

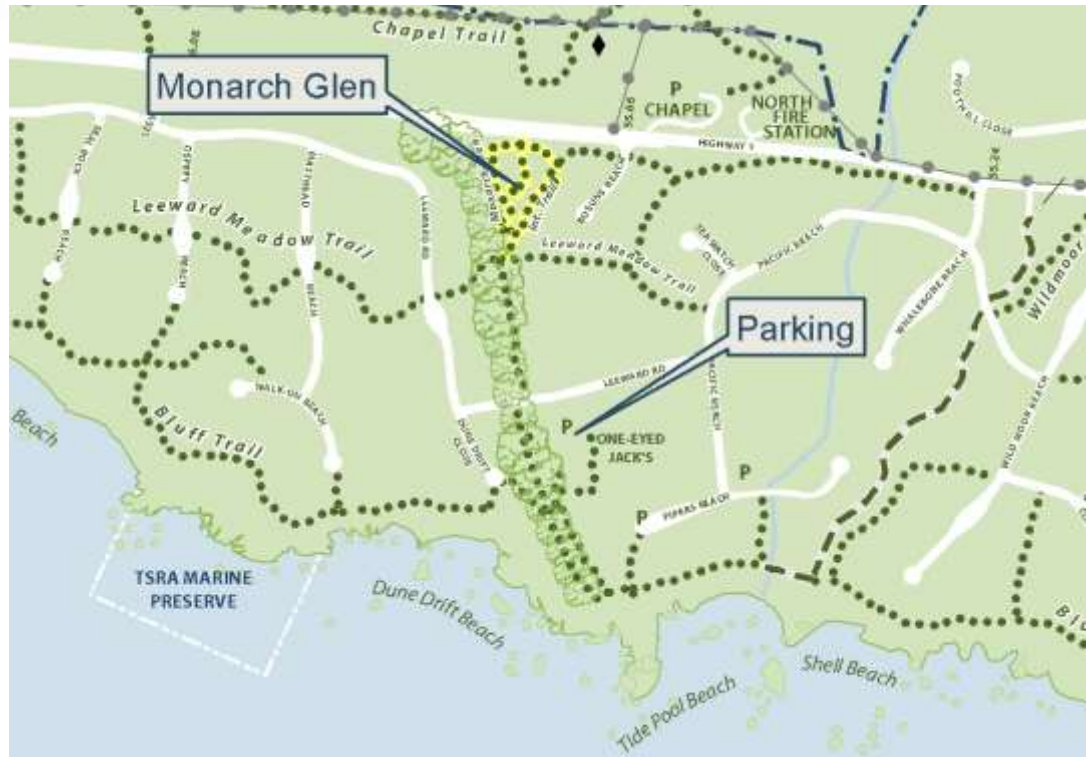
MONARCH GLEN

Interpretive Trail Guide



Vicinity Map

Park at One-Eyed Jacks picnic area and walk towards Highway 1, along the edge of the hedgerow (1000 feet), to the entrance to Monarch Glen at Trail Post #36D.



Monarch Glen owes its name to the patriarch redwood at post #16 as well as to the butterflies that for many years over-wintered by the thousands on the cypress trees here. Its natural, historical and aesthetic features include riparian woodland, pine plantation, canyon sides, meadow and edge habitats, each with its own microclimate, vegetation and soil conditions. Of the more than 64 different kinds of woody species and about 11 ferns and allies along The Sea Ranch trails, at least one third occur here in Monarch Glen. This diverse assemblage of species provides foods (in the form of acorns, berries, foliage, etc.) for a correspondingly rich variety of wildlife.

LISTEN: for clucking of quail and wild turkeys, scolding of squirrels, screams of ospreys, and buzzing of insects.

LOOK: for animal signs such as squirrel middens, scat and tracks of gray fox, black-tailed (mule) deer, jackrabbit, opossum, brush rabbit, raccoon, and skunk. You may also see insect galls, nibbled leaves and ant nests.

SMELL: the bay leaves, honeysuckle flowers, conifer needles, humus and wet grass.

COMPARE: flowers, fruits, leaf colors, pollen and seed cones as the seasons progress. Because deciduous species are harder to recognize in the dormant winter season, be sure to return in the spring.

IMAGINE: how much is going on underground that you can neither see nor hear. Rhizomes and roots are growing recycling essential minerals. Ants, rodents and trapdoor spiders are also busy.

ENJOY: Monarch Glen and leave everything undisturbed.

1. **MADRONE** bark is distinctively red-dish orange. Large, loose scales curl raggedly, then drop off and leave smooth bark. The leaves are evergreen, thick, glossy, up to 6" long. Its close relationship to manzanita and heathers is shown in typical urn-shaped flowers. The orange-red berries are too seedy to be edible for humans but are relished by birds. These two madrones exemplify the keen competition for light under the woodland canopy.

2. **SWORD FERN** bears stiff evergreen leaves with many leaflets from a central growing point. Note the 'sword hilt' at the base of each leaflet and spore clusters on undersides of leaves. This is the most common fern in our forest. To the left of the sword fern and by #3 is a Lady Fern.

3. **FRINGED CORN LILY** is fairly common in wet places at The Sea Ranch, but is classified as rare and endangered elsewhere in the state. It has broad, strongly veined pleated leaves with fringed white flowers on a large terminal spike. It blooms July to September. This species is toxic to humans and livestock. This is best viewed by standing on the little bridge.

4. **LADY FERN** is distinguished by arching deciduous primary leaves that are subdivided into many-toothed leaflets, giving the fern a delicate, lacy appearance. These leaflets, like the sword fern, bear spore clusters on their undersides.

5. **WESTERN COLTSFOOT** has large lobed leaves about one foot wide on stalks one foot or higher. Flowers are minute and in congested heads. Coltsfoot rapidly colonizes by horizontal underground stems called rhizomes. This colony might actually be just one, quite old, extended plant.

6. Look across the fence and meadow to see **MONTEREY CYPRESSES** which were planted in hedgerows as windbreaks between 1916-1920. This species was chosen because it grows rapidly, is densely branched, pest resistant and responds well to topping. Life span is about 100 years. These trees were topped until the 1930's, resulting in multiple leaders, which have become so big and top heavy that many are now breaking.

This **MEADOW** has become a grazing area for sheep and goats. Without

mowing, burning or grazing pressure, the area would be invaded by coastal scrub (chaparral) comprised of blackberry, coyote brush, bracken fern, bush lupine, coffeeberry, salmonberry, thimbleberry, cow parsnip, salal, wax myrtle and aliens such as bull thistle and poison hemlock. It then takes about 50 years for the prevailing forest of redwood, fir and tanbark oak to develop.

A few **MONARCH BUTTERFLIES**, with their characteristic black and rusty orange warning colors, might be 'nectaring' on the thistles in the meadows or resting on cypress branches anytime from September through March. While this species is one of the most common butterflies and is not in danger of extinction, the monarch's west coast population is declining drastically because of loss of proper habitats along migratory routes. Migratory route habitats must provide nectar plants as well as appropriate clustering sites. Milkweed is only found inland and is the only plant on which Monarch eggs can be laid and larvae nourished. Habitats that provide all three characteristics are being altered due to development pressures.

7. **CALIFORNIA BAY** (Pepperwood) is an evergreen tree with peppery, aromatic lance-shaped leaves. This species occurs from southern California to southern Oregon, where it is called Oregon myrtle.

8. **OLD MAN'S BEARD LICHEN**, hanging like fog wisps, should not be confused with "Spanish moss" (found in southeastern U.S.) which is actually not a moss but a flowering plant. Lichens use trees only for support. They consist of a photosynthetic (food-producing) alga embedded in fungus threads. The fungus threads absorb water and minerals from air and from the thin layer of humus (dust and organic matter) accumulated in furrows of bark. The rougher the substrate, the more moisture and humus is held and therefore the more profuse the lichen growth. This species is an indicator of clean air and a microclimate with higher than normal humidity as in this shady, relatively cool canyon. Turn around now and face the Cypresses to notice the abundance of horsetails. See #26 and learn more about them. Why do they seem to prefer to grow here and not at #26?

9. **POISON HEMLOCK** is extremely toxic and all parts of the plant are



poisonous. Plants like these were used to make the drink that killed Socrates. This biennial is easily identified by its purple, mottled stem and feathery leaves. White flower clusters resemble Queen Anne's lace, which is also in the carrot family. The dried stems of these plants may be difficult to distinguish in the winter.

10. This crumbling **SHED** might have been used to store salt blocks. Most plants don't provide enough sodium

for grazing animals. That's why wild grazers frequent salt licks and ranchers provide salt blocks. Across the trail is a 6' tall **SALMONBERRY** shrub with its distinctive reddish branchlets that lack the spines of blackberry but have similar trifoliate leaves. Flowers are pink and berries salmon-orange. Native tribes relished the berries with salmon, hence the plant's name.

11. **PINK FLOWERING CURRANT** has leaves with 3-5 lobes and hanging

clusters of pink flowers. The edible fruit is blue-black and makes good jelly.

12. **THIMBLEBERRY** has large, velvety, maple-like leaves with 3-5 lobes, white flowers and bright red edible fruits resembling a thimble.

13. **MONARCH GLEN SHEEP PEN** (See side of pen for information.)

14. **WILLOW**, recognizable by its gray-green, narrow foliage, is one of the most common riparian (e.g. growing near a natural watercourse) shrubs along our smaller drainage areas. In earlier times salicylic acid (aspirin) was made from the bark.

15. **GRAND FIR** needles are distinguished by their uneven lengths because the upper leaves on branchlets are shorter than the lower leaves. Compare these to the redwood branches which are behind post #16 to see that those needles are quite uniform. Also compare fir bark with that of the redwood next to it. True firs bear their cones erect, on the highest branches. Scales fall one by one which is why you do not find any true fir cones on the ground.

16. Look on the ground to see that **REDWOODS** are quite unique in shedding whole branchlets instead of just individual green needle leaves.

Walk over to the large redwood trunk (near the highway) to see that parts of it have broken but retain enough connection to get adequate water and minerals and continue growing off to the right. When a trunk falls from a vertical to horizontal position, growth hormones, responding to gravity, cause tips of formerly horizontal branches to gradually adapt to the 90-degree change in orientation. In a response known as apical dominance, they then grow vertically as new trunks, producing laterally-oriented branches of their own. In time, competition for light thins out all but the most vigorous new trunks.

17. **GEOLOGY SITE**: The creek here descends about 20 feet over several small waterfalls. Logs, loose boulders and rocks in the streambed create the upper waterfalls, but the lowest waterfall, which has a drop of about 6 feet,

is on solid sandstone. This same sandstone underlies most of the meadow at the north end of The Sea Ranch and forms all the sea cliffs north of Walk-On Beach. We get a glimpse of the sandstone here because the creek has cut deeply into the loose rocks that overlie the sandstone.

18. The meadow clearing in this area is surrounded by **DOUGLAS FIR**, a tree that has distinctive drooping branchlets. Douglas Fir is not considered a "true" fir, however because it has pendant rather than upright cones. You usually can see many whole cones on the ground. Douglas Fir is susceptible to pine pitch canker disease while true firs are not.

19. **BRACKEN FERN** has sturdy leaf stalks up to 5' high. These ferns arise from a rhizome to make an extensive single plant. Leaves are deciduous, but unlike lady fern, ultimate leaflets are not toothed. Spore clusters are hidden under rolled-over margins of leaflets.

20. Look up and around this area to see the 4 tree species which are the dominant components of this **RIPARIAN WOODLAND**: Douglas Fir, Coastal Redwood, Grand Fir and Tanbark Oak. Seedlings and saplings of the latter two are especially conspicuous along the trail between #16 and #23, showing the natural succession in this woodland. The Bishop Pines were planted in the 1960's and are adapted to fire which is needed to make the seeds germinate, hence, no seedlings are found here.

21. **WAX MYRTLE**, with its narrow, tapered leaves, can be a shrub or small tree. By definition, a shrub has more than one trunk at ground level while a tree has a single trunk. This is an important wildlife plant.

22. **NOOTKA ROSE** has two very effective survival strategies. Thorns defend the foliage, and the fleshy fruits (hips) are eaten by birds. The seeds pass through the birds' digestive tracts and are deposited to grow elsewhere.

23. **TANBARK OAK**, also known as tan oak, is another misnomer as it differs from true oaks in having erect, very dense pollen catkins (male flower clusters) and acorns with shaggy cups. The chestnut-like leaves have prominent parallel, lateral veins, each

ending in a sharp tooth. The bark was used to tan leather, and the acorns were important food for Native Americans. The acorns are the basis of an intricate food web comprised of herbivorous mammals, insects, birds and their respective predators.

Walk to the right and look down into the canyon at a long-ago fallen redwood. This tree shows a much later stage of the process described at post #16, in which lateral branch growth becomes vertical trunk growth. Such growth response on a fallen tree is rare to see because usually the root system is also pulled up and the tree dies for lack of water and minerals.

Walk to the end of this peninsula to look down into the fern-lined canyons on three sides. The benches were made using salvaged planks and blocks from the Knipp-Stengel Barn.

24. EVERGREEN (BLUE, CALIFORNIA) HUCKLEBERRY has hairy twigs, toothed, evergreen leaves and blue-black fruits. Red huckleberry has square stems, smooth-margined deciduous leaves and tart red fruits. Both are commonly found growing on stumps.

Walk east to the bridge to see a linear sunken area that may be the trace of an early ranch road or perhaps the bed of a section of the early county road. An aerial photo shows its connection to the current Highway 1 at two points..

25. BISHOP PINE leaves occur as two long and twisted needles per cluster, unlike the much less common Shore Pine that has two short (less than 2") needles per cluster and the introduced Monterey Pine with its three long needles per cluster.

Many of these pines, planted much too densely at the beginning of The Sea

Ranch in the early 1960's, have brown branches that were killed by western gall rust and/or pine pitch canker and drought. Parasitic fungi, spread by beetles, cause pine pitch canker disease. It starts in cone clusters, then kills branch tips and spreads to larger branches. Finally the whole crown dies, as can be seen by looking up at post #27. Compare these trees with healthy Douglas Firs.

26. HORSETAIL has underground stems that in spring produce brownish, short-lived, fertile shoots bearing spores. From spring through fall, one sees the photosynthetic, many-branched shoots with whorls of scale-like leaves at each node (joint). Ancestors of these and nearby ferns were the size of trees in dinosaur days. We do not know why they are not growing here any more.

27. RED ELDERBERRY growing on both sides of the bridge is a shrub or small tree with opposite leaves, each with 5-7 leaflets. The leaves and the stem of the elderberry are poisonous, but the berries can be used to make wine. Clusters of white flowers appear in the early spring.

28. POISON OAK has lobed, trifoliate leaves that provide brilliant red color in the fall and the strong possibility of a rash if touched. "Leaflets three, beware of me" is a useful reminder. Turn around and note that there is Poison Oak on both sides of the trail near this post. Beware!

29. PACIFIC BLACKBERRY also has "leaflets three" but with its spiny stem, leaf stalks and midribs and sharply toothed leaflets, it is easily distinguished from poison oak. It spreads by forming horizontal stems (runners) whose tips root and produce new shoots. These runners can be a tripping hazard for

hikers. You may also see a vine with opposite leaves, very fragrant tubular pink flowers and terminal clusters of bright red mealy berries, which is **RED HONEYSUCKLE**.

30. WESTERN AZALEA has hairy leaf margins, almost whorled leaves, and very fragrant white/salmon/pink flowers May-June.

31. HAZELNUT has double toothed, hairy leaves with heart-shaped bases. Some people are allergic to its pollen, which is abundantly produced from yellow catkins in early spring. This is a wild cousin of the cultivated species.

32. The MONARCH CREEK stream bed dries up by late spring, but pools may appear in late summer. This might occur because trees in the forest upstream are no longer absorbing much water from the soil. As a result, water can move downstream to reappear as pools that are a welcome source of fresh water for butterflies and birds.

33. COFFEEBERRY has glossy leaves with very prominent lateral veins on the undersides. Its leaf size and texture vary greatly depending on its habitat.

34. CANDELABRA TREES, with their unusual growth patterns, reflect the response of these Douglas Firs to coastal winds and the hedging effect of salty air that damages growth tips. Note the grafted branch on the fir to the right that unites conducting tissue of these two trunks. Underground, the roots of these trees may also have grafted. Monterey Cypresses can also form "living stumps."

Some birds you might hear and see in meadow edges and woods, especially in the early morning.

Blackbird: Brewer's, Red-winged
Bluebird: Western
Brown Creeper
Bushtit
Chickadee: Chestnut-backed
Dove: Mourning, Eurasian Collared
Finch: House, Purple
Flicker: Northern
Flycatcher: Pacific-slope
Goldfinch: American
Hawk: Northern Harrier, Red-tailed
Hummingbird: Allen's, Anna's

Jay: California Scrub, Steller's
Junco: Dark-eyed
Kestrel: American
Kinglet: Golden-crowned, Ruby-crowned
Kite: White-tailed
Meadowlark: Western
Nuthatch: Pygmy, Red-breasted
Phoebe: Black
Pigeon: Band-tailed
Quail: California
Raven: Common
Robin: American

Sparrow: Fox, Song, White-crowned
Starling: European
Swallow: Barn, Violet-green
Thrush: Hermit, Swainson's
Towhee: Spotted
Vireo: Hutton's
Vulture: Turkey
Warbler: Orange-crowned, Yellow-rumped, Wilson's
Woodpecker: Downy, Hairy
Wren: Pacific