Valley 120 20 miles north of Bridgeport. The road into Walker Canyon NATIONAL Lee Vining LEE VINING begins in rolling sage-covered hills and abruptly brings you into 9 miles north of Bishop. Round Valley is a Canyon a steep canyon marked by the rushing West Walker River. A ranching and agricultural area located at the base huge flood re-routed the river in 1997, and indications of of Wheeler Crest, which plays host to huge cottonwoods and that flood are evident on the rocks and trees which line poplars that hold their fall colors far into the season. Side trips from this area include Pine Creek Canyon and Lower Rock Creek road. the waterway. Pine, willow and cottonwood line the banks of the river and the road. Eventually, the road Both trips offer views of aspen and cottonwood along fast-moving enters the gentle and peaceful area known as streams. Travelers continuing up the Lower Rock Creek road Antelope Valley. The valley is comprised of eventually reach the junction of Hwy. 395 near Tom's Place and the entrance to Rock Creek Canyon. Awesome views of agricultural and ranching land and speckled with magnificent mature cottonwoods, some more Wheeler Crest, Mount Tom and Bishop Creek Canyon **June Lake** than 100 years old, which also line the main avail themselves on this route. ANSEL highway through the area. If traveling **6** Lower Rock Creek ADAMS (395) north, you will eventually reach the Nevada WILDERNESS The "Old Road," just north of Bishop. Drive north from border at Topaz Lake. Bishop on Hwy. 395 and take the Pine Creek exit. Then turn right on Old Hwy. 395. The old highway will return you to the freeway just south of Tom's Place. There's lots of color through steep, Lower Rock Creek Canyon. **7** Rock Creek Canyon Higher elevation roads are BENTON subject to winter closures. 30 miles north of Bishop off Hwy. 395. Rock Creek is a glacier-carved canyon, just off Hwy. 395 at Tom's Place. Continue up Mammoth Tioga, Sonora and Monitor Rock Creek Canyon 9 miles to Rock Creek Lake. Aspens line the passes are closed in winter TOWN OF canyon all the way to the lake—a popular hiking and fishing spot. Call 1-800-427-7623 for current highway McGee Creek Canyon conditions. 10 miles south of Mammoth Lakes off Hwy. 395. While you can Convict observe some fall color from your vehicle, McGee Creek Canyon is 240 MILES Lake best seen on foot. Park at the trailhead at the end of the dirt road. A long and somewhat strenuous hike rewards you with magnificent views of Red and White Mountain. Bring water, as the first stretches of the McGee Creek o trail are across a south-facing slope which, even in fall, can be quite warm and dry. Brilliant colors line the creek and canyon. CROWLEY LAKE

9 Convict Lake

6 miles south of Mammoth Lakes off Hwy. 395. Situated in a spectacular setting of rugged mountain peaks, Convict Lake's inkwell-look is heightened in the fall as the trees that line the lake come into color. A hiking trail winds around the lake, and the fishing here is fabulous.

10 Mammoth Lakes

There are several fine viewing areas near the Town of Mammoth Lakes. Check out the Sherwin Creek campground area by following Old Mammoth Road to the Sherwin Creek Road turnoff at Sierra Meadows Ranch. Follow the unpaved road 2 miles to Sherwin Creek.

The Mammoth Lakes Basin offers a beautiful alpine setting with five lakes just minutes from the center of town. Follow Main Street to Lake Mary Road, and continue 2 miles. The lakes offer fantastic fishing, and you'll find several trailheads for easy day hikes.

Also, try the Mammoth Scenic Loop. The scenic loop road intersects Hwy. 203 as it winds to Mammoth Mountain Ski Area, and brings you out on Hwy. 395 about 5 miles north of Mammoth. An easy side trip to Inyo Craters, just off the loop road, offers a great place for a picnic lunch. For a day of it, you can visit the Reds Meadow area and take in Devils Postpile National Monument, Rainbow Falls and the San Joaquin River. Some of the most beautiful old aspen groves can be viewed from this location. Follow Minaret Road to Mammoth Mountain Main Lodge. (Road access fee beyond Minaret Vista, with a mandatory shuttle bus to the Reds Meadow area. Call 760-924-5500 for information.)

Be sure to stop at Minaret Vista along the way to experience one of the most breathtaking views to be found in the Sierra.

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## 11 June Lake Loop

20 miles north of Mammoth Lakes off Hwy. 395. This scenic drive is a treat any time of year, but fall colors make this route especially pretty. Follow Hwy. 395 north to the south junction of Hwy. 158. The road winds past the community of June Lake, which sits on the shores of its namesake. Gull Lake is next, followed by Silver Lake and Grant Lake. Continuing along the Loop, Hwy. 158 brings you back to Hwy. 395 just past Grant Lake. (Winter road closure beyond Silver Lake.)

Big McGee Lake **Rock Creek** Lower **(6**) Canyon Rock Rock Creek Creek Lake Round Pleasant Valley Reservoir Valley LEGEND US Hwv 395 City of Payed Roads and Highways Bishop BISHOP **Unpaved Roads** WEST LINE S ANCIENT Visitor Center Buttermilk BRISTLECONE Country Ranger Station PINE FOREST Buckley Ponds Roadside Rest Bishop Scenic Vista Creek (395) ANCIENT Fish Hatchery Airport Historic Site Museum Eastern Sierra Scenic Byway Interpretive Display JOHN MUIR WILDERNESS State Scenic Highway

**Big Pine** 

PINE