

### June, 2001

There are still a few flowers to be looked for during the summer. I hope that the yellow Large Monkeyflower, *Mimulus guttatus*, plants are still in flower by the time you read this. They are flowering almost a month earlier than the last two years. Near the east end of Leonard's Bridge (the blue bridge) on Trail 13, look toward the lake about 15 feet and you will see them. While you are on the bridge, look at the six foot tall plant that is the native Elk Clover, *Aralia californica*. The leaves are six inches long and the plant is just setting buds. There is a section of the bridge where the railing is about four inches lower than the rest of the railing. If you stand at the west end of this lower section and look toward the lake, about 20 feet out you can see the Elk Clover. This species is previously unrecorded at JRBP.

Usually about the middle of June, California Indian Pink, *Silene californica*, flowers on Trail 1 in the serpentine area near the intersection with Trail 5. Below the trail and next to San Francisquito Creek are the Leopard/Tiger Lilies, *Lilium pardalinum* ssp. *pardalinum* which in the past years have flowered about the first of July. In this same area are the large Wood Angelicas, *Angelica tomentosa*.

A place to explore that you may not have thought of is Bear Creek near Sand Hill Road. Go across the concrete crossing of S.F. Creek near the bottom of Trail 1, getting your boots only a little bit wet. Immediately turn left, walk past the California Black walnut trees, *Juglans Californica* var. *hindsii*, through the grassland until you come to Bear Creek. There are stepping stones for you to cross the creek, but stop at the gate which is an entrance to the Shack Rider's site. At the creek there are perennials like Peppermint, *Mentha x piperita*, a Durango Root, *Datisca glomerata*, and Water Cress, *Rorippa nasturtium-aquaticum*. Often there are plants, which only appear because the creek has dropped the seeds as the water flows past. To me the area is a plant "hot spot." Previous summers we have found plants such as the Many-flowered tobacco, *Nicotiana acuminata* var. *multiflora*, sharp leaved Fluellin, *Kickxia elatine*, a little Scroph with hastate leaves and the evil-looking Spiny Cocklebur, *Xanthium spinosum*.

When there are no more flowers to look at try galls on the Valley and Blue Oaks. Most of us are familiar with "oak apple" galls, as can be seen on the stunted Valley Oak at the west end of the Causeway Bridge. In July, start looking at the leaves of these oaks for tiny saucers, disks, sea urchins, dunce caps, wooly bears and other galls. On the Leather Oaks, you may find a bright red gall with yellow splotches, looking like a beaked strawberry. Coast Live Oaks have other galls, as do willows, wild roses, and other plants. In the Docent Center Library is a copy of the out-of-print book *Plant Galls of the California Region* by Ronald A. Russo. Also,

Also, in the Docent Center are slides of galls taken by Chris Andrews. Have a good summer.

### September, 2001

New to JRBP are two three-foot tall shrubs of Lemonadeberry, *Rhus integrifolia*, native to southern California. They are found here approximately 100 feet from Goya Gate, on the left (SW) side, about 10-15 feet off of the trail. They are obviously escapees from the yard of a neighbor close to Goya Gate.

Last winter, Ann Lambrecht and I found two small two-needle pine trees (Monterey pines, *Pinus radiata*, have three needles per bundle). One tree is about seven feet tall, without mature cones to help identify. The other is about 20 feet tall, with cones one and one-quarter inches long, which

do not persist on the tree. These trees are obviously quite old, from the amount of lichen growth on them. While the final identification has not been made, if native, the 20 foot tall one most resembles Lodgepole Pine, *Pinus contorta* ssp *murrayana*. [Subsequently identified as *Pinus sylvestris*]. How did they get here? Did someone plant their "living Christmas trees?" The short one is easiest to see. If you are on our old loop to the now-former Docent Center, on the road parallel to Sand Hill Road, look to the left just before going right and downhill. This is also just before a maintenance road that leads left out toward Sand Hill Road. The pine is about 60 feet toward Sand Hill Road. The other pine is down the maintenance road and to the right where the road divides. It is about 50 feet off of the road toward Sand Hill Road, and not quite opposite the two power poles.

June brought a flowering squash or pumpkin plant near Leonard's bridge. Without summer water, by early August there were only withered flowers and three small leaves.

Garden flowers appeared too, brought in by the streams in winter. June 23, at the Dennis Martin site off the SLAC corridor, there was one four-foot tall *Verbena bonariensis*, called "Purple-top" by some garden books, and "Clusterflower Verbena" in Kozloff and Beidleman's *Plants of the San Francisco Bay Region*. It was gone by July 25.

### **October, 2001**

Twelve or thirteen years ago, Mabel Crittendon led a docent walk to the San Francisquito Creek bed off of Trail 1. She showed us one plant of Dudley's Shield Fern, *Polystichum dudleyi*. Since I started "plant-hunting" in 1998, I have been wanting to go back to see if this fern still grew in JRBP. This month, Ann Lambrecht and I went down in the dry creek and because it is so hard to get down to the creek. If there are people who really want to see this fern, call me and I will give you directions.

Years ago at JRBP, I learned that there was supposed to be a hybrid oak on lower Trail 5, but I had never looked for it. Last winter, Ann Lambrecht and I believed we had found it, from leaves that had fallen in our path. I went out again to look for this tree when the leaves started falling in early September. By the time you read this, it may be too late for any leaves to be found, but if you have any interest and are on Trail 5, you can at least find the tree. Directions are as follows: From the switchback on lower Trail 5, about 150 feet down, on the creek side, is a leaning Valley Oak, *Quercus lobata*. It grows up in an arc and has Hairy Honeysuckle, *Lonicera hispidula* var. *vacillans* vines and Poison Oak vines growing up the trunk. The trail immediately below it drops down because of exposed roots and I am glad I have the leaning oak to lean on. The next oak down (another 25 feet) on the creek side, but ten feet away from the trail is the hybrid. If you walk down the trail a few feet, you can see that the tree has two trunks, starting three to four feet above the ground. If there are still leaves on the tree, you can look up with the sky as the background and see the outline of the leaves or you may find some on the trail.

This is maybe a hybrid of California Black Oak, *Quercus kelloggi* and Coast Live Oak, *Q. agrifolia* var. *agrifolia*. There are Black Oaks growing off of Trail 5 above this tree (watch the path for the leaves to compare) and Coast Live Oaks are found in many places in the Preserve. The leaves of the hybrid are not as deeply lobed as the Black Oak, but are bristle tipped.

The undersides of some of the leaves appear to have hairs in the leaf axils, as the Coast Live Oak usually has (unscientifically sometimes referred to as "hairy armpits"). There is also the possibility that this is a hybrid of California Black Oak and Interior Live Oak, *Quercus wizlizeni* ssp. *frutescens*, which is in some books called "Oracle Oak". More information later.

Last year about Thanksgiving, a docent called inquiring about some flowers in bloom. Naturally, I had to check this out. Going in at Escobar Gate to the serpentine slope just before entering the

Blue Oaks, *Quercus douglasii*, there were at least 50 plants of Wicker Buckwheat, *Eriogonum luteolum* var. *luteolum*. With small pink flowers, and the rest of the plant an orangey-brown color, they made quite a sight. The flowering time is unpredictable. In June, I received a small sample collected from serpentine on Trail b. On August 30th, I saw some in flower on the same slope as in 2000, and on Trail 15, in two different place, but all on serpentine. So if you are out walking near serpentine areas, take a look for this buckwheat.

### **December, 2001**

In the last JRBP Field Notes, I wrote about the hybrid oak on lower Trail 5. There do seem to be hairs in the axils on the underside of the leaves, meaning a hybrid of coast live oak and California black oak, *Quercus agrifolia* var. *agrifolia* with *Q. kelloggii*, but it really takes the acorns to be certain. So I can put on my "To-Do" list for year 2002, to look for acorns, if any, from this tree.

A few weeks ago, Cindy Wilber and companions found on Trail 2 a broomrape, *Orobanche* sp. It has been seen by quite a few people by now, and was keyed by botanist Toni Corelli, along with Ann Lambrecht, to be Jepson's broomrape, *Orobanche californica* ssp. *jepsonii*. This plant, on Trail 2, was in the path about 80 feet east of a place where there is a cut tree limb with a white plastic stake used to mark Argentine ant nests, and also bird point count stake #26.

In 1999, there were two small patches of plants, which looked identical to this broom-rape, earlier in the fall, and at the cut tree limb/ant stake. They were not keyed to species at that time. These were not seen in 2000, (by me at least) since I was only at this site in early June and early July.

Another year and the flowering cycle begins again. The western leatherwood, *Dirca occidentalis*, often starts flowering in late December. Early in January, the hillside gooseberry, *Ribes californicum* var. *californicum*, shrubs start to flower. They are quite common in JRBP. Toward the end of January look for chaparral currant shrubs, *Ribes malvaceum* var. *malvaceum*. There are two or three plants up Trail 8 from the switchback just before the right hand curve, then about 15 feet upslope, somewhat hidden behind other shrubs. While at the switchback, look for striped coralroot, *Corallorhiza striata*, which has appeared here for several years, but usually a little later in the spring. There are three or four chaparral currants about 50 feet downhill from the intersection of roads D, E, and F, then 20 feet or so east. Also, another someplace on lower Trail 9, after going through what a few of us call "Buckeye Alley" and turning the corner to go through chaparral. While you are going through Buckeye Alley, look to the north a few feet, and find the small group of evergreen canyon live oaks, *Quercus chrysolepis*. Ann and I hope to start GPS'ing the "uncommon-in-JRBP plants" in January.

### **January, 2002**

I have a difficult time finding plants to write about in January-February, that I haven't written about before. Most that are flowering then are common enough so that people who walk in JRBP already know them.

We have two species of *Lithophragma*, in the Saxifrage family, which I think flower in late February or early March. There is Woodland Star, *Lithophragma affine*, and Hill Star, *Lithophragma heterophyllum*. Maybe others can tell them apart just by looking at the whole flower, but I never could. Woodland star has a hypanthium (an enlarged cup-like structure below the calyx and corolla) which has the shape of an inverted cone. Hill Star has a hypanthium which is truncate and looks as if it was cut off squarely at the bottom end. One year I got curious and looked at the hypanthium of every *Lithophragma* I saw on lower trail 5 and trail 1. All I found were Woodland Star, with the cone-shaped hypanthium. But going out fairly near the beginning

of trail 12, here were only Hill Star.

We have quite a few plants on our "Now or in the Past" list which have not been seen in recent years. Or maybe it's just that nobody tells anybody else. I think I will start a Watch List. I don't have e-mail, but you can get my phone number from Cindy Wilber, or just let her know and I will do my best to check out the information.

How about violets? Any kind. I look forward to hearing if you know where they are.

And how about Silk Tassel Bush, *Garrya elliptica*? In past years we knew the location of four in JRBP. One at the end of trail b, one on trail 10 that is close to a green gate (I'd have to show you on a map), one off trail 9 near the "coyote-howl spot", a roundish bald area. That name may have come from one of the early docents who used to live nearby; she could hear the coyotes howling above her house and imagine them sitting in that particular area. I have never seen the latter plant; it is closed in by other scratchy shrubs, but there was a metal marker on the ground at the edge of the trail. The fourth was by upper trail 9, off trail, not that far down (W or SW) from the hybrid Valley Oak-Blue Oak, which I wrote about in the April, 2001 Field Notes. The bush was on the north side of the trail but one had to walk in through grass and then curve around some other bushes. I have looked but could not find this one again.

### **March, 2002**

What "unusual in JRBP" plants can be looked for in the next six or eight weeks? In the April 2001 Field Notes I wrote about having finally seen Chia, *Salvia columbariae*, in the Mint family. This was on March 23, 2001, with about 30 plants, most of them in flower. This was two years after a researcher told me where to find them, and Ann Lambrecht and I finally managed to get there at the right time. They were at almost the end of Trail b, at a corner and just before a gully. There is also one Silk Tassel Bush, *Garrya elliptica*, on the other side of the gully.

If you take this trail, from Road F, notice the Hawthorn, *Crataegus monogyna*, in the Rose family, about 125 feet in, on your left (E) side. There are a number of these trees scattered around JRBP, usually flowering in late April. About 200 feet in is a rocky area on your left, which in 1998 had about 200 plants of the annual Douglas' Sandwort, *Minuartia douglasii*, in the Pink family. They have small white flowers. In 1998 they flowered in late April. If you see these there, I hope you will let me know. I like to keep records and there are so many trails here to walk.

Last year the same researcher mentioned above saw Scarlet Pimpernel, *Anagallis arvensis*, in the Primrose family, only with blue flowers, the last week of April. This was also on Trail b, about 30 feet before the first gully, which is about 200 feet in from road F.

On April 4, 2001, Ann and I saw Common Phacelia, *Phacelia distans*, in the Waterleaf family, on Trail 11. There were about 20 plants, just starting to flower. These were at the switchback, which has boards across the gully. Going up the trail are Chinese Houses, *Collinsia heterophylla*, which I have mentioned before. These are in the Figwort family, and usually flower in May. If you are on Trail 12, at the second bridge, look for the Golden Currant shrubs, *Ribes aureum* var. *gracillimum*, in the Gooseberry family. They were in flower 4/14/99 but on 4/25/01 still only in bud. You may have noticed that plant guides that list flowering times have about a three-month period for this. I can't predict either.

Another plant for my "wish list". In the 1980's we knew of three locations for Bird's-Foot Fern, *Pellaea mucronata*. One was by road C, on the slope below the power lines. Another was on Trail 11, at the switchback by the gully with the boards. The third was on lower Trail 9 in the chaparral. All three seem to be gone. A warning here: Coffee Fern, *Pellaea andromedifolia*, growing in a dry area, can look a lot like Bird's-Foot Fern.

## April, 2002

This Field Notes article will look a little different—it seems that the current custom in botanical circles is to use lower case letters for common names of plants, with the exception of place names and people's names when they are part of the common name.

In the last JRBP Field Notes I wrote about chia, *Salvia columbariae*, near the far end of Trail b. On March 20, Ann Lambrecht and I walked there to see what was happening. There were over 50 chia plants, but none with flowering stems yet. However, researcher Irene Brown saw them in flower on March 31.

Also on Trail b, Ann found the basal leaves of what are (probably) two elegant piperia plants, *Piperia elegans*, in the orchid family. One plant still had last year's dry flower stalk. They were on the east side of the trail about 50 feet south of the first "gulch." Usually the leaves dry up and the flowering stalk comes up about the first of June. This location would be the third we know of in JRBP.

Last year on April 30, we saw chaparral pea shrubs, *Pickeringia montana* var. *montana*, in the pea family, in flower by Trail 7. This location is west of fire road D, and south of the trail about 15 feet, opposite the utility pole. There are three shrubs which were in bud as of April 14. There are another two east of the Hillside Lab on Trail 7, but I have never seen these flower.

While in the vicinity of the first chaparral pea shrubs, take a look at the pistachio tree, *Pistacia atlantica*, in the sumac family. Western poison oak, *Toxicodendron diversilobum*, is also in this family. The tree is only about six feet tall and the leaves are odd-pinnate. It is also south of Trail 7, about 10 feet off trail, and 20 to 25 feet west of the chaparral pea and the utility pole. This is not the pistachio species that produces the delicious edible nuts, nor the Chinese pistachio used for ornamental street trees.

At the east end of Trail 13 where it intersects with road E and Trail 12, look near the top of the slope ahead of you and a little to the right, and to the right of a large rock. Above the sky lupine, *Lupinus affinis*, is a single plant of the imbricate phacelia, *Phacelia imbricata* ssp. *imbricata*, in the waterleaf family. It was in bud on April 10th.

Also by the middle of May, the California horkelia, *Horkelia californica* ssp. *californica*, in the rose family, should be in flower. Start out on Trail 12, go just a little way to the first right-hand corner (really a curve), then turn the left-hand corner, and when you get to the next right-hand corner, stop! Ahead of you with the poison oak, broken branches and clumps of trillium, *Trillium chloropetalum*, are low plants with small pinnate leaves and whitish flowers. The plants resemble the fairly common (in JRBP) sticky cinquefoil, *Potentilla glandulosa* ssp. *glandulosa*. This is the only location in JRBP for the horkelia that I know of.

Also on Trail 12, but not coming up until the middle of May, is wild licorice, *Glycyrrhiza lepidota*, in the pea family. Continue walking along the creek until you come out of the canopy and into grassland. About 65 feet from the edge of the canopy, on the left (east) side will be what seems to be a number of non-grass plants in a small area amid the grasses. The flowers are white, and probably won't appear until early June.

## June, 2002

New to JRBP is a foot-high Japanese maple, *Acer palmatum*. It is about 20 feet off Leonard's bridge, near the elk clover, *Aralia californica*, which is up again (Field Notes, June, 2001).

The maple is not visible from the bridge. A few feet from the maple is a single trail plant, *Adenocaulon bicolor*, in the sunflower family. As far as we know, this species has not been seen here for many years.

Ann Lambrecht found over fifty narrow leaved flax, *Linum bienne*, in the Flax family, north of the main gate along the fence. They are just past the area where there are three power poles very close together and where a road leading from the field station meets the fence. These are also new to JRBP. I am told there are actually people who go out and look for the plants I write about. It may be no use looking for the flax. Ann found them about 10:00 AM. By 11:45 AM, on her way back, she found that all the petals had fallen off the flowers. To quote one book, "petals are ephemeral." And by the time you read this, the plants will probably be gone.

Summertime has its flowers, and most of them seem to be yellow. There is a patch of California goldenrod, *Solidago californica*, in the sunflower family, by road F, opposite the intersection with trail 6. There is also some on trail 7, east of the Hillside Lab. I don't exactly know when in the summer they flower.

Then there is the hirsute grindelia, *Grindelia hirsutula* var. *hirsutula*, also in the sunflower family. "Hirsute" is defined as "with stiff coarse hairs" in Thomas's *Flora of the Santa Cruz Mountains of California*. We have seen these at the west end of trail 4 (Field Notes, March, 2001), and on the trail that leads uphill from the little blue bridge, which is parallel to the road that leads uphill from the dam bridge. Also there were quite a few last year on trail a, which is sort of parallel to the lower part of road D. Flowering is probably June.

Probably in July, the rather coarse coast tarweed, *Madia sativa*, another sunflower family plant, comes up. We have the summer-flowering mustard, Mediterranean mustard, *Hirschfeldia incana*, in, obviously, the mustard family.

Let's try the mint family. Look on the east side of road C between the beginning of trail 1 and the concrete crossing on San Francisquito Creek. Here, unless it has been mowed, is a patch of the non-native self-heal, *Prunella vulgaris* var. *vulgaris*. It usually is in flower by mid-June.

The last two years Ann and I have been observing a patch of seaside heliotrope, *Heliotropium curassavicum*, in the borage family. Last year the patch, really a long line, was in flower from at least July 1 through early September. It is off trail 14, south of the east end of the dam, and down slope from the trail toward the lake. It is between the slope bottom and the beginning of the cattails/tules. From the end of the dam, go 40-50 feet and look down between two groups of birch-leaf mountain mahogany shrubs, *Cercocarpus betuloides* var. *betuloides*, in the rose family. Binoculars help, and PLEASE, don't break any bones looking.

We are grateful to Scott Loarie, Stanford student graduating with a master's degree, for showing us plant locations we probably would not have found by ourselves. One had about 50 elegant clarkia, *Clarkia unguiculata*, in the evening primrose family. Another had at least 50 NW crimson columbine, *Aquilegia formosa*, in the buttercup family. We do have columbine in two other locations that we know of, but in limited numbers. In another discovery, he found at least 50 of what must be a "scroph," *Linaria*, unkeyed as yet to species, in the figwort family. By the time Ann and I saw them, the plants were all dried up. A task for next year.

### **September, 2002**

The plant highlight of the summer was found and photographed in late May by butterfly researcher Irene Brown in one of her butterfly areas off road F. There were two of these plants, in the orchid family, which we keyed to be Michael's piperia, *Piperia michaelii*, new to JRBP. In the California Native Plant Society Inventory of Rare and Endangered Vascular Plants of California, this species appears on List 4: plants of limited distribution—a watch list. The two plants were still in flower and setting fruit when we last saw them on 7/31.

Also new to JRBP is *Lactuca virosa*, wild lettuce, in the sunflower family. A biennial, the 25-cm-long basal leaves appeared by Trail 13 in 2001. There were three plants and this year they

put out flowering stalks. The problem here was that the deer kept eating the stalks, but finally left them alone so we could key and identify the plants.

Toni Corelli found a tomato plant with flowers and small fruits by one of the limited-access roads west of the Field Station.

In the April 2002 Field Notes I wrote about California horkelia, *Horkelia californica* ssp. *californica*. When I found them in 1998, there were about 20 plants. Last spring I found only seven, later only four or five and only one flower.

Self-heal, *Prunella vulgaris* var. *vulgaris*, in the mint family (June 2002 Field Notes), near the concrete crossing, flowered but mostly got mowed.

The seaside heliotrope, *Heliotropium curassavicum* (June 2002 Field Notes), off Trail 14, are doing well. A few were in flower when seen 7/5, and many more 8/15.

The wild licorice, *Glycyrrhiza lepidota* (April 2002 Field Notes), on Trail 12, still had not flowered by 8/10. Four years of records of flowering times seem to do me absolutely no good. However, timing is everything, and a large patch of green in the midst of dried grasses led me to a second location of the wild licorice. It is on the top of the slope before but very close to the beginning of Trail 12. Not in flower, and drying quickly.

What have we now? The white-flowered hayfield tarweed, *Hemizonia congesta* ssp. *luzulifolia*, in the sunflower family, is flowering in many areas of JRBP. Almost dry is the sticky yellow-flowered coast tarweed, *Madia sativa*, in the sunflower family. In August the western goldenrod, *Euthamia occidentalis*, also in the sunflower family, started flowering. These are found by the old boat ramp on Middle Lake and along the nearby shore. While I have not seen them for several years, these also grew on Trail 10 at the beginning of the drainage, not far from the intersection with Trail 9.

Then there is horseweed, *Conyza canadensis*, also in the sunflower family, but with small flowers that just look like fuzz. These are very common now along Highway 280 and Sand Hill Road, and also in JRBP.

### **November, 2002**

In August, Stanford Ph.D. student Will Cornwell brought to the Oakmead Herbarium at JRBP a yellowish gooseberry with glandular bristles, from a shrub on Trail 1. This shrub, near the westernmost redwood on that trail, has been on our plant list as canyon gooseberry, *Ribes menziesii*. Docent-botanist Toni Corelli went to the books and found that the fruit of canyon gooseberry is supposed to be purple. She found that the shrub most matching the fruit color and other characteristics appears to be Victor's gooseberry, *Ribes victoris*.

The California Native Plant Society 6th Inventory of Rare Plants has Victor's gooseberry on its List 4, limited distribution (watch list). So far the range for Victor's gooseberry is in the counties just north of San Francisco Bay. If this shrub should prove to be Victor's gooseberry, it would be the first record for San Mateo County. We all must wait until spring to see what the flowers are like.

A second location for this shrub is on Trail 2, where there is one which bore yellow fruit and three more smaller plants, which Ann Lambrecht and I believe could be the same species. I can't describe the location except that they are between the cut limb with the white plastic ant stake on it, and the Zoology cabin site. As a temporary measure, we have, with the help of resident ranger Brooke Fabricant, tied our special ribbon to them. The ribbon is gold and brown checked, and means we hope the shrubs won't be cut down or trimmed during trail clearing time.

On July 17, Ann and I noticed Jepson's broomrape, *Orobanche californica* ssp. *jepsonii*, on Trail 2, by the cut limb/white plastic ant stake. Bird point count rebar #26 is nearby. One broomrape

was starting to flower nicely; the other looked like it had been stepped on. We first saw these in this location in 1999 (Field Notes December 2001). Having heard there were more on the trail, on Oct. 2 we went again. At this point on the trail, both were dried up, but another had appeared. About 27 meters east (notice I have joined the 21st century with this meters stuff) were two more in flower and one dried. These are actually flower groups perhaps 7-15 cm in diameter and are root parasites. We don't know what they grow on. Right now our gold and brown checked ribbons are across the trail to alert walkers. We will remove them when the plants have dried. We temporarily put some of the same ribbon on the western burning bush, sometimes known as the pawnbroker's bush, *Euonymus occidentalis* var. *occidentalis*. There are only 2 or 3, at the edge of the trail on Trail 1, and we would hate to see them fall to unknowing weed-whackers. Another CNPS listed plant is our chaparral mallow, *Malacothamnus fasciculatus*, on Trail 12 between the intersection with Trail 10 and the second bridge. The CNPS Inventory has retained the original name, arcuate bush mallow, *Malacothamnus arcuatus*, "a synonym of *M. fasciculatus* in The Jepson Manual." This plant is List 1B, "rare, threatened, or endangered in California and elsewhere." You may see our gold and brown checked ribbon on two separate plants, smaller than the main group, between the main group and the second bridge. In August, there appeared underneath the causeway bridge on Trail 13, some different plants which turned out to be toothed coast fireweed, *Erechtites minima*, in the sunflower family. This was on our plant list but has not been seen, as far as we know, for many years. JRBP staff decided this plant should not be allowed to spread, if it could be prevented. Several people went down below the bridge (it isn't easy), collected, bagged and disposed of the plants. The woolly-headed lessingia, *Lessingia hololeuca*, in the sunflower family, may be all dried up by the time you read this. With a little moisture, I have seen this in flower as late as mid-November. It is CNPS List 3, "rarity and endangerment unknown." It is endemic to California. Ann and I have GPSed all the areas we could find. There was a lot in areas around the Sun Field Station, and on an old road leading up to the global change project. There was also quite a bit coming in Escobar gate, on road F through serpentine area H, and continuing almost to the blue oaks. There was more on Trail 15 near the Vestal enclosure. I had better save something for the next issue; flowers get very scarce this time of year.

### **January, 2003**

In the April 2002 Field Notes, I mentioned a small pistachio tree *Pistacia atlantica*, in the sumac family, that is near Trail 7. There are a few others in JRBP. We have an old lichen-covered tree on the top of the hill above the west end of the dam, also a small one directly across (north) from the west end of the dam. There is a baby one on the rocks below it. We have also seen one near the horse trail on the SLAC side of San Francisquito Creek.

The pistachio is deciduous. It is also dioecious; "male (staminate) and female (pistillate) flowers grow on separate plants." The tree above the dam did not have any fruits this fall, but we will check its flowers next spring. There is female tree just outside the Sand Hill Road fence about 25 meters south of the place where there are three power poles close together and the wires make a right angle turn to continue on to SLAC. The tree is about eight meters tall and there is a pine tree just north of it. This fall the tree was loaded with its small reddish drupe-like fruits. The odd-pinnate leaves turned a glorious red.

There were still a few flowers left on the Jepson's broomrape, *Orbanche californica* ssp *jepsonii*, when we saw them on November 20th on Trail 2. We removed the ribbons as I wrote we would do in the last Field Notes.



Ann Lambrecht and I found a second location for western burning bush, *Euonymus occidentalis* var. *occidentalis*, in the staff-tree family. The plants are also on Trail 1 about 27 meters east of the first location, in what I call the bracken fern area (*Pteridium aquilinum* var. *pubescens*) with another two or three smaller ones, off the trail on the south side. There were a few leaves and one fruit, so we could be sure. We tied our gold and brown ribbon on one.

As long as we are at this location, on the creek side, climbing up a white alder tree, *Alnus rhombifolia*, grows a virgin's bower vine, *Clematis ligusticifolia*, in the buttercup family. This is one of three locations we know of in JRBP. You won't see the plant now. Leaves have fallen and flowering time is July.

In late October, before the rains came, Ann and I went down into the creek off of Trail 1, to GPS the Dudley's shield ferns, *Polystichum dudleyi*, where we also found a single violet plant on the slope (species unknown since no flowers). On the path going down to the creek were some plants that I at least, had been ignoring, thinking they were common snowberry, *Symphoricarpos molis*, in the honeysuckle family. Low growing shrubs, opposite ovate leaves, but different veining; these plants were modesty, *Whipplea modesta* in the mock orange family. Modesty is on our plant list, but I personally have not seen it here since 1988, a drought year. At that time Herb Dengler led a docent walk up San Francisquito Creek from the concrete crossing to the entrance of Bear Creek and pointed them out below the redwoods.

#### MUSHROOM NEWS FROM BROOKE

December has always been our best month for mushrooms and this year just made it under the wire. I think this is the year of the *Omphalotus olavascens* (western jack o' lantern mushroom). It can be found on Trails 2, 3, 8, and along Fire Road F, and probably lots of other places as well. To quote David Arora, author of *Mushrooms Demystified*, "There is no good reason why this mushroom should be mistaken for a chanterelle, but it sometimes is."

Alas. It is olive-orange and grows at the base of dead trees. The most spectacular site is at the top of Trail 3 between the power pole and the Fire Road. Look south-east for the dead trees. The newts like it too! There are troops of *Lactarius alnicola* (golden milk caps) under coast live oaks, though not as many as last year, which was truly exceptional. Also up, but not as profuse as years past are *Amanita phalloides* (death cap). There are a few next to the fenced-in tree by the golf cart as well as a large troop off Trail 3 (halfway up, uphill side, under an oak). A special treat is the great number of *Hygrocybe acutoconica* (a cute conic waxy cap) in three groups off Trail 3. They are bright yellow and hard to miss on the uphill side of Trail 3 near the death caps. These also come up between the dam and the short-cut Trail to Trail 8, but they are not out yet at this location. Also, as noted in Field Notes past, are *Hericium ramosum* on a log uphill on Trail 2. This is a more delicate bear's head and is a very beautiful toothed fungus that seems more appropriate on a coral reef. There are, as usual, many *Pluteus cervinus* (deer mushroom) and *Russula brevipes* (better "punted than hunted...") here and there. I haven't had the time to key out all the boletes and others by the Hillside Lab, but soon...

Finally, we have some enormous *Gymnopilus ventricosus* (big laughing mushroom) and (still!) *Pisolithus tinctorius* (dead man's foot) at our residence; give us a call if you want to see them!

#### **June, 2003**

There is an area at JRBP that is usually referred to as the "Dennis Martin site." It lies along San Francisquito Creek and is not an area for tours. To get there, one can drive in the Whiskey Hill entrance. This is not a good idea in the rainy season if the road is muddy or later in the year if the grasses are too high in the road. Park in the small parking lot opposite the "concrete crossing,"

the other side of which is the end of road C. Better to wait for the time of year when the water is low enough at the concrete crossing to just walk from road C and cross the creek. Walk the SLAC corridor road for probably 3/4 mile until you see the weather station on your left. Across the road from the weather station is a short road, at this writing with plants like poison hemlock and hedge parsley, *Torilis arvensis*, growing up in it. Part way down this road, look to your right and you will see a 1.5 meter high concrete post on which is engraved SITE OF--DENNIS MARTIN--HOUSE--1846 TO 1864.

Under your feet you may see bits of shell. Examine them if you wish, but please replace them where you found them. This is an archaeological site and artifacts should never be removed. We go down here once or twice a year because there is quite a variety of plants and sometimes we find plants that are not usually found at JRBP. For example, last year about 20 plants of small-flowered fumitory, *Fumaria parviflora*, in the poppy family, appeared. Although many mature tree of heaven trees, *Ailanthus altissima*, were removed from this area several years ago, there are now about 100 small trees from 30cm to 5m in height.

The short road you are on leads down to a dry but very rocky stream bed filled with plants. Walking is not easy. Here we find acacia sp., willows, box elder and buckeye trees. There is mugwort, Durango root, fennel, French broom, more poison hemlock, and stinging nettle. There are smaller plants like horehound, hedge nettle, feverfew, American brooklime. There are Himalayan blackberry, horsetail and various grasses. When we went in late May there was scarlet mimulus in flower.

If you have managed to walk down this rocky area, near the west (SW?) end turn toward the flowing creek. Water was still high when we went, but later when it is almost dry you can cross the creek, and if you are agile, get up the slope by clinging to the exposed tree roots. Then there is a trail which leads you out to Trail 2, and then back out to Trail 1 and road C. Otherwise go back the way you came.

We like to go in late August or September, because at the creek's edge grow spearmint (light blue flowers) and peppermint (darker blue flowers). At least that is when we have found them flowering in past years. There are also small fig trees here, and often we have found scarlet mimulus still flowering.

### **November, 2003**

TRAIL NEWS FROM CAROL ZABEL Banks of San Francisquito Creek sometimes turn out to be "hot spots" for plants. On October 1st, Ann Lambrecht, Toni Corelli and I went to the concrete crossing, or low flow crossing as it is sometimes called, near trail 1 and road C. There is a fairly flat area on the left side as you are looking downstream. These are some of the plants we saw.

Peppermint, *Mentha x piperita*, in flower, and spearmint, *Mentha spicata* var. *spicata*, which may be in flower as you read this. Also pennyroyal, *Mentha pulegium*, and bee balm, *Melissa officinalis*, all in the mint family. There is some hoary nettle, *Urtica dioica* ssp. *holosericea*, so beware. Most of us call this stinging nettle because it does. There was a dried dock, *Rumex* sp. In the buckwheat family, several lady's thumb, *Polygonum persicaria*; water smartweed, *P. punctatum*; common knotweed, *P. arenastrum*. We saw a light-blue-flowered garden lobelia. In the figwort family there was the common round-leaved fluellin, *Kickxia spuria*, and the seldom seen sharp-leaved fluellin, *Kickxia elatine*, plus the basal leaves of woolly mullein, *Verbascum thapsus*. In the amaranth family was one tumbleweed, *Amaranthus albus*. In the goosefoot family, one spearscale, *Atriplex triangularis*. In the plantain family, some common plantain, *Plantago major*. In the sedge family, we saw tall cyperus, *Cyperus eragrostis*. In the sunflower

family, horseweed, *Conyza canadensis*; weedy cudweed, *Gnaphalium luteo-album*; mugwort, *Artemisia douglasiana*. There was small-flowered nightshade, *Solanum americanum*, in the nightshade family, and floating in the water, duckweed, *Lemna* sp. There were grasses, one of which was a tall grass we think was Dallis grass, *Paspalum dilatatum*. Last but not least, one plant about 5 cm high, polycarp, *Polycarpon depressum*, in the pink family.

The female pistache tree, *Pistacia atlantica*, is in fruit. This species is dioecious, male and female on separate plants. This tree is actually right outside the Sand Hill Road fence. From the Field Station turn left, going back the way you drove in, but take the first right, then left at the next Y until you reach the fence. Turn left and walk about 25 meters. There is a pine tree just north of the pistache. The vine off trail 12 we thought might be a pumpkin did not survive the deer. Almost all the large leaves are gone, as is the small fruit that was forming. A surprise for this time of year was seeing on October 15th a number of pink buds and partly opened flowers on the chaparral mallow shrub, *Malacothamnus fasciculatus*, in the mallow family. This shrub is on trail 12, past the intersection with trail 10, and long before the second bridge.

### **February, 2004**

This is not a good time of the year to write about plants. For want of a new area to explore, on October 29th Ann Lambrecht, Toni Corelli, and I walked across the dry lake bed from near the old lab across to the deep inlet on the east side of the lake. This is definitely not a tour trail! Ann and I had done this in 2000 and could then only cross to the shallow inlet. Now the cattails have filled in so much that the entrance is blocked. Underfoot was much parrot's feather, *Myriophyllum aquaticum*, in the water-milfoil family. There were some plants of kelp, *Polygonum amphibium* var. *emersum*, in the buckwheat family. (I like the common name swamp knotweed better.) Occasionally there were leaves of Pacific oenanthe, *Oenanthe sarmentosa*, in the carrot family. There were quite a few of a plant, which Toni keyed to be red goosefoot, *Chenopodium rubrum*, in the goosefoot family. This is on our plant list, but as far as I know, has not been found here in many years.

There was a patch of knot grass, *Paspalum distichum*, near the cattails, and scattered around another grass, swamp grass, *Crypsis schoenoides*. There were also a number of small cyperus plants, believed not to be our fairly common tall cyperus, *Cyperus eragrostis*, but as yet unknown.

On November 12th, Toni and I walked around the completely dry lakebed of Middle Lake. More parrot's feather and some of the kelp, also water smartweed, *Polygonum punctatum*, some tall cyperus, and some small dry cyperus, probably the same as the unknown from Searsville Lake. We recently walked in the area of the Hermit's cabin site and found a fig tree with ten or eleven ripe figs. We left them for the wildlife to eat. There was also a vine, of which Irene Brown had sent me a photo last spring. The photo showed flowers growing up high, but we will have to wait until next spring to see if we can identify it. In our JRBP plant list is lavender-cotton, *Santolina chamaecyparissus*, in the sunflower family. We assume that this shrub is on the list because there is a row of them planted near Leonard's house.

We were walking in the grasslands in the northwestern part of the Preserve, looking for the garden lily-of-the-Nile, *Agapanthus orientalis*, that we knew grew there. It had flowered in the past few months, as had those at the Douglas iris site. At the same site there were other leaves of a garden plant, which had been there for many years. This time there was one flower. It was red-hot poker, *Kniphofia* (probably *uvaria*), in the lily family. This is new for our plant list.

A treat was the sighting of a phainopepla (that's a bird) showing us its profile and flycatching. We understand that this is not a common bird in the immediate area, but, honest, we plant people can tell the difference between it and a Steller's jay. Illustration by Herb Dengler

## **OAK MISTLETOE - PHORADENDRON VILLOSUM AT JASPER RIDGE BY TONI CORELLI**

Oak mistletoe at Jasper Ridge can be found living on valley oaks (*Quercus lobata*) and blue oaks (*Quercus douglasii*). Mistletoe is a parasitic plant that can only live on another live plant. It sends modified branches called haustoria into the host's phloem and helps itself to water, minerals, and probably sugars as well. However, it has green leaves and manufactures much of its own food materials by photosynthesis, which indicates that true plant parasites such as mistletoe can also be hemiparasitic or partially parasitic if they have green leaves. The genus *Phoradendron* means, "tree thief" because it draws nourishment from its host tree and *villosum* meaning "hairy" referring to the hairs on the leaves and stems. Its common name "mistletoe" is derived from ancient observations that mistletoe would often "spontaneously" appear on a branch or twig where birds had left droppings. "Mistel" is an Anglo-Saxon word meaning "dung," and "tan" is the word for "twig." So, mistletoe literally means "dung-on-a-twig."

Oak mistletoe is considered a woody shrub in *The Jepson Manual*. It is a flowering plant in the *Viscaceae* (Mistletoe) Family. There are over 1,000 mistletoe species worldwide. Our mistletoe is dioecious which means two houses, the male and female flowers are found on separate plants. The flowers are small and non-showy, however the state flower of Oklahoma is mistletoe, the species *Phoradendron serotinum*. The female flower produces round white berries in the winter that are about one-quarter inch in diameter. The berry usually holds a single seed surrounded by a sticky pulp.

Seed dispersal is mostly by birds. The berries are eaten by birds that digest the pulp of the berry and excrete the living seed onto the tree branches. Sometimes the sticky seeds get stuck on the bills and feathers of birds and the seed is removed by wiping them off on the tree branch. The sticky pulp on the outer surface of the seeds stick to the tree branches where the seeds germinate. Young or small trees are seldom infected by mistletoe since the birds prefer to perch in the tops of taller, older trees. However, severe buildup of mistletoe often occurs within a tree that already has a lot of mistletoe because birds are attracted to and spend prolonged periods of time feeding on the mistletoe berries therefore excreting the sticky seeds on the same tree. The birds in our area responsible for seed dispersal are robins, bluebirds, thrushes, cedar waxwings, and phainopeplas. The great blue hairstreak butterfly uses our mistletoe as its host plant for egg laying and as food for its larvae.

Several years are required for a new seed bearing mistletoe plant to develop from seed. Once a plant is established, the root system gradually extends up and down the branch of the plant it is growing on. Defoliation or destruction of the aerial portion of the mistletoe plant does not kill it. New shoots may be produced from the root system or the mistletoe may survive and grow entirely within the infected host tissues. Not until the tree dies, or the parasitic portion dies or is removed, is the mistletoe killed.

There is general agreement in the literature that mistletoe does not kill the host tree. However, trees heavily infected by mistletoe may be weakened and therefore predisposed to attack by insects. They may be more stressed during periods of drought and branches heavily laden with mistletoe can break off during storms and high wind that can leave the tree susceptible to an entrance point for decay fungi.

**March, 2004**

After more than five years of writing this article, I am fast running out of pretty flowers to write about. This time let's consider some plants practically no one pays any attention to, the rushes, family Juncaceae. Spreading rush, *Juncus patens*, is found scattered around the Preserve in many places. Perennial, "plants forming dense round tufts," plants appearing a blue-green color, about a meter tall, inflorescence not much to look at. The long bract growing above the inflorescence is rounded and appears like a continuation of the stem. From the Sun Field Station, walk about twenty meters down the road toward the bridge below the dam. Look on the right-hand side of the road.

Another fairly common rush here is western rush, *Juncus occidentalis*. This rush also grows "in tufts," the color green, not blue-green, and the long bract above the inflorescence is thin and flattened, more grass-like. Areas where these can be found are the beginning of the road near the Sun Field Station, which eventually leads to the Douglas iris site. Also on and next to Road F at the west end of Trail 15, heading SE along Road F. Both sites usually get mowed.

We also have a lot of iris-leaved rush, *Juncus xiphioides*. In this rush, the leaves do grow like garden irises, edge to edge toward the stem. A place to look for these is the west end of Road F where the blue oaks begin, where Trail 3 starts. We have another plant with similar iris leaves, blue-eyed-grass, *Sisyrinchium bellum*, a real iris, not a grass. The rush leaf blades have crosswalls; slide your fingers gently up the blade to feel them. There is a lot of western rush at this area—even more than iris-leaved rush. Last year I found hundreds, probably thousands, of the little, 5-7 cm high toad rush, *Juncus bufonius* var. *bufonius*. This was March 15th, and the rushes were in fruit or I would not have seen them, thinking "just more grass." These rushes are annuals, and there was a dry, brown strip of them on each side of Road F where I have described the western rush, above. There were more on the other side of Road F from the "waste paper basket" tree. This is what some of us called the big valley oak, *Quercus lobata*, almost opposite the beginning of Trail 16. Sometime in the 1980's there were waste paper baskets and laundry baskets under the tree to catch the leaves as they fell in the autumn. This was a student's research project, and some sort of analysis was done on the leaves. Anyway, these rushes dried, sides of the road were mowed, and as of March 3rd this year there was no sign of them.

At the intersection of Road E and the beginning of Trail 12 is a large, flat area. There is a huge patch of common spike rush, *Eleocharis macrostachya*, in the sedge family. There are a few rushes right by the beginning of Trail 12, but they need to grow a little to key. Now for some pretty flowers. There is an area we have nicknamed "The Quarry." It is NOT part of a tour trail. Walk onto Trail 12 from Road E, turn right at the first little corner (very soggy), go left at the next little corner, go straight and at the next right-hand corner, stop. Ahead of you is a narrow passageway leading to a big open space. Please tread carefully in this passageway, because it is the only location we have found at JRBP for California horkelia, *Horkelia californica* ssp. *californica*, in the rose family. The leaves look a lot like the more common here sticky cinquefoil, *Potentilla glandulosa* ssp. *glandulosa*.

Toward the back of the big open space you see broken rocks. These have been identified for us as graywacke sandstone. Last year about the third week of March we saw a few California saxifrage, *Saxifraga californica*, in the Saxifrage family, along the south side. About April 10th last year there were in flower hundreds of bicolored linanthus, *Linanthus bicolor*, in the phlox family, in the front part of the quarry. These were soon followed toward the back by miniature lupine, *Lupinus bicolor*, in the legume family.

On March 10th, Ann, Toni, and I walked the loop, Trails 11, 10, and 9. In "broadleaf evergreen forest" where Trail 10 parallels the intermittent stream—see your big trail map—I finally got to

see the rectangular wooden water trough I had heard about for years. It is still there, north east of the green gate. Poison oak was not enough in leaf to hide it.

**June, 2004**

I'll continue with the sedge family, Cyperaceae. There is a large patch off Trail 1, between the trail and the Indian grinding rock, of a sedge that Herb Dengler taught us was Santa Barbara sedge, *Carex barbarae*. I have gone through the keys and certainly can't disagree. The Jepson Manual says, "very important traditional basket fiber plant".

I have been asked a couple of times in the past what the "grass" is that grows in low mounds in San Francisquito Creek. Herb also taught us that this was not grass but torrent sedge, *Carex nudata*. I have seen the inflorescence through binoculars, but there is absolutely no way I am going down the slope to the creek or wade from a low spot to try to key it myself. I definitely take his word for it. Thomas' Flora of the Santa Cruz Mountains of California says "stream beds, often growing in crevices between rocks."

If you are on Road E, take a look at the upslope of the curve north of the deep inlet. On this slope is a Pacific madrone tree, *Arbutus menziesii* in the heath family. This tree was the subject of research in the past. There are fixed ropes around the tree. On this slope grow sticky monkeyflower, *Mimulus aurantiacus*, in the figwort family. There are also a number of the common California broom plants, sometimes known as deerweed, *Lotus scoparius* var. *scoparius*, in the legume family, which have yellow pea-like flowers. On the same slope are 9-10 plants with five-petal yellow flowers. They are peak rush-rose, *Helianthemum scoparium*, in the rock-rose family. These plants are about 30 cm high, and except for the flowers, appear more rush-like, with a lot of stiff green stems and tiny linear leaves. There are three next to the road and I hope they don't get mowed.

At the beginning of the canopy on the trail leading to the Hermit's mine site is a manzanita, genus *Arctostaphylos*, in the heath family, undoubtedly a cultivar. It stands about three meters high, with reddish bark. I wonder which neighbor has the source plant.

Near the Hermit's cabin site is a vine with reddish bark that bends and climbs up a tree and is growing, I'm guessing, 15 meters above the ground – too far to collect flowers and leaves although Irene Brown has sent us a fallen flower, as well as photos. We can see, at the site, many clusters of white flowers. Looking through binoculars we can see the shape and arrangement of the leaves. We believe this is a rose, and that the Hermit may have planted it. From books, one possibility is Lady Banks' rose, *Rosa banksiae*, specimens of which were brought from China to England in 1807. Supposedly, the world's largest rose tree is a Lady Banks' rose which was planted in 1885, in Tombstone, Arizona. As of 1998, it had flowered each year for 113 years and covered an area of 8,000 square feet, supported by posts and pipes. To read more go to: <http://www.mediterraneangardensociety.org/plants/Rosa.banksiae.Tombstone.cfm> Another rose, on our plant list, is Cherokee climbing rose, *Rosa laevigata*. It is growing right outside the Sand Hill Road fence about 10 meters north of the Main Gate. It usually flowers the last week of May or first week of June. While the original rose came from China it became so widespread in the state of Georgia that it is the Georgia state flower.

Ann and I went with Toni, with Nona's permission, onto serpentine Area H, to look for serpentine linanthus, *Linanthus ambiguus*, in the phlox family, and on our plant list.

Unfortunately we could find no trace of the plant at this time. What we did find were hundreds of Kellogg's tauschia, *Tauschia kelloggii*, in the carrot family. These were growing hidden as understory plants, below mostly leather oak, *Quercus durata* var. *durata*. The only other known location in JRBP is on Irene Brown's butterfly trail between the end of Trail b and Road F. This

trail, being part serpentine, is off limits to most of us.

### **September, 2004**

With the dry weather this year, some of our favorite plants did not flower. The three elegant piperia, *Piperia elegans*, in the orchid family, on Trail b, dried while still just in leaf. The transverse rein-orchids, *Piperia transversa*, on the bird trail behind the Hillside Lab, did not come up. Of the two Michael's piperia, *Piperia michaelii*, one dried up before flowering. The other flowered but dried quickly. Last year Ann Lambrecht and I found one common water plantain, *Alisma plantago-aquatica*, in the water-plantain family, in a wet spot near the beginning of Trail 12. It produced both flowers and fruit before being eaten by deer. This year the leaves dried very quickly and it did not flower. It is a perennial so there is hope for next year.

On the bright side, over fifty of the tiny southern mudwort, *Limosella acaulis*, in the figwort family, appeared on the muddy lake shore by the old Lab. The flowers are about 2 mm wide and the plant about 4 cm high. Ann and I had seen these plants in 2001 and 2002 but could not find them last year. We found the holly-leaved water-nymph, *Najas marina*, in the waterweed family, in the water behind the old Lab. We found, while walking in the dry Corte Madera Cbed, a patch of Bolander's rush, *Juncus bolanderi*.

Last April Ann, Toni Corelli, and I made a plant survey of the beginning of the intermittent stream by upper Trail 10. Plants found were as follows (family names omitted to save pace): Western poison oak, *Toxicodendron diversilobum*; narrow-leaf milkweed, *Asclepias fascicularis*; bull thistle, *Cirsium vulgare*; coyote brush, *Baccharis pilularis*; Italian thistle, *Carduus pycnocephalus*; narrow-leaved mule ears, *Wyethia angustifolia*; prickly sow thistle, *Sonchus asper* ssp. *asper*; slender tarweed, *Madia gracilis*; western goldenrod, *Euthamia occidentalis*. Mouse-ear chickweed, *Cerastium glomeratum*; Fuller's teasel, *Dipsacus sativus*; California burclover, *Medicago polymorpha*; Spanish clover, *Lotus purshianus* var. *purshianus*; little hop clover, *Trifolium dubium*; narrow-leaved vetch, *Vicia sativa* ssp. *nigra*; white-tipped clover, *Trifolium variegatum*; cranesbill, *Geranium molle*; cut-leaved geranium, *Geranium dissectum*. Pennyroyal, *Mentha pulegium*; short-spiked hedge nettle, *Stachys pycnantha*; yerba buena, *Satureja douglasii*; sun cup, *Camissonia ovata*; English plantain, *Plantago lanceolata*. Toni found water chickweed, *Montia fontana*, which has not been seen here for many years. California buttercup, *Ranunculus californicus*; sticky cinquefoil, *Potentilla glandulosa* ssp. *glandulosa*. Field madder, *Sherardia arvensis*; bellardia, *Bellardia trixago*; large monkeyflower, *Mimulus guttatus*; bifid sedge, *Carex serratodens*; western rush, *Juncus occidentalis*; iris-leaved rush, *Juncus xiphioides*; common wood rush, *Luzula comosa*; white brodiaea, *Triteleia hyacinthina*. Of course there were grasses, but there will be another time for those. Last but not least, a very large rattlesnake crossed the pafront of Ann, her first seen in the field.

### **November, 2004**

Autumn, and the faithful woolly-headed lessingia, *Lessingia hololeuca*, in the sunflower family, is again in flower. Look around the Field Station, also in from Escobar gate, and on Trail 15 near the Vestal Enclosure. There doesn't seem to be much else in flower.

Sometimes it pays to go off-trail to explore. Ann Lambrecht, John Rawlings, and I went up on the knoll between Road F and the east end of Trail 15. There to our surprise were three or four dwarf interior live oaks, *Quercus wislizeni* var. *frutescens*. There were also about fifty dried up plants we think are California helianthella, *Helianthella californica* var. *californica*, in the sunflower family. If so, these are the same sunflower type flowers you find in the area between Trail 4 and Road F. We must remember to take a walk up the knoll next spring. We old-timers among the docents had nicknames for a lot of sites, and newcomers, if they hear these, probably

have no idea where they are. In the March 2004 Field Notes, I wrote about the "waste paper basket" tree. This is the big valley oak that for a time had various baskets under it to catch the falling leaves in autumn, for research purposes. It is located just south of Road F across from the beginning of Trail 16.

Near the northwest end of Trail 15 is an "owl tree" or "owl oak" where owls once nested. Before that it was known as the "milk thistle tree." Many milk thistles, *Silybum marianum*, in the sunflower family, grew under it, probably a legacy from the days when cattle roamed here and would use this tree for shade. I think some milk thistles still grow there. Across the road to the south and a little further away is another "owl oak." These are valley oaks, *Quercus lobata*. Barn owls were known to have nested in this one, and one of the Hermit's test pits is located below it. There is "Buckeye Alley." This is the lower part of Trail 9, from where it splits from 9/11, up to the left-hand corner where it goes into the chaparral. The predominant plants along here seem to be California buckeye trees, *Aesculus californica*, in the buckeye family. This part of Trail 9 is also where you can find the small grove of canyon live or maul oak, *Quercus chrysolepis*. The grove is on the north side of the trail, with a little ditch between the trail and the trees. They are about one third of the way from the beginning of the trail to the left-hand corner.

The passage across San Francisquito Creek between the end of Road C and the SLAC Corridor seems to be variously known as the low-flow crossing, the concrete crossing, or the cement crossing.

In earlier days what today is Middle Lake was known as the Inner Marsh, and there was a boat landing here, now overgrown with cattails. Across Portola Road was the Outer Marsh. There was also a boat landing below the Field Station and slightly to the south in a tiny bay. There are two "green gates" that we know about. One is next to Trail 10. On the other side of the trail, quite close, grows one of the three or four silk tassel bushes in the Preserve. This is *Garrya elliptica*, in the silk tassel family. The other "green gate" is by Trail 5 where it intersects with Trail 6.

### **February, 2005**

Leaves of the Michael's piperia, *Piperia michaelii*, in the orchid family, are up. Where there had been only two plants when first found by Irene Brown in 2002, the same in 2003 and 2004, now there are four. As of December 15th the leaves had not been munched by herbivores as in previous years, but we must be vigilant. They have copper rings and/or copper mesh around them and a cage over the group. As far as I know Michael's piperia are still listed as List 4 – limited distribution (watch list) – by the California Native Plant Society on its Inventory of Rare Plants.

In the November 2004 Field Notes Brooke mentioned the new bridge over the "wet spot" on Trail 12. It is quite near the beginning of the trail and was much needed. I am happy not to have to walk on the spreading rush, *Juncus patens*, to keep from getting my shoes too muddy. I am shedding a tear because the bridge may have been built over where one common water plantain, *Alisma plantago-aquatica*, in the water plantain family, has grown the last two years (Field Notes, September 2004). Maybe if I'm lucky it grew a foot over and will come up again next summer. Also taken out in order to assure good drainage were a number of small-fruited bulrush, *Scirpus microcarpus*, in the sedge family. These were north of the new bridge. They will probably come up again. If not, look for them during the spring on the lake side of the east end of Leonard's bridge. These are also found at Bear Creek by the Sand Hill Road fence.

Thanks to photos from Irene Brown we have been alerted to this season's leaves of the orchid, elegant piperia, *Piperia elegans*. These are near the beginning of Trail b off Road F. Don't be



fooled if the wooden stake at the beginning of the trail says "B." Stores may not sell lower case letters. The orchid leaves are a little past what we call among ourselves "Rattlesnake Gulch." This is a small rocky gulch crossing the trail. Another photo shows the leaves of the transverse rein-orchid, *Piperia transversa*, on the birder's trail behind the Hillside Lab. Last year was a very poor year for the orchids, with the leaves often drying before flowering.

Back in Field Notes, September 2001, I wrote about the two small two-needle pine trees we had found. One, about two meters tall, is easiest to see. If you are on the old loop to the Field Station which would lead to the small parking area, on the road which is parallel to Sand Hill Road, look to the left about twenty meters just before going right and downhill. The other tree is about five meters tall. From the point where you might have stopped to see the first tree, a maintenance road leads left toward Sand Hill Road. In a short distance the road divides, and to the right, on the left hand side, twenty meters or so off the road, is the second tree. These trees have been identified for us as Scotch pine, *Pinus sylvestris*, not a native. Good to have that identification solved.

### **April, 2005**

Two more reminiscences from the past (Field Notes, November 2004). As you drive in at the Main Gate, then turn left, before the right hand corner, which goes toward the big parking lot, there is to your right a large shallow depressed area. This was a "bicycle bowl" and is a leftover from the "resort" days. Now stored there are old picnic tables and benches, logs from the pine trees that were removed from the global change area and, on a flatbed and covered with a red tarp, milled pine lumber from the removed pine trees.

If you drove straight on heading for the Field Station but before turning toward the lake, across the road toward the north and slightly to the left, just out of sight, is the old baseball/softball area.

Bird's-foot fern, *Pellaea mucronata*, which we knew from two or three locations a few years ago, had disappeared. Recently, Betsy Clebsch, docent and author of two books about plants in the genus *Salvia*, took Toni Corelli where Betsy remembered Herb Dengler had shown a group some bird's-foot ferns. Then Toni took Ann Lambrecht and me to see them. The location is an old unused overgrown trail on which we had to go part of the way on hands and knees to get through. There were at least five small clumps of these ferns. Then we had to go back out, again on our hands and knees where necessary. But bird's-foot fern still lives at JRBP!

I first mentioned lemonadeberry, *Rhus integrifolia*, in the sumac family, in Field Notes September, 2001. This is a native of southern California. There were at that time two bushes on the left side of the trail in from Goya gate. They presumably came in from plants on the short trail between Goya Road and Goya gate. Until this year I had never seen them in flower, although we looked. Last year we found 3-4 more on Road F just northwest of the intersection with the trail from the gate. These are also flowering now.

### **June, 2005**

While driving through the main gate at Jasper Ridge, the middle of May, I noticed that the rose bush was in flower. This is the Cherokee climbing rose, *Rosa laevigata*, which grows by the fence about 50 feet north of the main gate. It is supposed to have been planted over 25 years ago. I was surprised to see, on my right, just before making the turn toward the Field Station, a small rose bush in flower. Curiosity made me stop the car, and pick a rose from each. They were the same, with white petals in a single layer.

The middle of February this year, we walked on Trail c, and were pleased to find about 20 sets of leaves of what we knew were the orchid elegant piperia, *Piperia elegans*. The middle of April,

Toni reported that all were gone. They must have made a tasty snack for some deer. On a walk of Trail b, where there have been three of the same species, we could only find two.

The orchid Michael's piperia, *Piperia michaelii*, now number five plants. They grow off Road F near Trail 15. The first year they were found, 2002, many leaves got munched, possibly by slugs, so we tried to protect them by putting copper bands around them. That seemed to help but when they flowered, deer came along and ate the flowers. When the plants came up again a cage in the shape of a 4-sided pyramid, with hardware cloth on the sides, was put over them. Now the problem was to allow pollinators to enter. Cary Tronson, the JR operations steward, was nice enough to drive Ann and me up in the golf cart, and cut openings in the cage that would let in the pollinators, possibly moths, but would keep the deer out. The PVC pipes forming the base of the cage have been doing a good job so far of keeping the leaf-munchers out.

Since Cary had to go to the Boething Nursery site anyway, he invited us to come along. We were amazed at the sight of thousands of 1/2 inch to 1 inch little black caterpillars feeding on hundreds of plants of Italian thistle, *Carduus pycnocephalus*. Irene Brown has identified them as the caterpillars of the painted lady butterfly.

Irene Brown also reports seeing the blue form of the scarlet pimpernel, *Anagallis arvensis*, in the primrose family, on both Trails b and 9.

### **September, 2005**

The end of July, Ann, Toni and I made a plant survey of the creek and its banks at Bear Creek Crossing near Sand Hill Road. Following is a list of what we saw. First listed is the common name of the family, then the common name of the plant, then, in alphabetical order, the scientific name within the family. If you have a JRBP Vascular Plant List this follows page by page. Trees, shrubs and woody vines are omitted. Horsetail family: common horsetail, *Equisetum arvense*. Amaranth family: tumbleweed, *Amaranthus albus* (probably, plant a little immature). Carrot family: poison hemlock, *Conium maculatum*; fennel, *Foeniculum vulgare*. Sunflower: mayweed, *Anthemis cotula*; marsh baccharis, *Baccharis douglasii*; Italian thistle, *Carduus pycnocephalus*; yellow star-thistle, *Centaurea solstitialis*; bull thistle, *Cirsium vulgare*; horseweed, *Conyza canadensis*; sneezeweed, *Helenium puberulum*; willow lettuce, *Lactuca saligna*; nipplewort, *Lapsana communis*; bristly ox-tongue, *Picris echioides*; common groundsel, *Senecio vulgaris*; feverfew, *Tanacetum parthenium*; spiny cocklebur, *Xanthium spinosum*. Mustard: lesser wartcress, *Coronopus didymus* (found here last year, 100's, maybe 1000's found at the Boething Nursery site this year, not on the plant list); Mediterranean mustard, *Hirschfeldia incana*; wild radish, *Raphanus sativus*; water cress, *Nasturtium officinale* (formerly called *Rorippa nasturtium-aquaticum*). Goosefoot: *Atriplex* or *Chenopodium* sp., need fruits to ID. Morning-glory: bindweed, *Convolvulus arvensis*; *Dichondra* sp. (new, not on the plant list). Datisca: Durango root, *Datisca glomerata*.

Spurge: spotted spurge, *Chamaesyce maculata* (seen this year in several places at JR, a real weed); petty spurge, *Euphorbia peplus*. Legume: Spanish clover, *Lotus purshianus* var. *purshianus*; black medick, *Medicago lupulina*. Gentian: *Centaurium* sp. Geranium: *Geranium* sp. Mint: bee balm, *Melissa officinalis*; peppermint, *Mentha x piperita*; pennyroyal, *Mentha pulegium*; hedge nettle, *Stachys* sp. Loosestrife: grass-poly, *Lythrum hyssopifolium*. Evening primrose: willow herb, *Epilobium* sp. Poppy: small-flowered fumitory, *Fumaria parviflora*. Plantain: common plantain, *Plantago major*. Buckwheat: common knotweed, *Polygonum arenastrum*; lady's thumb, *Polygonum persicaria*; water smartweed, *Polygonum punctatum*; green dock, *Rumex conglomeratus*; curly dock, *Rumex crispus*; fiddle dock, *Rumex pulcher*. Purslane: common purslane, *Portulaca oleracea*. Primrose: scarlet pimpernel, *Anagallis*

arvensis. Figwort: round-leaved fluellin, *Kickxia spuria*; American brooklime, *Veronica americana*. Sedge: tall cyperus, *Cyperus eragrostis*; small-fruited bulrush, *Scirpus microcarpus*. Duckweed: duckweed, *Lemna* sp. Grass: bent grass, *Agrostis* sp.; silver European hairgrass, *Aira caryophylla*; barnyard grass, *Echinochloa crus-galli*; nit grass, *Gastridium ventricosum*; common velvet grass, *Holcus lanatus*; Italian ryegrass, *Lolium multiflorum*; perennial ryegrass, *Lolium perenne*; canary grass, *Phalaris* sp.; smilo grass, *Piptatherum miliaceum* (new, not on the plant list); annual beard grass, *Polypogon monspeliensis*.

### **September, 2006**

I am writing this in July and you will be reading it in September. July is hot and dry, and walking in Jasper Ridge could seem dull, with only dry grasses and flowering yellow starthistle, *Centaurea solstitialis* to look at. On July 12, we went in through Goya Gate, turned at the olive tree onto trail 15, and at the little drainage where the trees end and the serpentine starts, we found SPIDERS! In the grasses there were at least a dozen orbweb spiders, *Argiope* sp., and I am sure we could have found more had we looked. Colorful, in black and yellow, the first we saw, from its size, maybe four or five cm with its legs spread out, would have been a female. And a fast mover, it dashed down from its web to catch some little prey, then back up again to the middle of its web. The smaller spiders were most likely males.

Moving on, we did find a group of about ten California Indian pinks, *Silene californica*, some in flower. A surprise, because this was about two months past normal flowering time, and our only known reliable site here was on trail 1, on the slope above the tiger lilies. At the intersection of trail 16 and fire road F, we found flying, with bright red wings, a "bug" which then folded its wings down its back and ran back and forth in the grass in front of us acting like a beetle. It was probably four or five cm long. This may have been a tarantula hawk, which is a spider-hunting wasp.

At the first wooden bridge on trail 12 are some plants, most of which do not have pretty flowers, but are still interesting. Approaching the bridge on the right, in the often wet downslope, are cattails, *Typha* sp., and many small-fruited bulrush, *Scirpus microcarpus*. At the side of the bridge were three plants of common water plantain, *Alisma plantago-aquatica*, which in June had small, white, three-petaled flowers. We also saw blue-green spreading rush, *Juncus patens* (common here), and bright green Pacific bog rush, *Juncus effusus* var. *pacificus*, long on our plant list but just re-found in 2005.