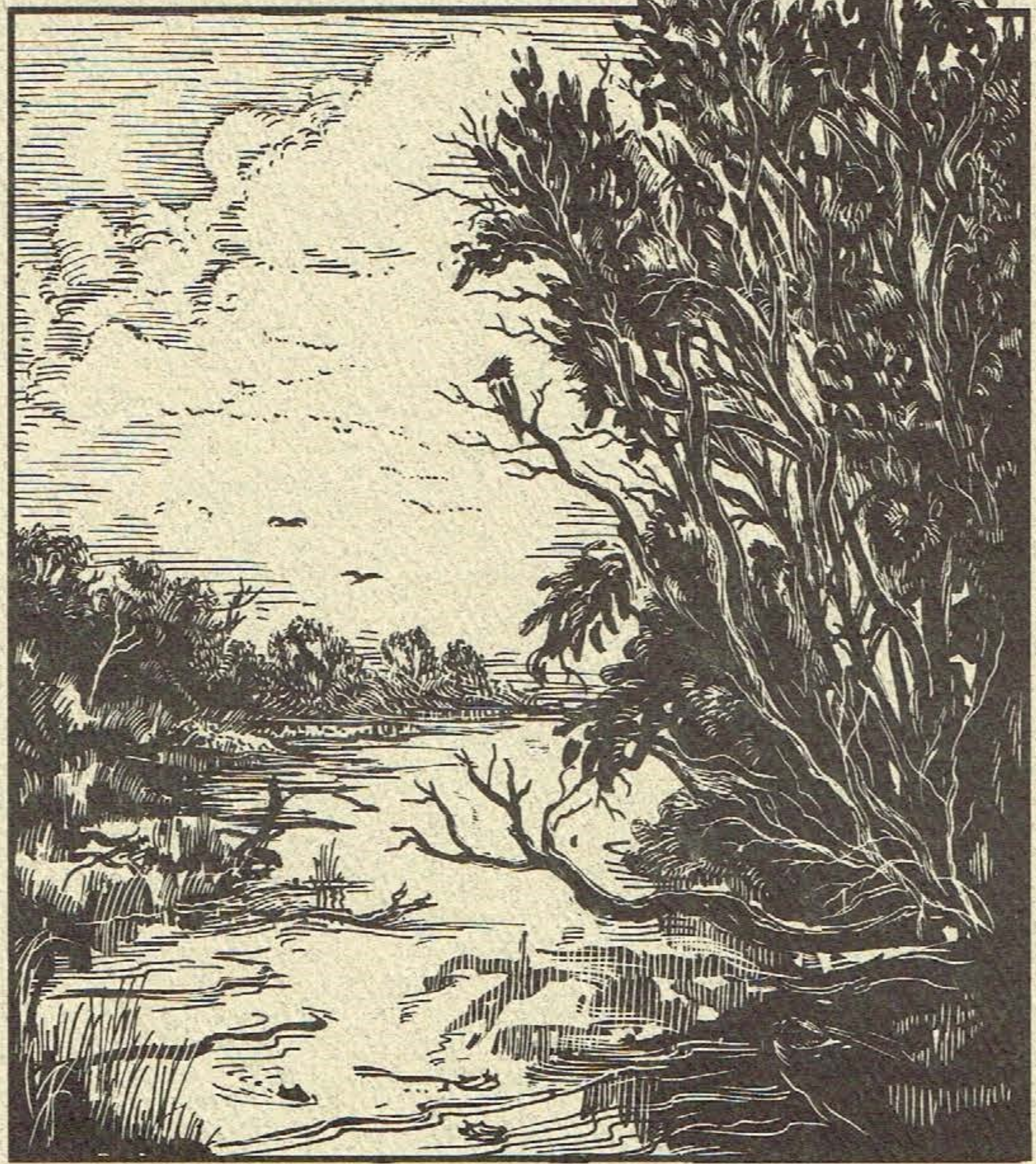


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BOBELAINE  
AUDUBON  
SANCTUARY



An Interpretive Guide  
to the  
Mixed Riparian Forest

**BOBELAINE AUDUBON SANCTUARY**  
An Interpretive Guide to the Mixed Riparian Forest

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**Acknowledgments**

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A most heartfelt "thank you" goes to Erin O'Toole, without whom this publication would not be possible. Erin spent countless hours designing the layout, typing the text, and drawing all of the beautiful artwork found throughout the brochure. We are deeply grateful to her for her dedication and tireless efforts on this project.

For additional copies of this publication, or if you have any questions about Bobelaine Sanctuary, please contact Sacramento Audubon Society, care of:  
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555 Audubon Place,  
Sacramento, California, 95825



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Riparian forests once covered the Great Valley of California, spreading half a mile or more wide along the banks of all the rivers. Now, less than two percent of those original river forests remain in California.

In 1975 Bob and Elaine Crandall gave 430 acres on the west side of the Feather River to the National Audubon Society to be preserved and protected as a near-natural, rare remnant of this once-common habitat.

A river forest consists of a variety of habitats, or zones, with lots of "edges," places where two types of habitat meet. Most activity is concentrated in these edges, and life there is rich and diverse.

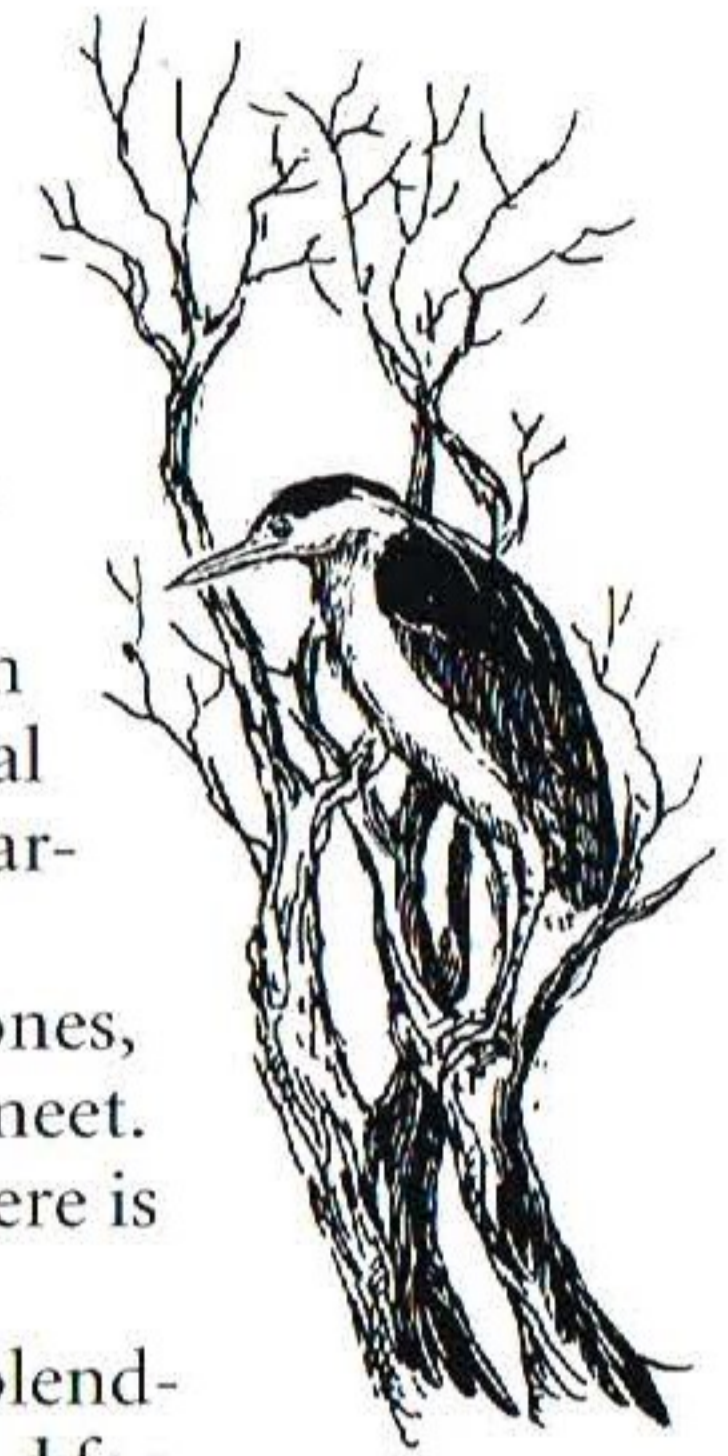
Our Sanctuary has riverbank willows and alders blending into grasslands; marshy buggy sloughs at cottonwood forest edges; shrubby thickets of rose, blackberry and elderberry; and a mature valley oak woodland, the climax (last stage) in the succession of growth in this system.

Fire and flood, as well as seasonal weather, bring change. During heavy rain years Bobelaine is flooded to varying degrees. On a hot, dry and windy day in late September of 1992 fire swept through the Sanctuary. A build up of old undergrowth fueled a fire that turned cottonwoods into flaming torches. Some massive old trees were lost. However, opening some areas to sunlight, and the changed chemical composition of the soil have produced a spurt of growth in understory plants.

The Sanctuary is a refuge for many species. Black-tailed deer, skunks, gray foxes, raccoons, beaver, otters, coyotes and ringtail cats are some resident mammals. Over 190 bird species have been recorded here, and there have been many sightings of the endangered yellow-billed cuckoo, which may nest here.

Bobelaine is part of the 3,756 acre Oso-Plumas area nominated by the Department of Fish and Game as a National Natural Landmark, for its value as a prime example of Great Valley Mixed Riparian Forest.

Sacramento Audubon, which manages the Sanctuary for National Audubon, supports protection of the lands adjacent to the Sanctuary in the proposed landmark area. Educational programs, field trips and nature walks designed to introduce people to the area are conducted on a continuing basis. Sacramento Audubon has a strong commitment to continue our role as manager and protector of this unique and important natural area.



## Self-Guided Walk

### FROM THE LEVEE

As you walk up onto the levee, move slowly and quietly scan the lake. Look for a swimming beaver or muskrat. Search for egrets in the trees, and for pied-billed grebes in the middle of the lake. In winter you may spot a wigeon or shoveler. Springtime means flocks of tree swallows. Watch the oak trees at the edge of the water for yellow-rumped warblers, Nuttall's and acorn woodpeckers, and the ubiquitous starling.

Remember to use your other senses as well. The scream of a red-shouldered hawk or the rattling cry of the kingfisher may alert you before you see the birds themselves.

On this self-guided walk, turn left and walk north on the levee along the lake. In the oaks on your right and in the walnut orchard on your left there's a good chance of seeing western blue birds and



northern orioles in the spring. The brush at the foot of the levee is good for a wide variety of sparrows in winter and towhees at all times. Watch for black phoebes flycatching over the lake from perches on telephone wires or branches overhanging the water.

Lake Crandall is a borrow pit, left when dirt was excavated to build the levee. Though not natural, the lake, and the sloughs extending from both ends of it, form a rich and diverse habitat and are a welcome addition to the Sanctuary.

Just past the end of the lake you'll see a gate leading down into the sanctuary. Stop first and look out over the cultivated fields; on a clear day you can see the Sutter Buttes. Go slowly and quietly down the slope to the slough.





## AT THE SLOUGH

This is Wood Duck Slough, and true to its name, wood ducks are frequently seen here. If you have a scope, scan the far end of the slough. Watch for black-crowned night-herons, green-backed herons and egrets. In warm weather the pond turtles will be sunning themselves. Bullfrogs and smaller frogs are frequently seen and heard.

This is also a favorite area of the river otters. If you look closely at the ends of the logs sticking out of the water, you may see a pile of scat. This is a territorial otter marking. The tall bushy shrub/tree in front of you with the small round balls on it is button bush. The ground here may show the cleft hoofprints of deer.

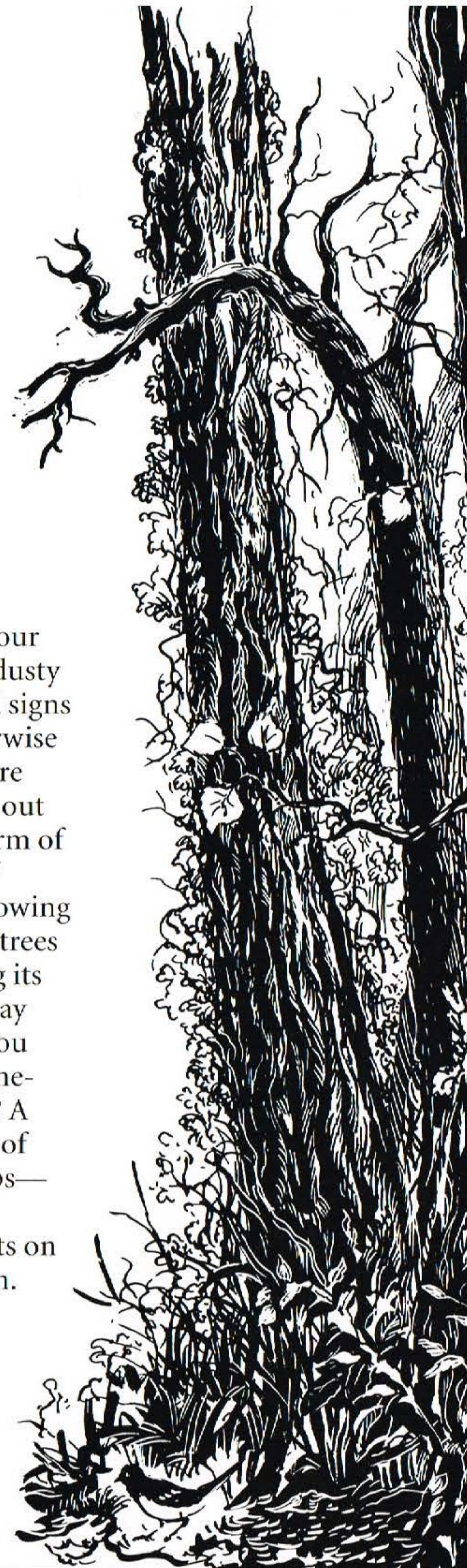


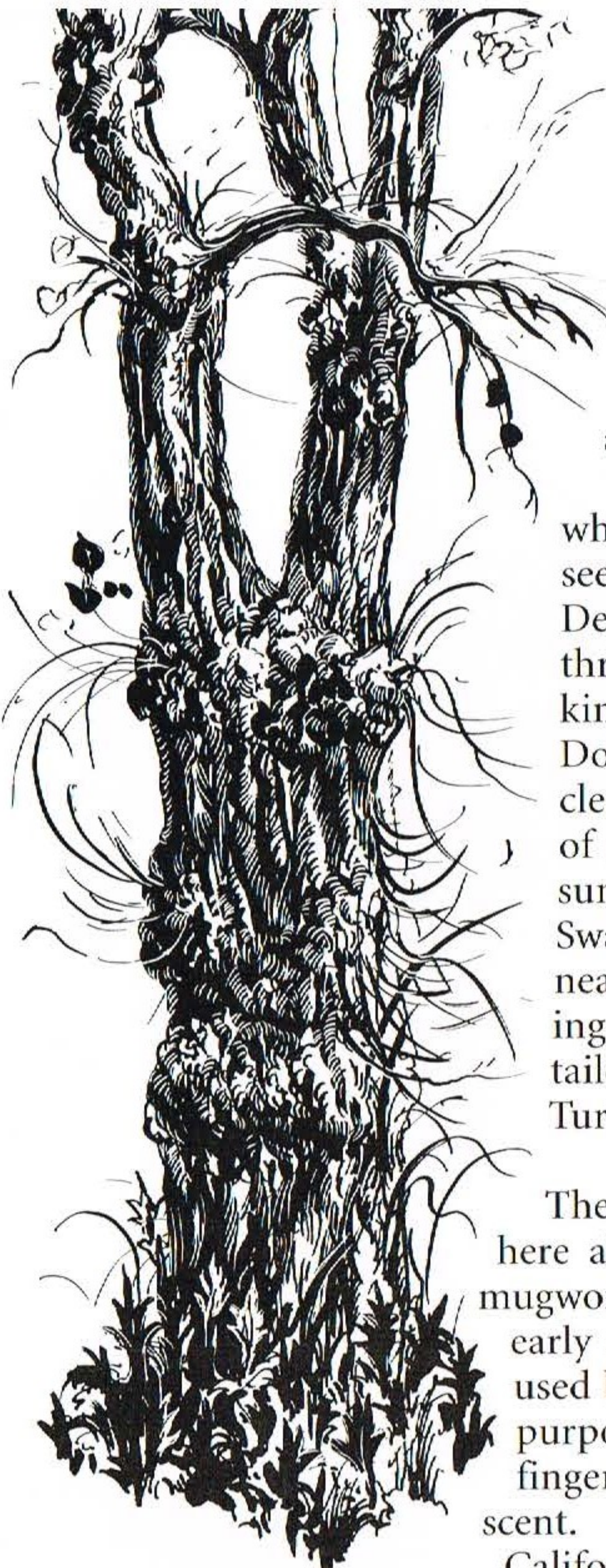
Now is a wise time to begin thinking about poison oak. It flourishes here in many forms — vines, shrubs and bushes. The clusters of white berries are a valuable food source for many birds and animals, but all parts of the plant can cause severe itching and swelling in humans. Its prevalence is a good reminder to stay on the trails.



Again, don't forget to use all your senses. Keep watching the trail for dusty or muddy spots where you can find signs of the inhabitants that do not otherwise show themselves. Most mammals are fairly nocturnal, but when they are out they do leave telltale signs in the form of footprints, scat, and the remains of meals (a pile of feathers tells a harrowing story). Scraped bark hanging from trees and branches tells of a deer rubbing its new antlers. Look at the scat you may find on the trail. What does it tell you about the animal? Size tells you something. Is it composed mostly of fur? A coyote's mouse meal remains? Lots of partially digested grapes or rose hips—could it be a raccoon passed here?

The tall square-stemmed plants on the sides of the trail are blue vervain. The flowering heads have tiny purple/blue flowers in season. The hanging vines that aren't poison oak are mature California grape.





## INTO THE SANCTUARY

Here you can see several signs of fire damage. The burned trees, though dead, are still an important part of the ecosystem, providing shelter and food (increased insect activity) for birds and mammals.

This area is worth pausing in for a while to see how many birds you can see and how many more you can hear. Depending on the season it's good for thrushes, towhees, wrens, warblers, kinglets, woodpeckers and flycatchers. Don't forget to look up when you're in a clear area, for winter brings large flocks of geese and swans overhead, and in summer you may see the uncommon Swainson's hawks, which nest in the nearby Sutter bypass. Other hawks soaring overhead are likely to be either red-tailed hawks or red-shouldered hawks. Turkey vultures are common as well.

Don't forget your sense of smell. The two strongly scented plants growing here along the trail are Mexican tea and mugwort. Mexican tea was introduced by early settlers. Mugwort is a native plant, used by Native Americans for a variety of purposes. Try rubbing a leaf between your fingers. It has a pleasantly strong herbal scent.

California rose also grows along the path. Its pink flowers and bright red rose hips contrast with the darker, lower-growing blackberry, and if you see a climbing vine with white flowers in puffs, it's probably clematis. Star thistle, milk thistle and horse weed are some of the intrusive non-native plants that have become a problem here since the fire.

Notice the tall, smooth-barked whitish trees. These are California sycamores, closely related to the oriental plane trees common in urban yards. The stark bare-white branches and trunks in winter make a striking picture.

## EIZINGER GROVE

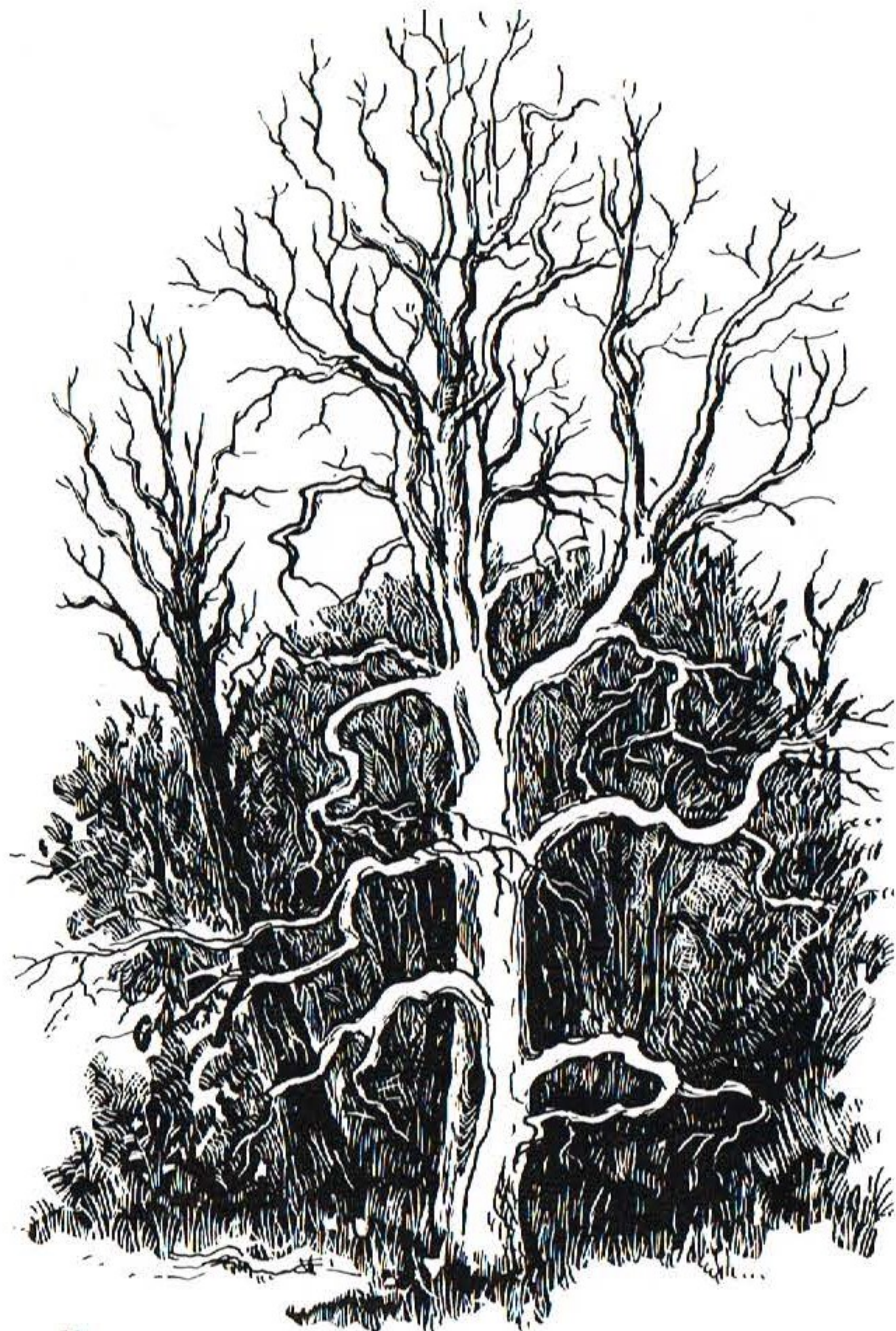
By now you may have reached the circular area called Eizinger Grove, named for Ben & Willie Argante Eizinger, two of the first Audubon members to actively encourage educational use of the Sanctuary.

The mixed grove of valley oaks and California sycamores ahead is good in the spring for warblers. There are frequently great horned owls in this area as well.

Take the trail to the left (North). Notice the pair of giant valley oaks on your left. As you pass them you walk under a canopy of wild grape. If the grape is in fruit, taste one. They have large seeds, but an uncommonly strong grape flavor. The large tree on your left just past the oak is a magnificent specimen of the California sycamore.

The trail now opens out into another fire damaged area. The Fremont cottonwoods, valley oaks and coyote bush in this open space all burned. It will be interesting to see the changes through the seasons as the area regenerates. The coyote bushes on the left are already showing a lot of new growth. In winter, roughly December through April, they are in bloom. Native Americans said that when they burst into bloom it looked as though a coyote had passed and bits of his fur had caught on the bush.

The tall grass-like plant on your right is Santa Barbara sedge. This native plant is very fire resistant and stays green in summer when grasses are brown and dry. During the fire trees surrounded by the native sedge suffered far less damage.





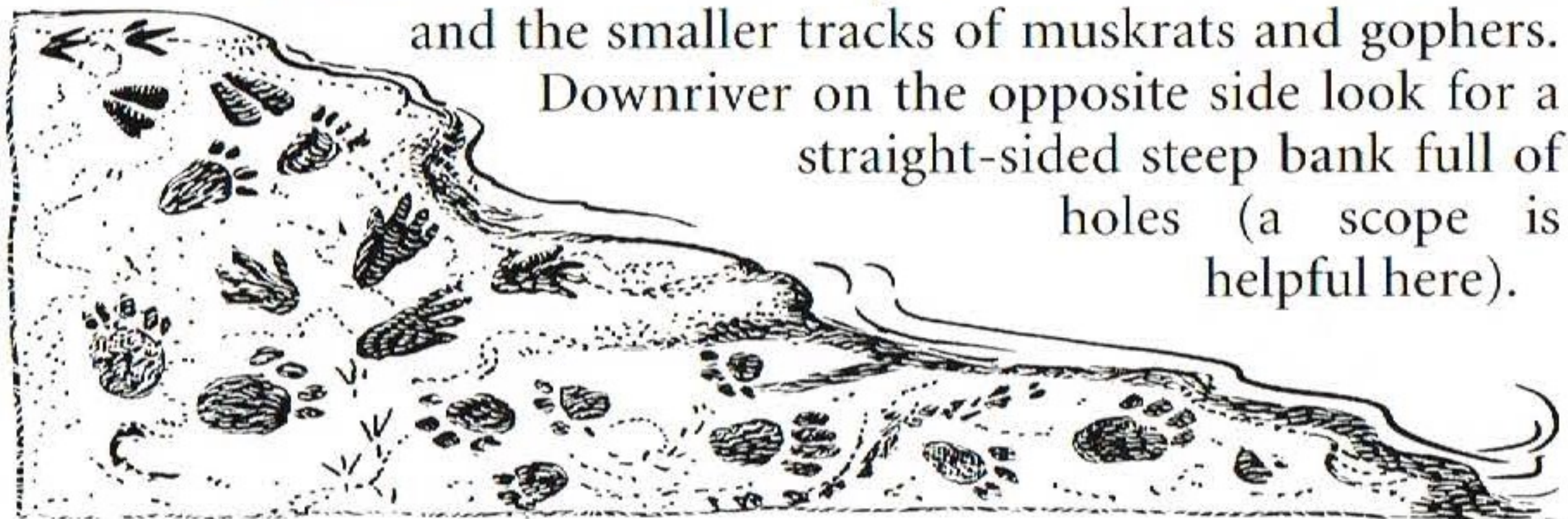
As you walk on towards the river there are some California black walnut trees on your right, and then more valley oaks. A cursory inspection of the oak leaves underfoot will reward you with at least two or three kinds of galls. The very large oak apples are galls, as are the minute, variously-shaped growths on the leaves. Another common gall is the swelling at the base of the stem on a cottonwood leaf.

#### RIVERS' OVERLOOK

Turn at the "Rivers' Overlook" sign to walk down to the river. You can find several types of galls growing on the sandbar willows here. Praying mantis egg cases are also frequently found on the sandbar willows. They are a hard brown growth about the size and shape of a finger joint attached to the branch. Enjoy looking at them, but please leave them there so they can hatch.



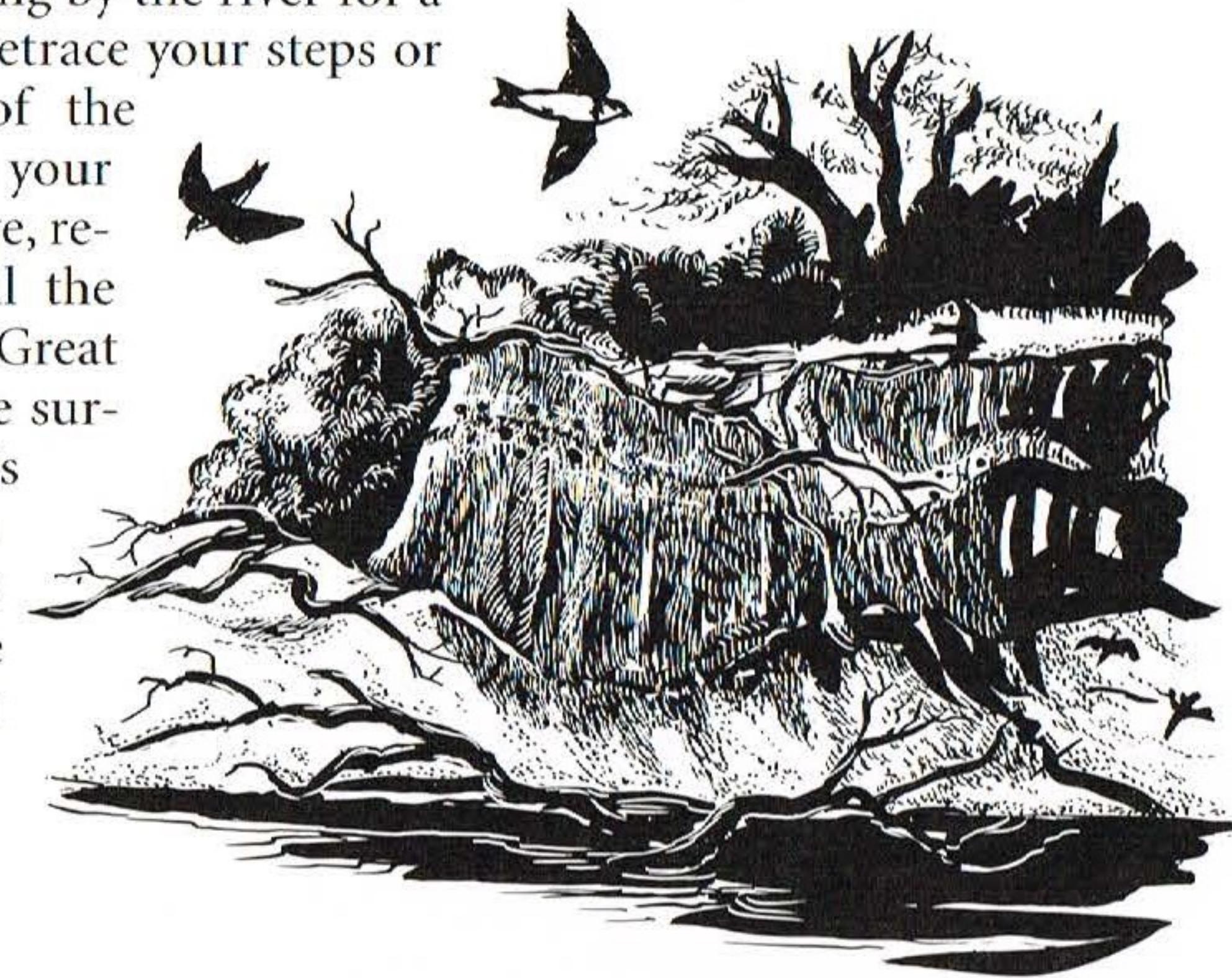
The water's edge is a good place to find the tracks of different animals. Look for the footprints of skunk and raccoon and the smaller tracks of muskrats and gophers. Downriver on the opposite side look for a straight-sided steep bank full of holes (a scope is helpful here).



This is a nesting colony of bank swallows (March-May). Scan the shore on both sides of the river for sandpipers, American pipits, greater yellowlegs and killdeer.

As you look across the river, you can see the mouth of the much smaller Bear River as it joins the Feather. The Feather then flows down and joins the Sacramento River at Verona. The rivers' boundaries change constantly. The sandbars change shape from year to year as the currents change; the banks build up in one area while eroding in another. Although the flow is normally controlled upstream by the Oroville dam, the river still overflows its banks during wet years. In 1986 Bobelaine was almost completely underwater.

After relaxing by the river for a while, you can retrace your steps or explore some of the other trails on your own. As you leave, remember that all the rivers in the Great Valley once were surrounded by this kind of riparian forest. Please help us preserve this little that remains.



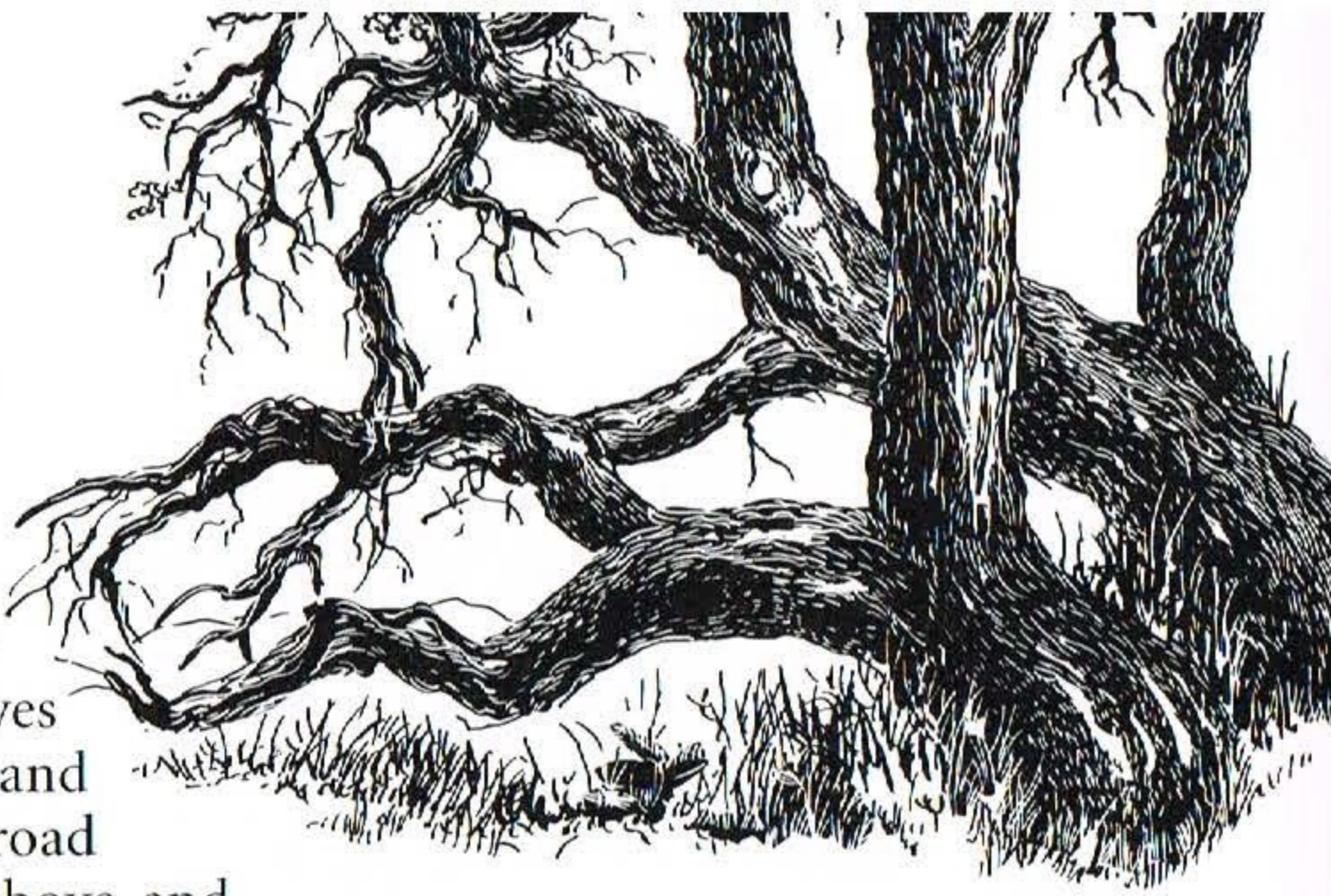
## Valley Oak

The valley oak is the highest form of vegetation in this region, the climax plant. It is deciduous, with leaves 3 to 4 inches long and 2 to 3 inches broad yellowish green above and

paler beneath. The leaves are parted nearly to the midrib into paired lobes. The acorn is long and conical with a warty cap, and the bark is thick and checkered.

Native peoples depended on the acorn as a staple of their diet. The tannin from the bark was used in tanning hides. The large oak apple galls were mixed with rusty iron to make ink. Acorns are still an important food item for squirrels, deer, and some birds. Acorn woodpeckers store the nuts for food and for the insect larvae they may contain. In addition, the valley oak hosts over one hundred species of galls of all types-leaf, root, bark and stem.

Other common riparian trees at Bobelaine are the box elder, black and sandbar willow, California or white alder, Oregon ash and California black walnut.



## Fremont Cottonwood

Named after early explorer John C. Fremont, cottonwoods were a welcome sight to early explorers -- a sign of water in arid lands.

The leaves are bright green and triangular or roundish, with leaf stalks flattened to allow the leaves to flutter in the slightest breeze. The bark is light gray and deeply furrowed in older trees. The female trees form grape-like clusters of seed pods that open into cottony masses when the seeds are ripe. The male trees form dangling reddish catkins in early spring. Cottonwoods host a distinctive gall that forms as a large smooth swelling on the leaf stem.

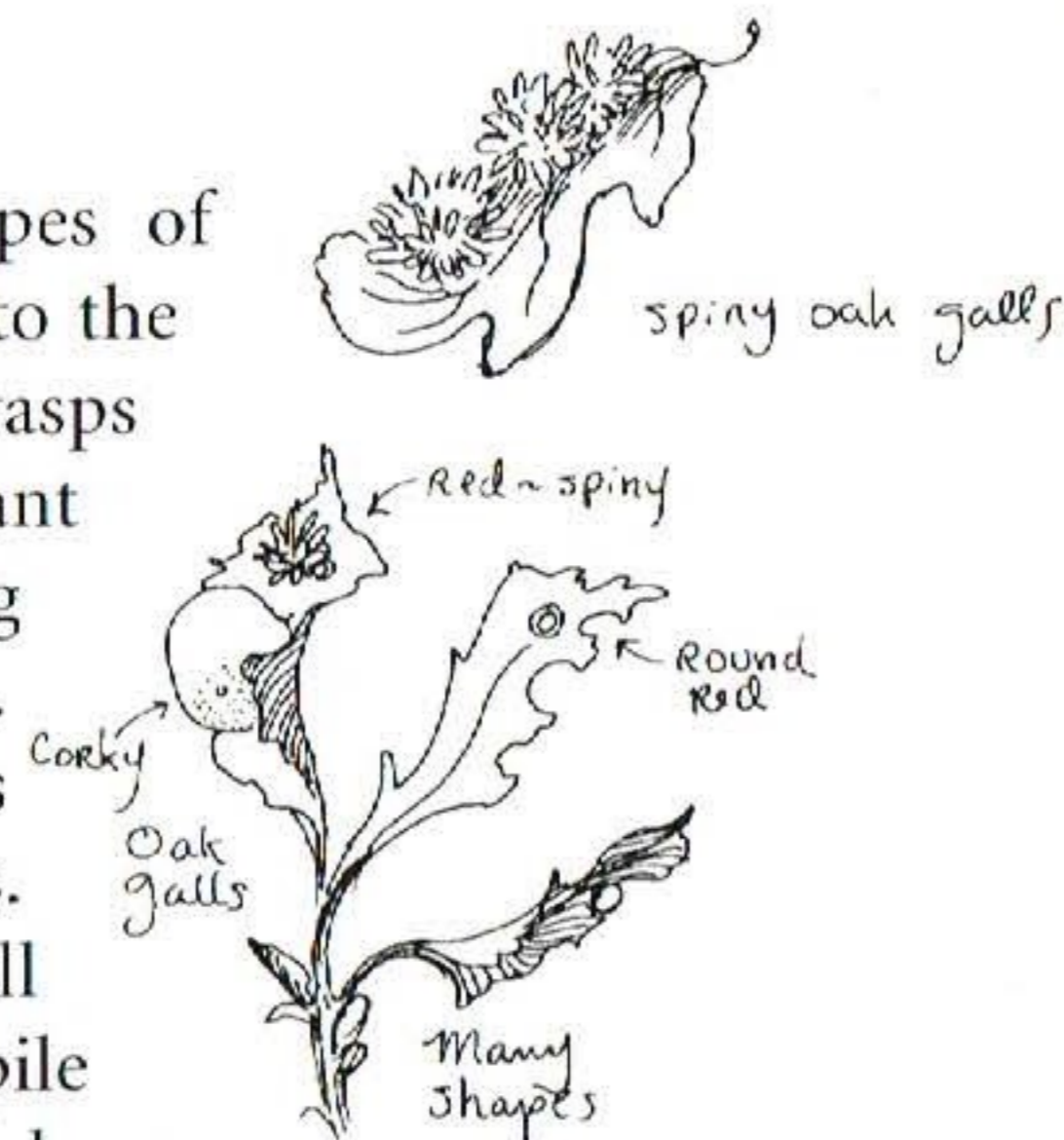


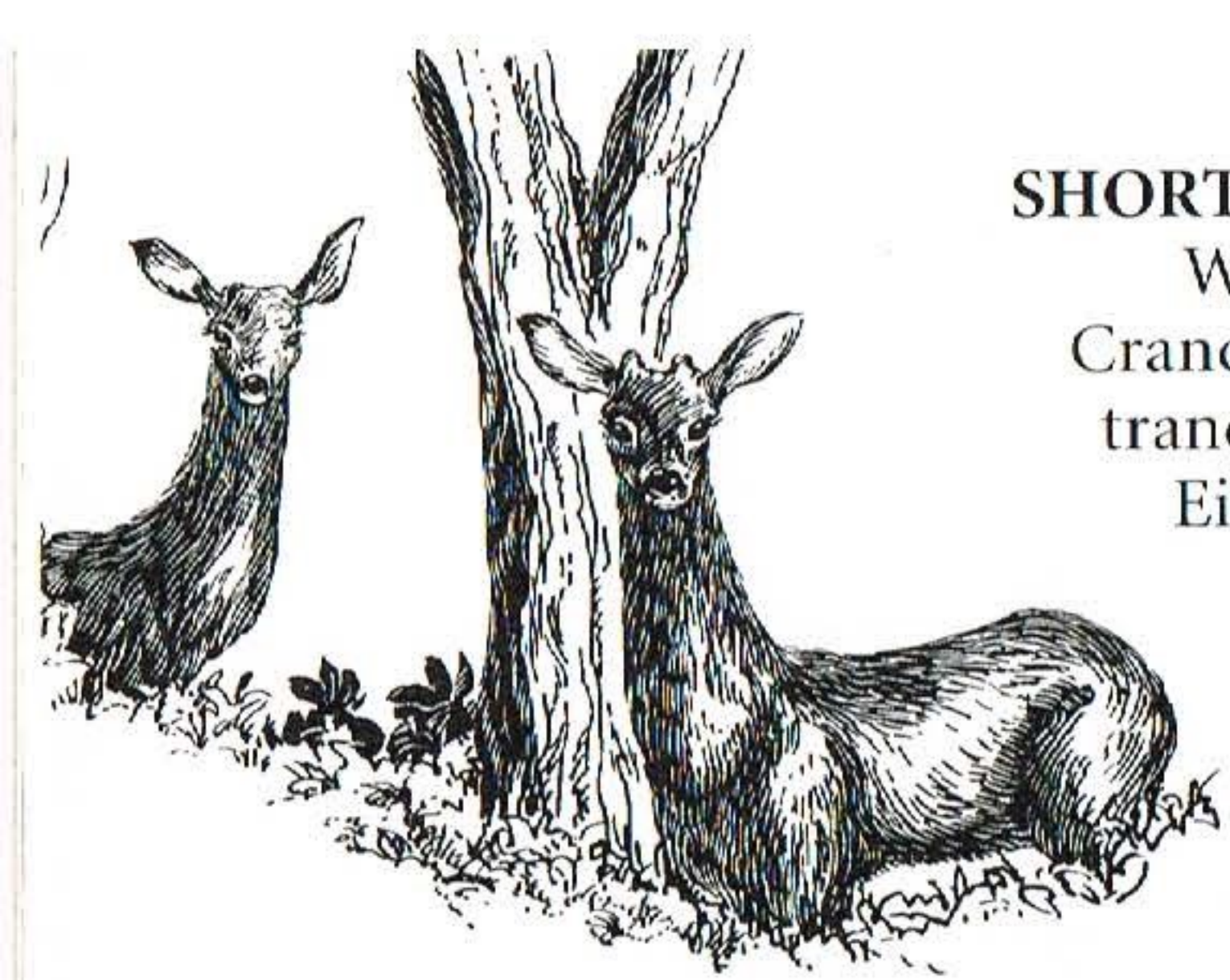
## California Sycamore

A member of the plane tree family, the bare white trunks and branches of the sycamore are conspicuous in winter. The sheets of bark are shed annually. The leaf is large and palmate, somewhat like a maple leaf in shape. The dangling seed balls are approximately one inch in diameter.

## Galls

The myriad forms and shapes of galls, from the largest "oak apple" to the tiniest leaf gall, are caused by tiny wasps or other insects that pierce the plant tissue to lay their eggs, stimulating the plant cells to abnormal growth. Oaks are host to over 100 gall types on stems, leaves, roots and branches. Willows, roses and cottonwoods all have their own galls. Sift through a pile of oak leaves looking closely at each one and see how many different types of leaf galls you can find.





### SHORT WALK

Walk north on the levee past Lake Crandall, in through the center entrance and down the Center Trail to Eizinger Grove. Follow the north trail to the River's Overlook. This walk is the one fully described in this guide. It is about 1.3 miles one way.

### THE NORTH TRAIL

Going past Rivers' Overlook, the North Trail winds through a cottonwood forest festooned with heavy liana vines of poison oak and wild grape. There is a heavy understory growth of blackberry and other shrubs. Trees in this area include box elder, Oregon ash and white alder. If you go all the way to the north end, try returning on the Foot of the Levee Trail. This follows Wood Duck Slough and passes a black-crowned night-heron roost. Watch the far bank of the slough for the entrances to otter and beaver burrows.

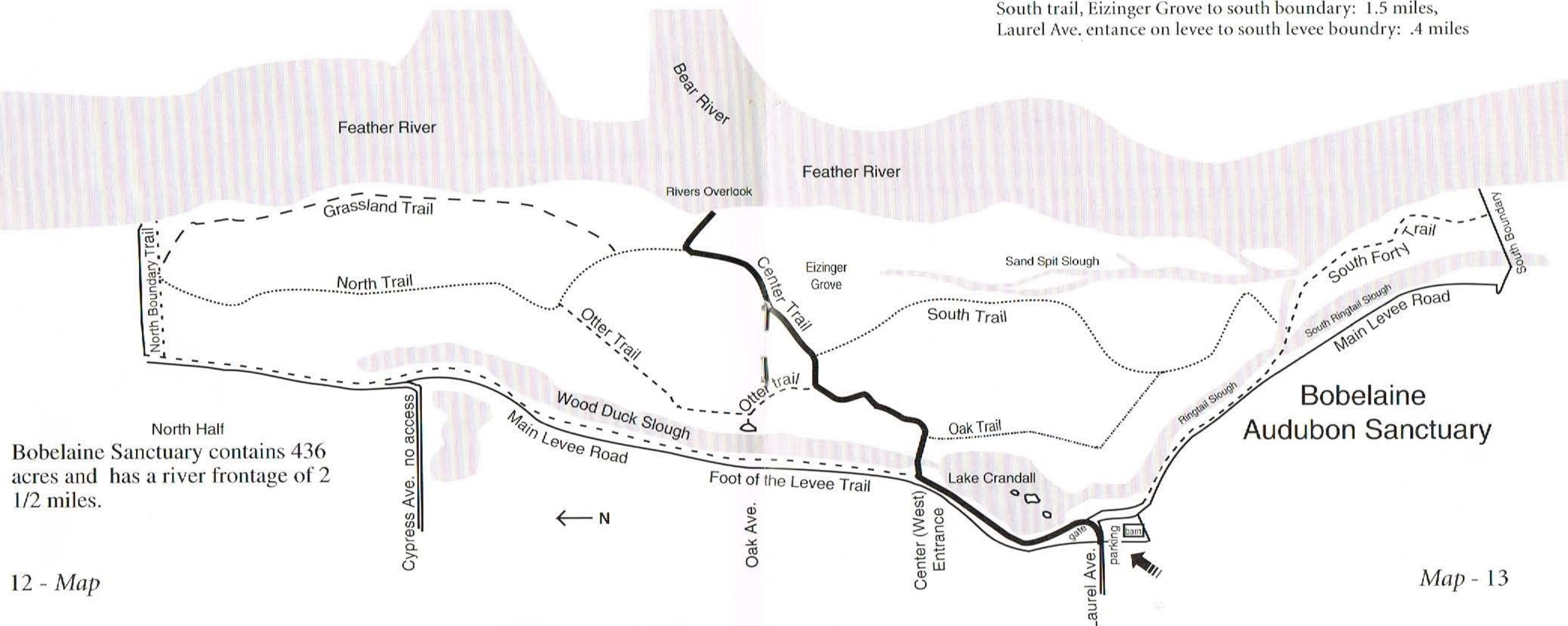
### THE SOUTH TRAIL

The South Trail out of Eizinger Grove goes through more open areas, including a climax oak forest with widely spaced trees, and across Ringtail Slough. (The slough may be impassable in very wet weather). Just past Ringtail Bypass, a broad grassy area gives a good view of the Feather River and the entrance to Sand Spit Slough with its sandbar willow stand. Yellowthroats are heard singing here. On down the South Forty Trail you pass through a heavy shrub area, primarily elderberry, rose and coyote bush. This is a very good area for small birds: warblers, towhees, sparrows, wrens, etc. Backtrack on the South Forty and come out at the south levee boundary and you can return on the Foot of the Levee Trail along Ringtail Slough.

Shorter loops are possible using the Otter Trail or Oak Trail, but these are subject to seasonal closing and may be posted as closed.

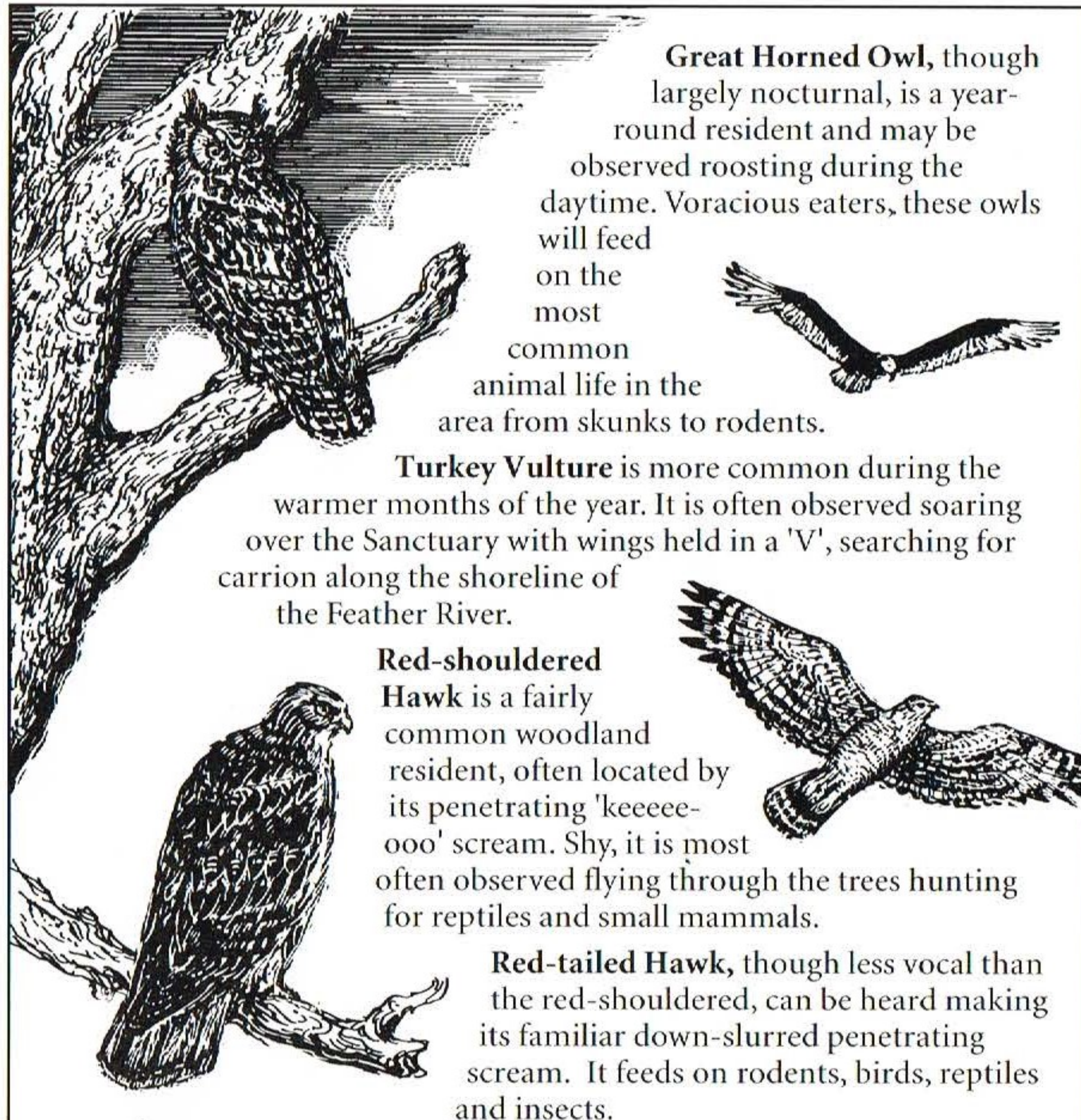
### TRAIL DISTANCES

- Laurel Ave. entrance on levee to center entrance: .3 miles
- Center entrance to north boundary entrance: 1.2 miles
- North trail from Eizinger Grove to north boundary: 1.2 miles
- Center trail, Center levee entrance to Eizinger Grove: .4 miles
- South trail, Eizinger Grove to south boundary: 1.5 miles,
- Laurel Ave. entrance on levee to south levee boundary: .4 miles



Bobelaine Sanctuary contains 436 acres and has a river frontage of 2 1/2 miles.





**Great Horned Owl**, though largely nocturnal, is a year-round resident and may be observed roosting during the daytime. Voracious eaters, these owls will feed on the most common animal life in the area from skunks to rodents.

**Turkey Vulture** is more common during the warmer months of the year. It is often observed soaring over the Sanctuary with wings held in a 'V', searching for carrion along the shoreline of the Feather River.

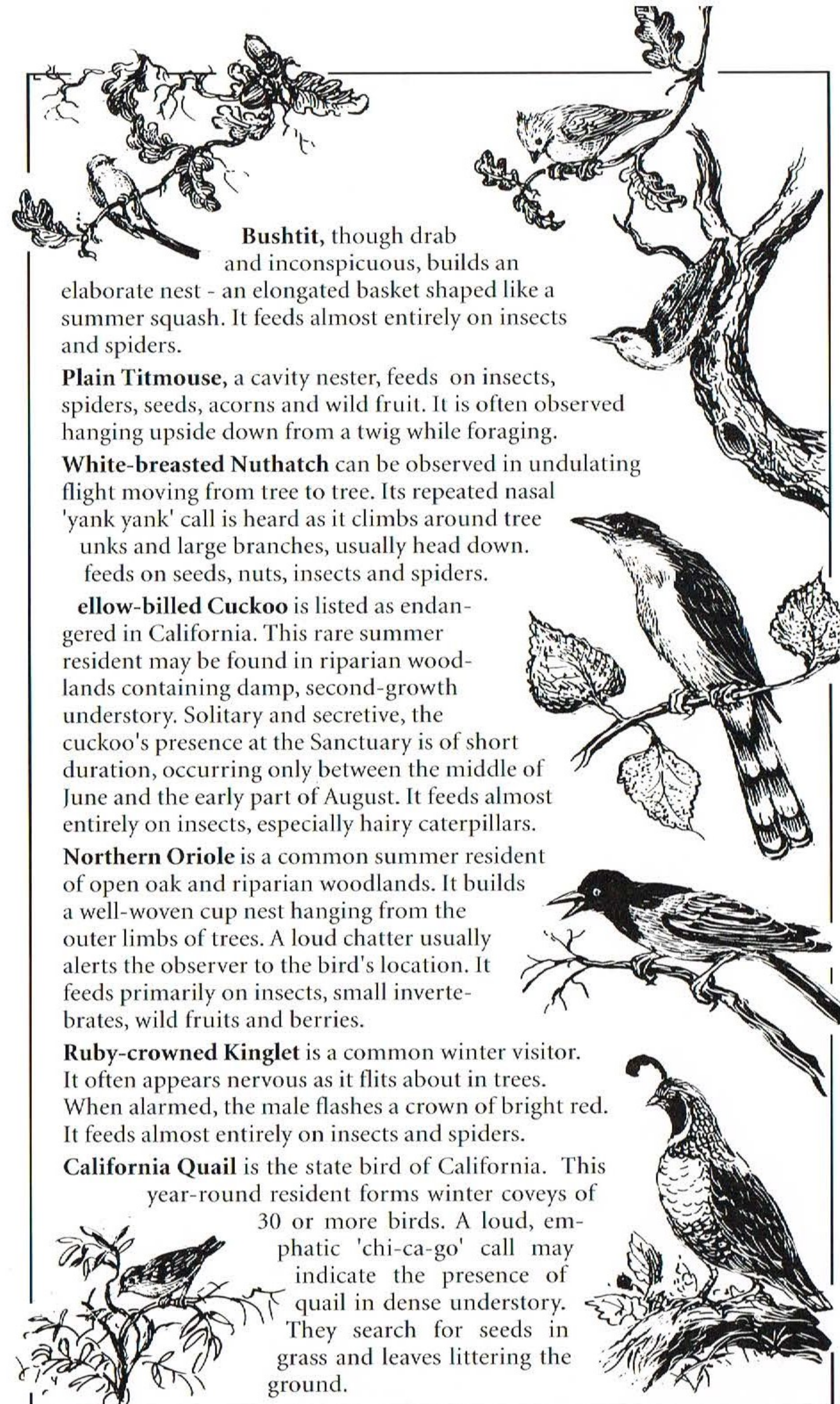
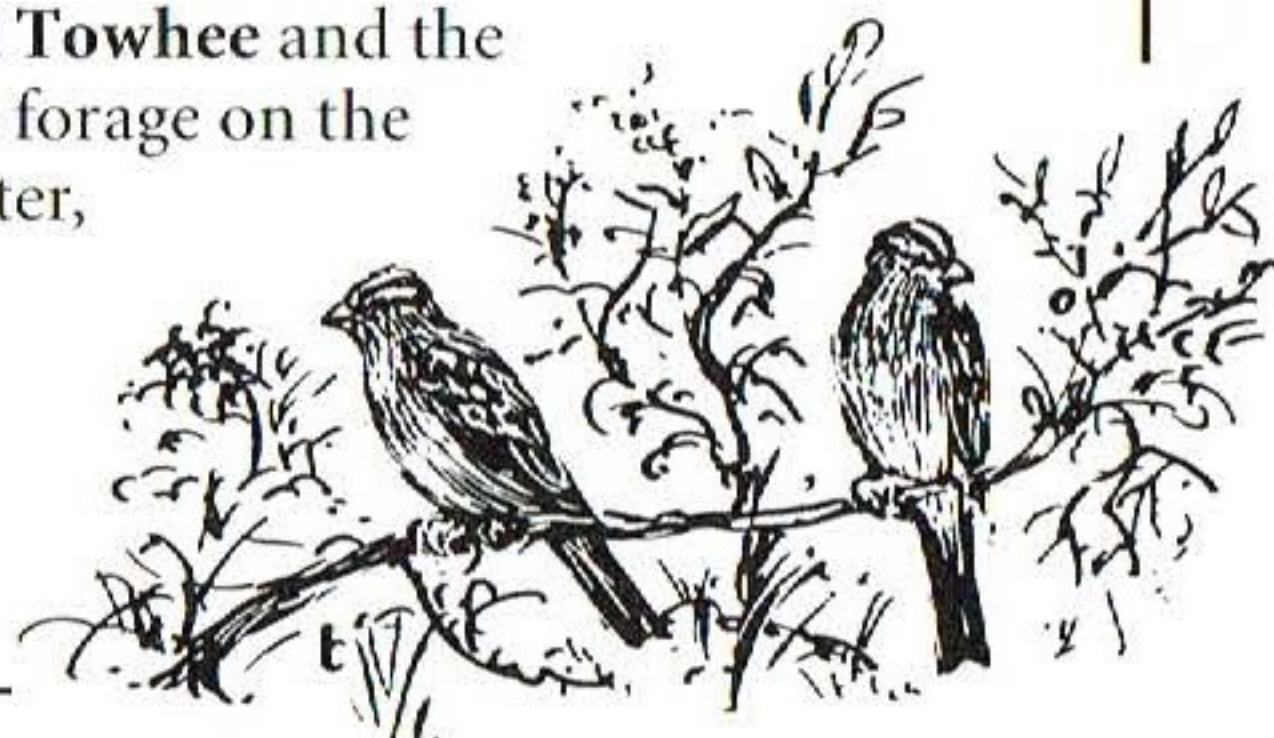
**Red-shouldered Hawk** is a fairly common woodland resident, often located by its penetrating 'keeeee-ooo' scream. Shy, it is most often observed flying through the trees hunting for reptiles and small mammals.

**Red-tailed Hawk**, though less vocal than the red-shouldered, can be heard making its familiar down-slurred penetrating scream. It feeds on rodents, birds, reptiles and insects.

**Bewick's Wren** and the less common but more vocal house wren are usually observed near the edges of dense understory where they nest in natural cavities and feed mostly on insects, spiders and small invertebrates.

**White-crowned Sparrows** are common winter visitors. This sparrow and the golden-crowned sparrow are found in flocks, sometimes mixed, as they scratch the ground for seed.

**Rufous-sided Towhee** and the California towhee forage on the ground in leaf litter, scratching for seeds, wild fruits and insects.



**Bushtit**, though drab and inconspicuous, builds an elaborate nest - an elongated basket shaped like a summer squash. It feeds almost entirely on insects and spiders.

**Plain Titmouse**, a cavity nester, feeds on insects, spiders, seeds, acorns and wild fruit. It is often observed hanging upside down from a twig while foraging.

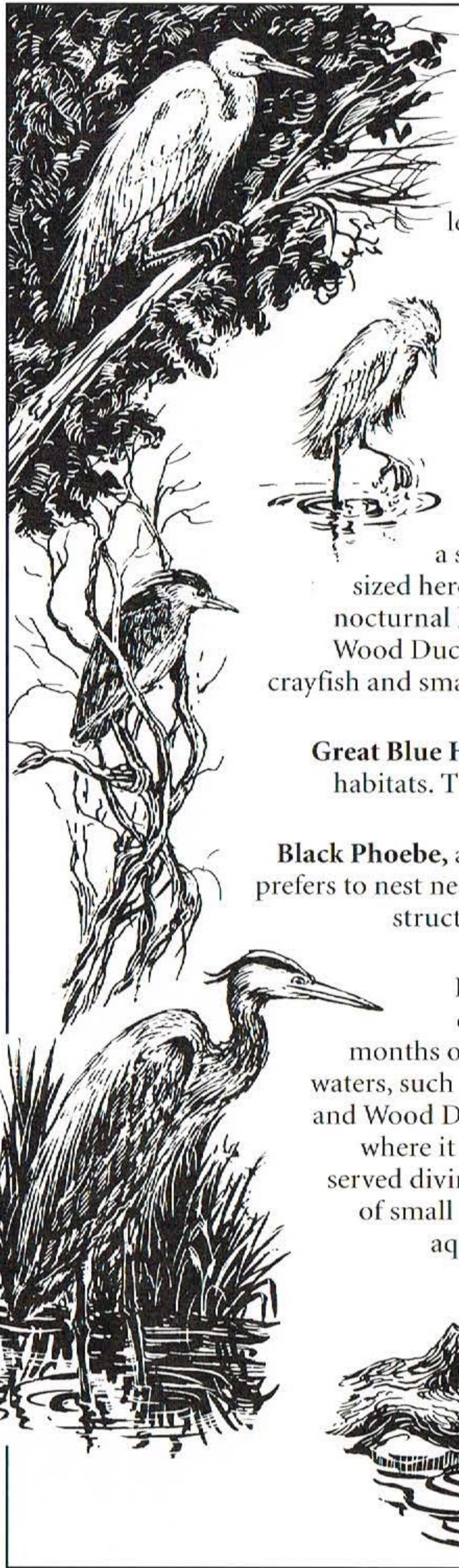
**White-breasted Nuthatch** can be observed in undulating flight moving from tree to tree. Its repeated nasal 'yank yank' call is heard as it climbs around treeunks and large branches, usually head down. It feeds on seeds, nuts, insects and spiders.

**Yellow-billed Cuckoo** is listed as endangered in California. This rare summer resident may be found in riparian woodlands containing damp, second-growth understory. Solitary and secretive, the cuckoo's presence at the Sanctuary is of short duration, occurring only between the middle of June and the early part of August. It feeds almost entirely on insects, especially hairy caterpillars.

**Northern Oriole** is a common summer resident of open oak and riparian woodlands. It builds a well-woven cup nest hanging from the outer limbs of trees. A loud chatter usually alerts the observer to the bird's location. It feeds primarily on insects, small invertebrates, wild fruits and berries.

**Ruby-crowned Kinglet** is a common winter visitor. It often appears nervous as it flits about in trees. When alarmed, the male flashes a crown of bright red. It feeds almost entirely on insects and spiders.

**California Quail** is the state bird of California. This year-round resident forms winter coveys of 30 or more birds. A loud, emphatic 'chi-ca-go' call may indicate the presence of quail in dense understory. They search for seeds in grass and leaves littering the ground.



**Great Egret** is a large white egret with black legs and yellow bill. It is often observed hunting shallow waters for fish, frogs, snakes, crayfish and small mammals. The smaller and less common snowy egret has black legs with yellow feet and a black bill.

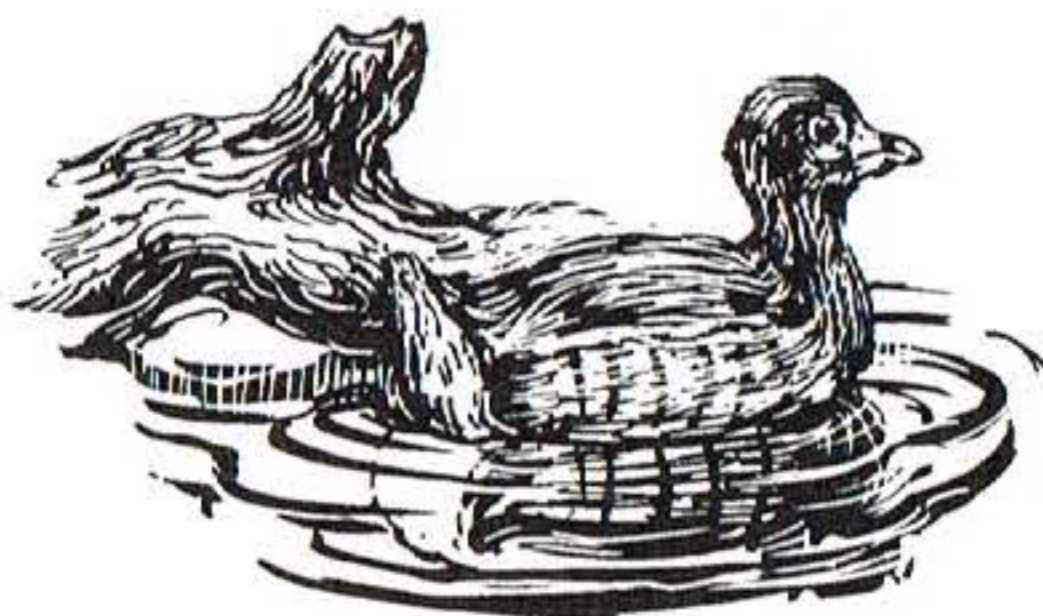
**Tree Swallow** is a common summer resident of open areas near water. It utilizes deserted woodpecker holes or natural tree cavities for nesting, and feeds almost entirely on insects caught on the wing.

**Black-crowned Night-Heron** is a stocky, medium-sized heron known for its nocturnal habits. It can frequently be found in Wood Duck Slough hunting for fish, frogs, snakes, crayfish and small mammals. When startled, a series of 'quoks' serves as an alarm call.

**Great Blue Herons** are often observed near aquatic habitats. They hunt shallow waters for fish, frogs, snakes, crayfish and small mammals.

**Black Phoebe**, a common resident of aquatic habitats, prefers to nest near water, generally aided by man-made structures for support of its mud nest. A fly-catcher, it feeds on insects.

**Pied-billed Grebe**, a resident more common during the cooler months of the year, seeks quiet waters, such as Lake Crandall and Wood Duck Slough, where it is often observed diving in search of small crayfish and aquatic insects.



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**Belted Kingfisher** is fairly common within the confines of Lake Crandall and Wood Duck Slough where its raucous chattering vocalizations tell the observer of its presence. Often observed perching on a branch or snag overlooking the water, or seen hovering above the water, kingfishers dive headfirst to catch small fish and aquatic insects.

**Yellow-billed Magpie**, a year-round resident, is omnivorous in its eating habits, feeding on large insects, carrion, fruit, acorns and seeds.

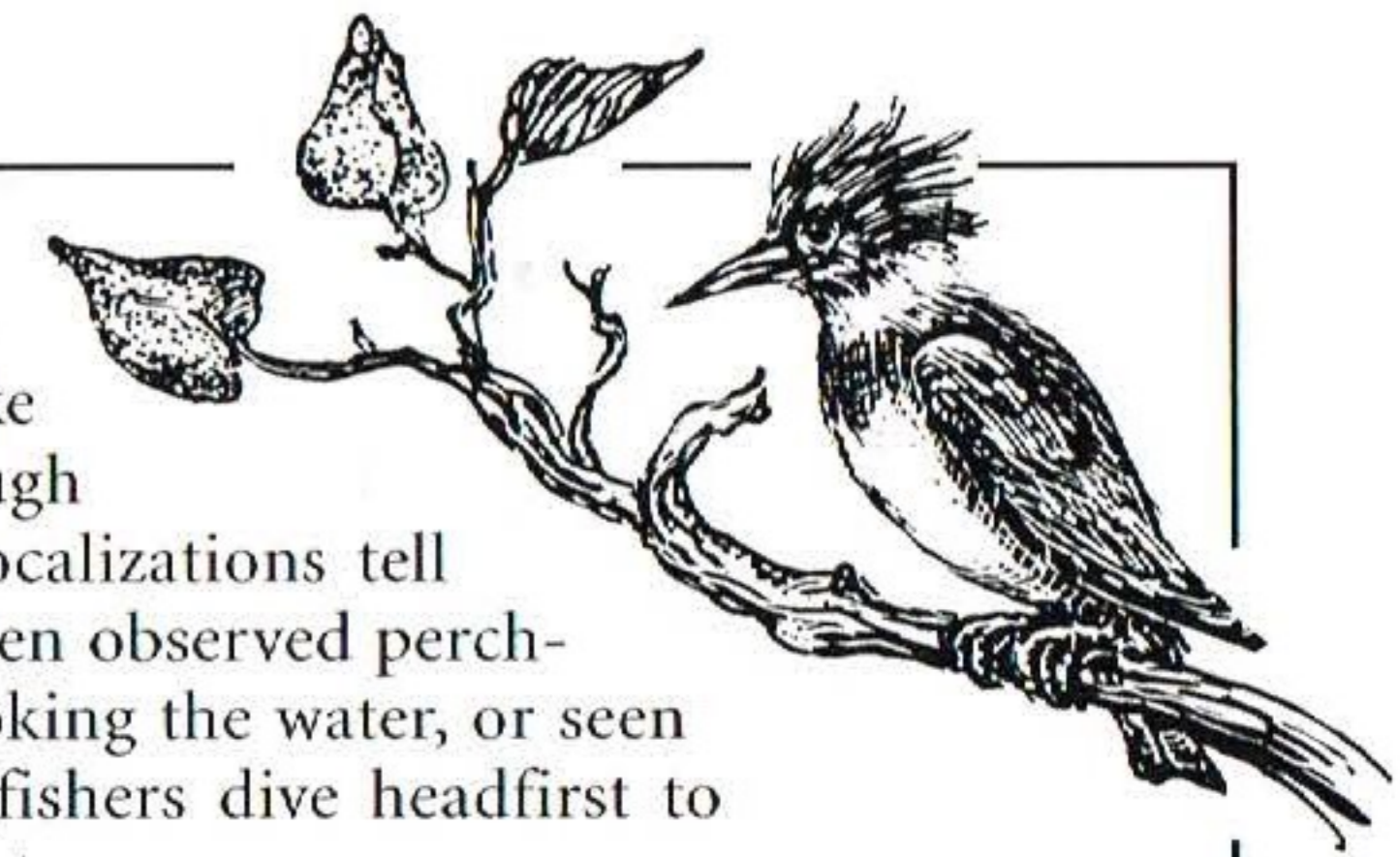
**Acorn Woodpecker** has a habit of storing acorns in communal storage trees. Extremely social, it occurs in small, noisy colonies where its distinctive 'ja-cob ja-cob' call alerts an observer to its location.

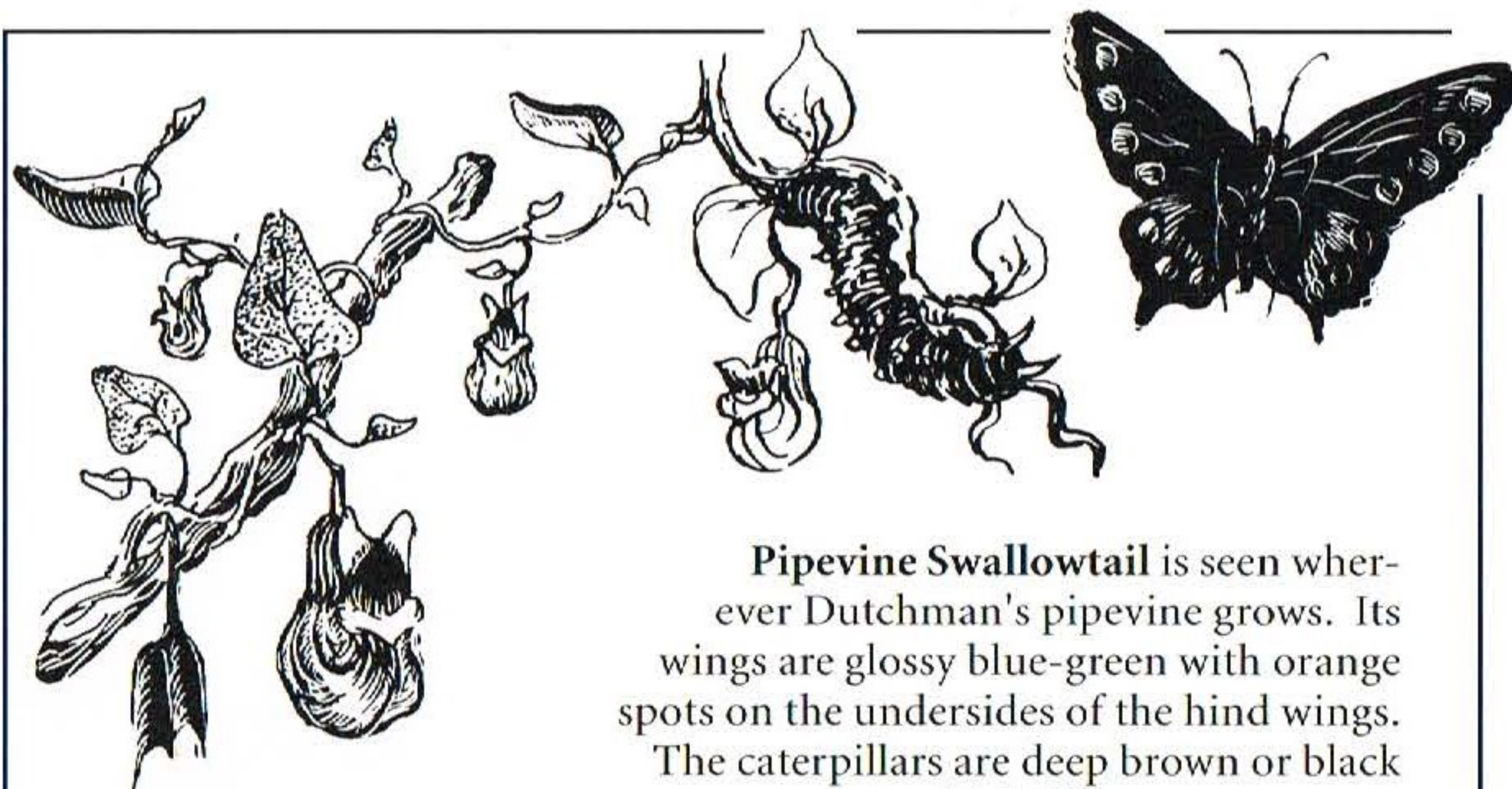
In addition to acorns, it feeds on berries, tree sap, ants, beetles and other insects.

**Northern Flicker** is more common during the cooler months of the year. The red-shafted form is a year-round resident of riparian and oak woodlands. Its series of sharp, penetrating 'wicka-wicka-wicka' calls is given during the breeding season in addition to drumming on a resonating snag or stump. It feeds primarily on ants, wild fruits, berries and seeds.

**Nuttall's Woodpecker** emits a high-pitched rattle that alerts an observer to its presence. It forages by probing crevices and chipping away bark as it searches for wood-boring insects.

**Wood Duck** nests in natural tree cavities and man-made nesting boxes. It feeds on acorns, fruits, aquatic vegetation and invertebrates.





**Pipevine Swallowtail** is seen wherever Dutchman's pipevine grows. Its wings are glossy blue-green with orange spots on the undersides of the hind wings. The caterpillars are deep brown or black with brilliant orange spots

**Dutchman's Pipevine** grows in low wooded areas. It winds 5 to 10 feet up over other plants and spreads over the ground. Leaves are oval to heart-shaped and hairy. Unusual blossoms resembling a Dutchman's pipe hang from the leaf axillas. The blossoms are yellow-green with purple veining and appear in February along with the new leaves. By May the blossoms have formed brown pendant seed pods.

**Mexican Tea** will probably make your nose aware of its presence before your eyes notice its bushy green foliage. The leaves are alternate, lanceolate and toothed. Tea made from boiling the leaves is said to relieve an upset stomach and was a remedy used by early California residents.

**Horehound**, a perennial herb, grows in clumps 1 to 3 feet high. The leaves are gray-green, roundish, thick, wrinkled and hairy. Horehound is a common weed in waste places in the valleys and foothills. It is a native of Europe, widely naturalized over North America. Immigrants handed down horehound recipes for various ailments. The tops were used for colds and in treating blood pressure abnormalities.

**Mugwort's** simple erect stems grow 3 to 6 feet high. The whole plant has a pleasant, pungent odor. Mugwort is a common native. Native Americans thought highly of this plant. It was a symbol of peace. The juice was used to soothe skin irritations, and a leaf placed in each nostril was a remedy for headaches and a stuffy nose..

**Virgin's Bower**, or Western clematis, is a woody vine that may climb to 40 feet by using the leaf stems or petioles as tendrils. The small white flowers are in clusters blooming in May. The plumes of the seeds twist into silvery balls that are especially showy from May through August.

**Blue Vervain** has stout, square-ridged stems rising 2 to 6 feet and tapering to a point. Flower spikes end in clusters of tiny bright lavender-blue flowers.

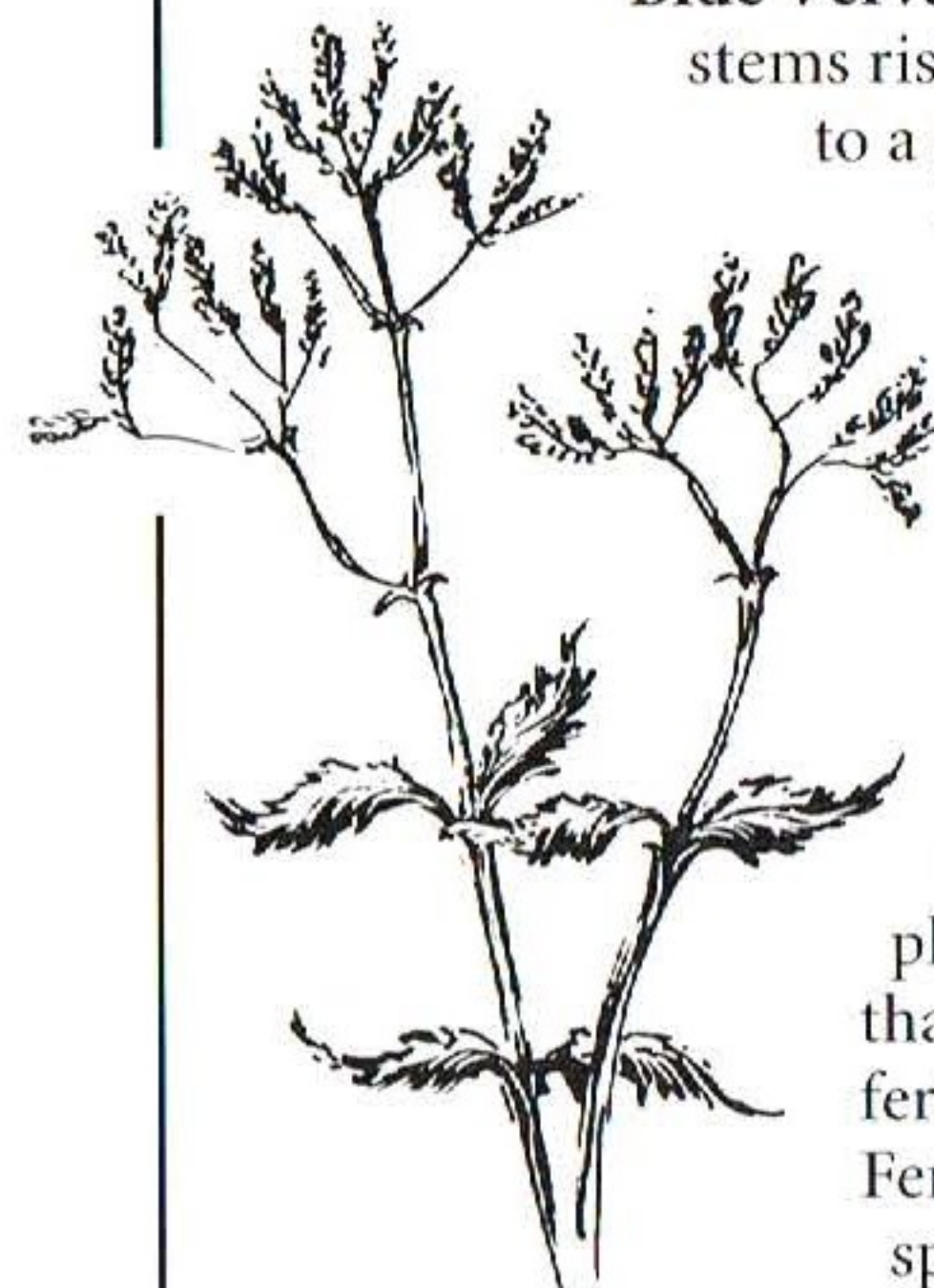
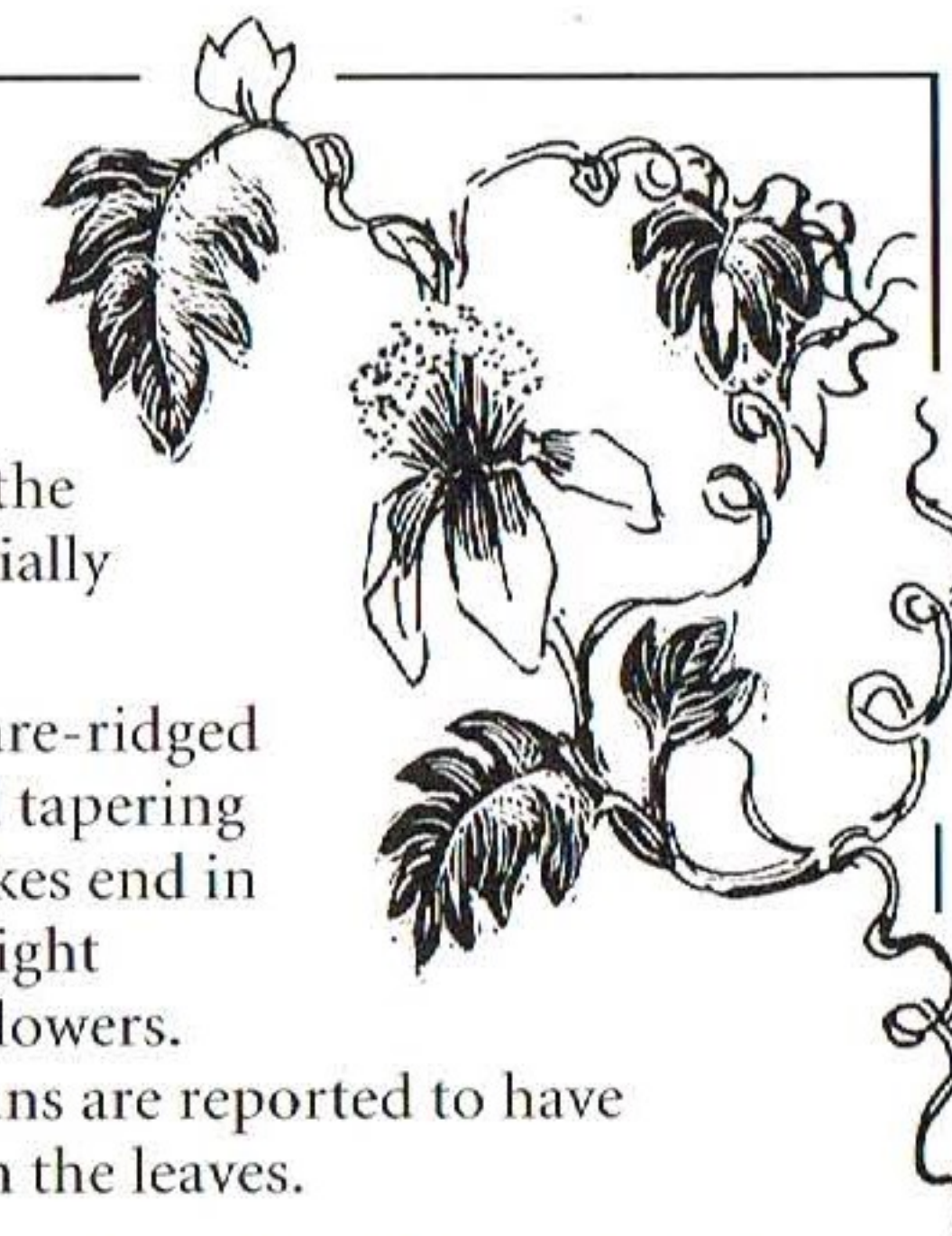
Native Americans are reported to have made a tea from the leaves.

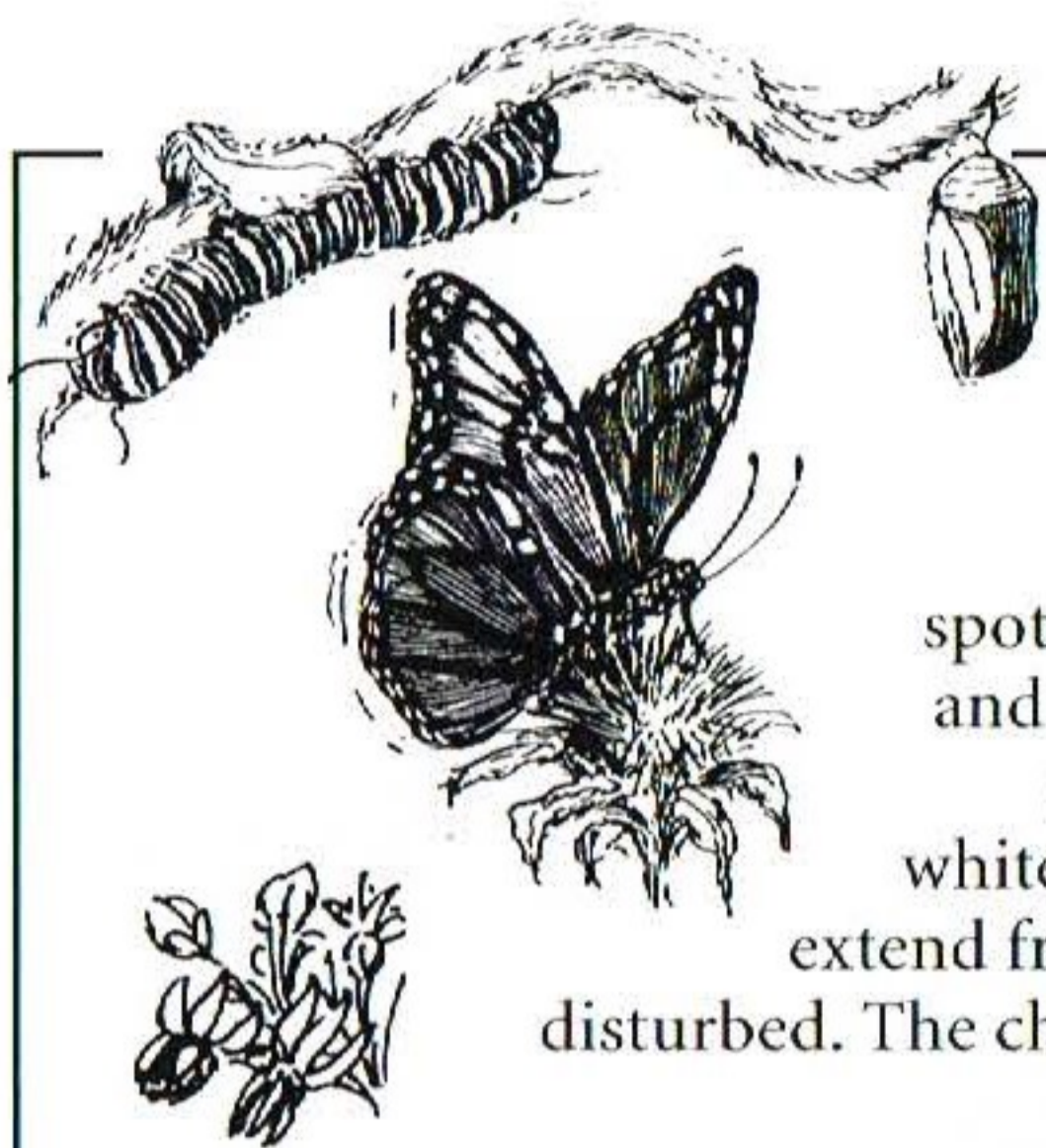
**Horsetail or Scouring Rushes** have stiff stems reinforced with silica and feel rough to the touch. These plants grow in sections, joined together in neat decorative joints.

Neither a fern nor a flowering plant, it has a life cycle much like that of ferns. Spores grow into fertile and non-fertile plants. Fertile plants produce eggs and sperm in a spore-bearing cone. Some of the stalks are sterile. Because of the silica in the stems, the plants have been used for scouring and polishing.

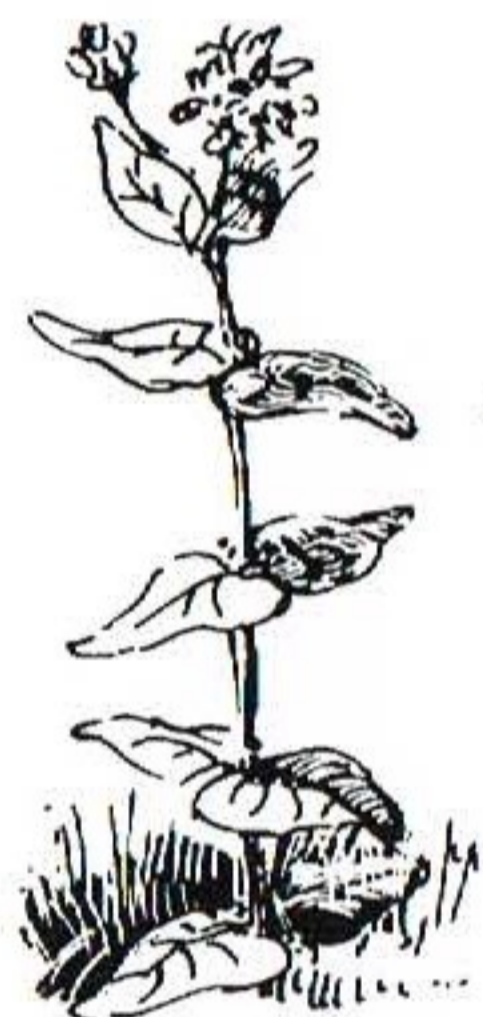
**Ripgut Brome** grows 16 to 25 inches tall. The heads are open and nodding, with long, rough, hairy projections. The mature seeds cause damage to livestock, as the name implies. This annual was introduced from Europe and has become widespread.

**California Blackberry** forms dense thickets in moist woodlands. The small white flowers bloom in clusters in the spring, later developing into black sweet berries. Native Americans and pioneers used the berries for food. Many birds and animals find food and shelter in blackberry thickets.





**Monarch Butterfly** is a well-known butterfly frequently seen at Bobelaine. Its orange-brown wings are bordered and tipped with black. The black areas of the wings and body are dotted with white spots. Pale green, ribbed eggs are laid on leaves and stems of milkweed plants. The caterpillars are yellow-green decorated with black and white bands. Black antennae-like filaments that extend from each end twitch when the caterpillar is disturbed. The chrysalis is a beautiful pendant resembling a small green lantern with gold spots.



**Showy Milkweed** presents an angular appearance with each pair of leaves at right angles to the next. The stems and leaves are pale green covered with wooly hairs. The deep pink or maroon petals are folded back towards the stem. Take time to look closely at the fascinating flowers and find the incurving horns inside the hoods. Milkweed blooms June to July. Native Americans heated the thick milky juice of the plants and mixed it with deer or bear grease to make a chewing gum. The fibers of the stems were used for making cords or ropes. Milkweeds are host to monarch butterflies. The caterpillars absorb a bitter poison from the plant which persists in the adult insect, making it distasteful to birds.

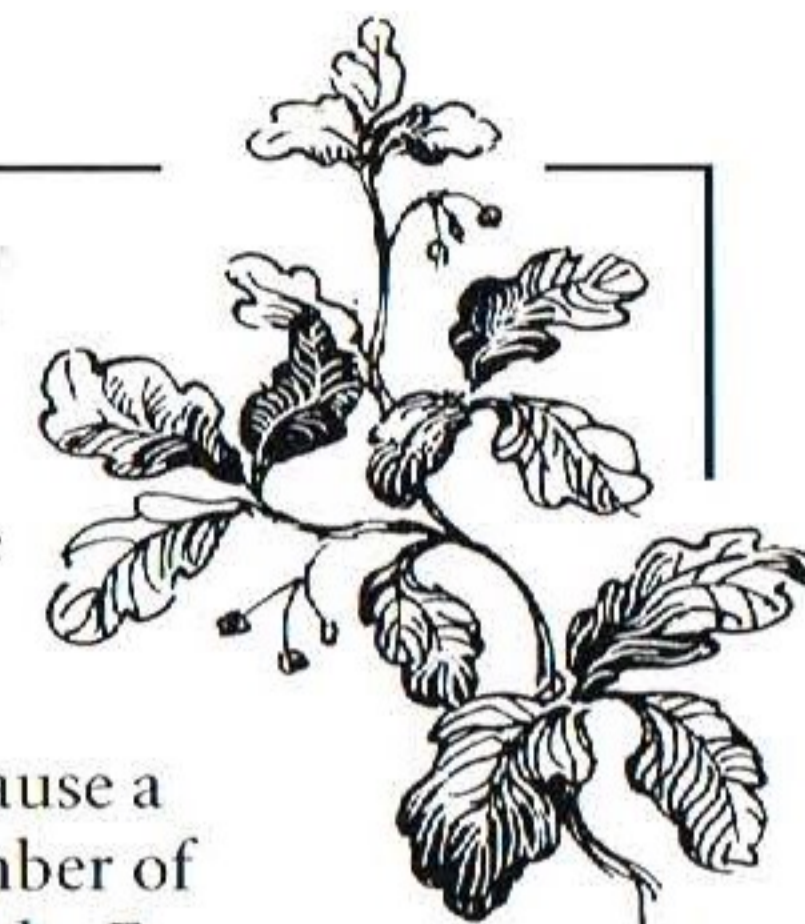
**California Wild Grape** can produce extraordinary large stems up to 60 feet long and as much as 4 to 5 inches thick. The small white blossoms appearing in May and June are very fragrant. As the fruit ripens, it changes from green to purple.

Native Americans used the leaves to wrap foods for roasting and the stringy bark for twine. They dried the fruit and added it to their year-round food supply.

**Wild Rose** is a usually erect, stout, diffusely branched shrub 3 to 9 feet high. The flowers are rose-colored or light pink, blooming from May to November. The thorns are recurved like a fish hook. Rose seed capsules, or hips, are round and turn bright orange in the fall. Deer tracks are often seen leading into rose thickets, and the shrubs provide sanctuary for much wild life. The Native Americans used tea made from the roots of the rose for a cold remedy. Today, rose hips are sold as a rich source of vitamin C.



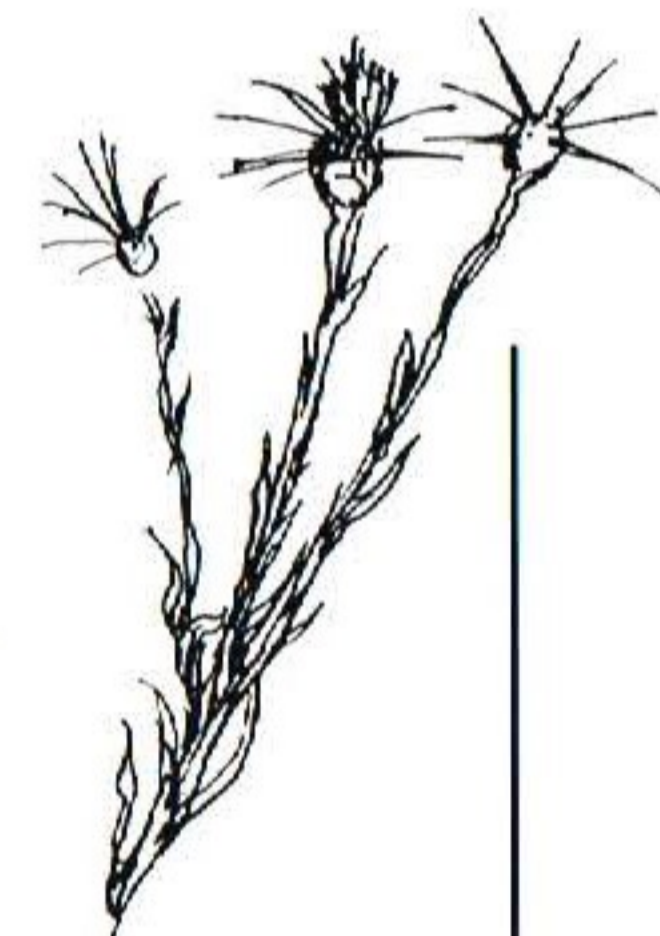
**Poison Oak** grows as an erect or spreading shrub, 2 to 8 feet high, or as a vine, climbing 15 to 20 feet. The leaves are 3 to 4 inches long with three glossy green leaflets on each leaf stem. The tiny flowers are greenish-white and grow from the leaf axils. In the fall, the leaves turn bright colors, tempting the unwary to pick them. Contact with the plant may cause a very unpleasant skin irritation. Poison oak is a member of the sumac family and is related to the poison ivy of the East.



**Common Mullein**, a soft wooly spike, may grow over 6 feet high. A basal rosette of leaves 6 to 12 inches long encircles the stalk. Other leaves alternately ascend the stem, becoming smaller. The stalk of yellow flowers rises sometimes as much as 3 feet above the leaves. The plant is biennial and flowers usually do not appear until the second year. The tall stalks persist long after the plants die. Hummingbirds collect mullein hairs for their nests, and the abundant seeds furnish a banquet for goldfinches in late fall.

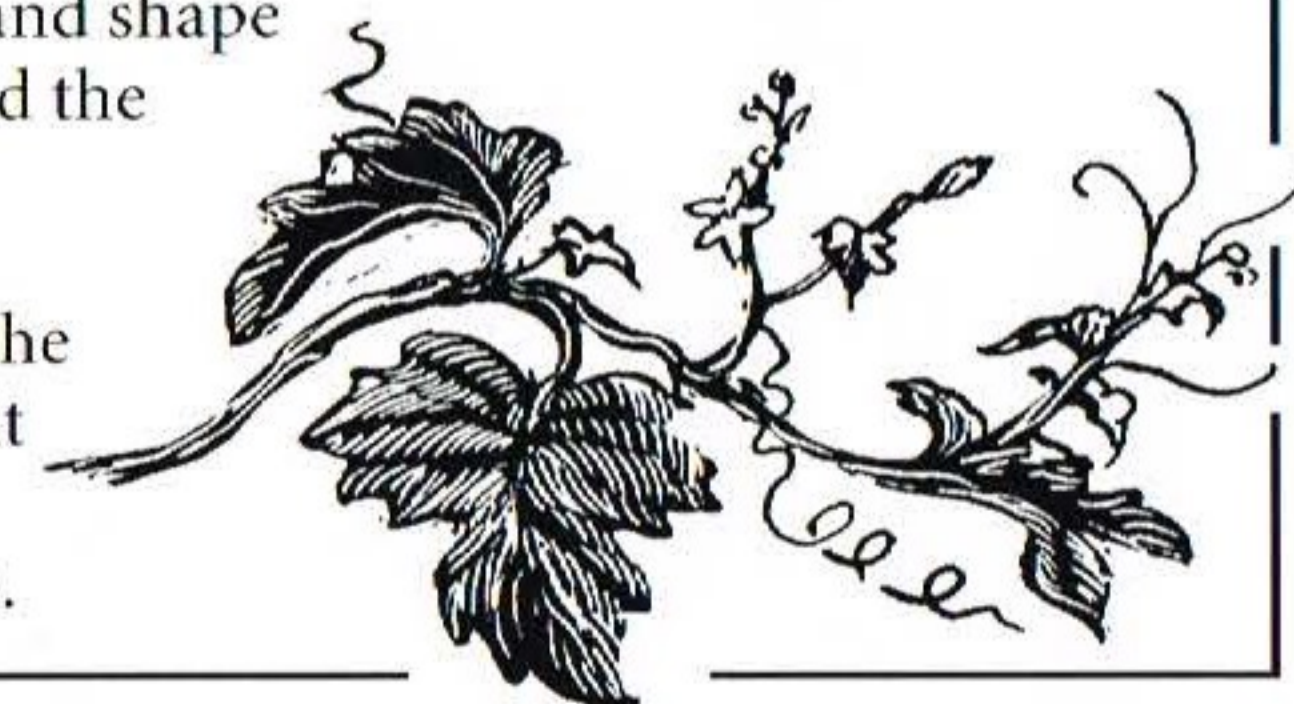


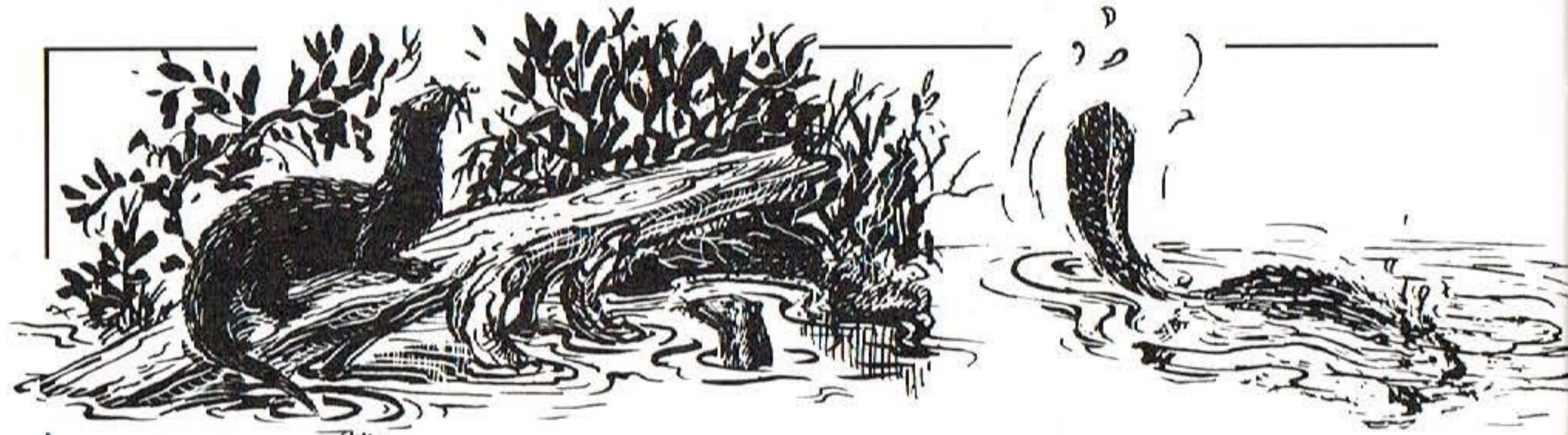
**Moth Mullein** has tall, straight stems that grow 2 to 4 feet high. The alternate, oval leaves usually drop before the blossoms appear. The flowers, appearing in June and July, are yellow or white. The stamen stalks are bearded with violet, wooly hairs. Look into the flower. Does the center look like the head of a moth?



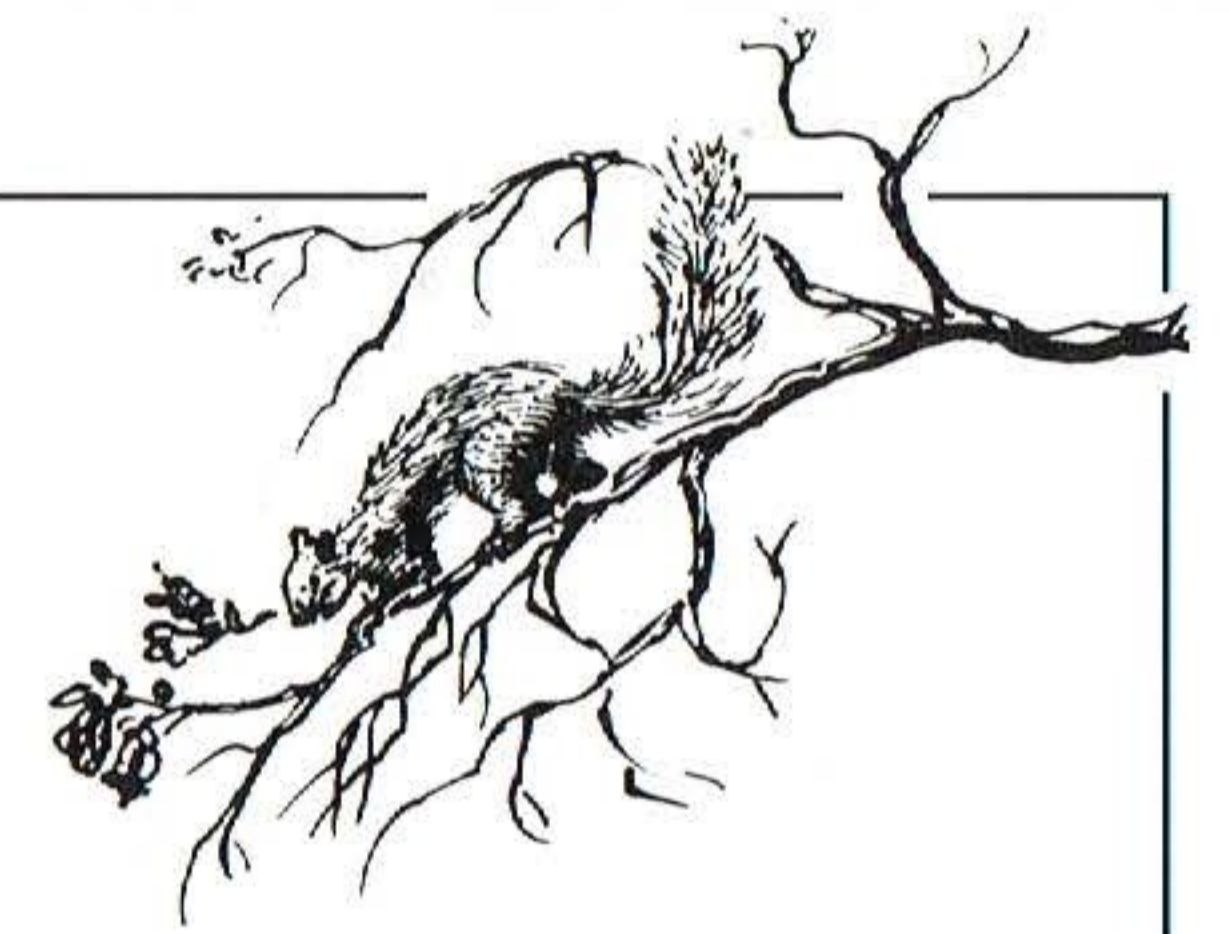
**Star Thistle** has rigid spreading stems rising 1 to 2 feet from the base. Leaves and stems are whitened with a loose cottony wool. A thin wing-like projection extends along both sides of the stem. The leaves are linear and alternate; the flowers are bright yellow with a spiny base.

**Man Root, or Old Man in the Ground**, has trailing stems 12 to 30 feet long. The leaves are similar in shape to the wild grape. The small flowers are greenish-white. The round green fruit is covered with spines and ripens to produce large round dark seeds. The plant derives its common name from the size and shape of the root. Native people crushed the green seed pods to make a hair cream, and the child-ren of the early Spanish Californians used the hard seeds as mar-bles. This plant is sometimes called the wild cucumber. The fruit is not edible.





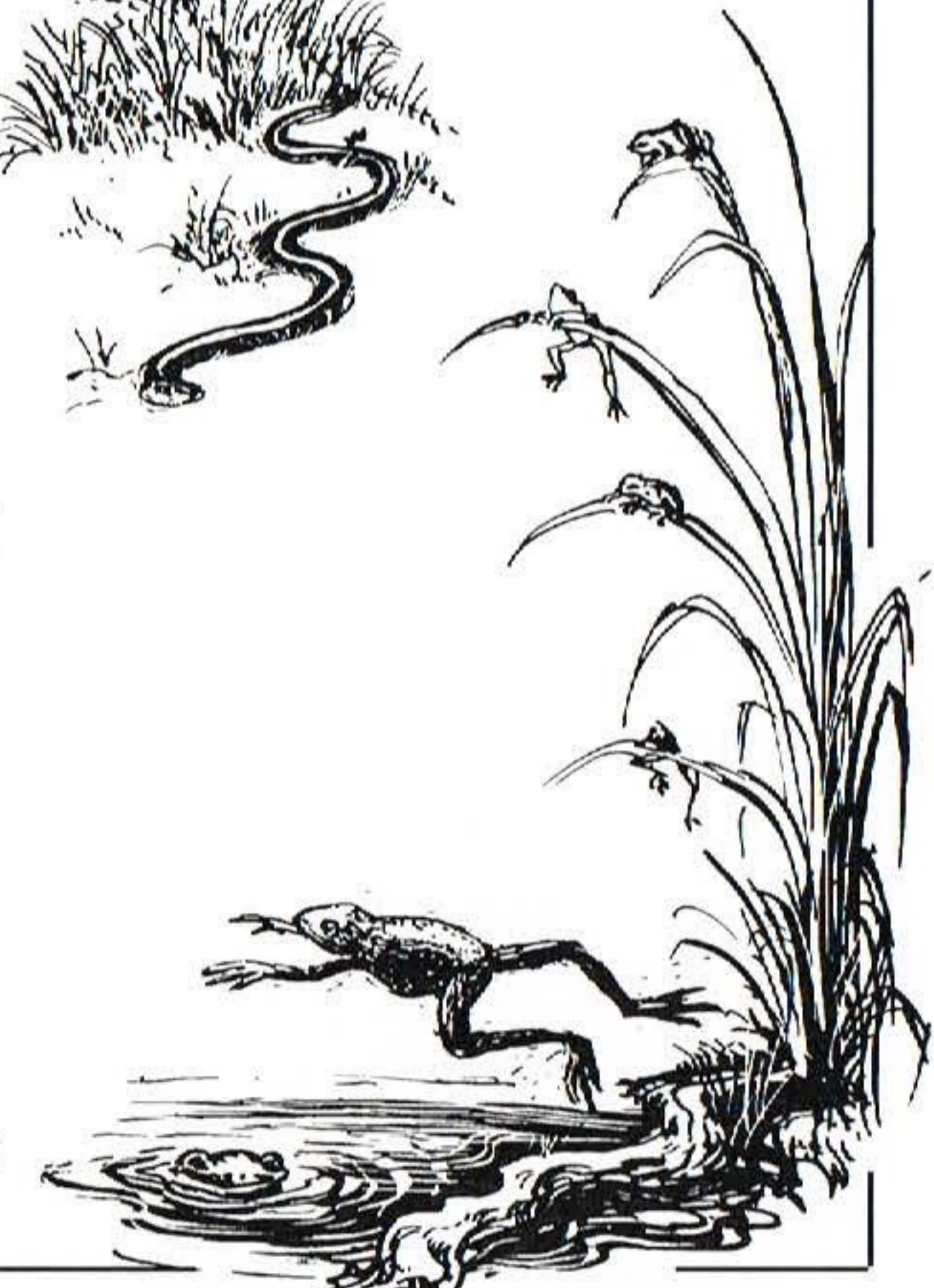
The mammals at Bobelaine, as elsewhere, are largely nocturnal, partly by preference and partly because of human pressure. Early morning or evening is the best time to catch a glimpse of a beaver swimming or a coyote disappearing down the trail, but you may run across a busy otter family playing and fishing in the middle of the day. Live trapping done for scientific research has shown that the Sanctuary has healthy ringtail cat population. (The most successful bait for the traps was cat food and strawberry jam.)



The local mule deer herd carries a strain of albinism, and in 1990 twin albino fawns were born here, so it's quite possible to see a white deer among the usual brown ones.

Even if you don't see the animals, you can find many signs of their presence. Tracks on the trails and at the water's edge show what passed by. Watch new growth in the spring for leaves bitten off by deer. A little pile of clamshells near the water's edge shows where a muskrat had a feast. Small conical holes in the ground are signs that a skunk or raccoon was digging for roots and insects.

Walk quietly here and watch and you'll discover much more.



## Development of a Riparian Forest



Willow Cottonwood Sycamore Oak

### Some basic books

#### **Sacramento's Outdoor World: a local field guide.**

*American River Natural History Association & Sacramento County Office of Education.*

If you buy only one book, buy this one. Some material in this brochure was borrowed (with permission) from Outdoor World. The book has brief descriptions and drawings of the common plants, birds, mammals and insects of the Great Valley.

#### **Common Riparian Plants of California: a field guide for the layman.**

*Phyllis M. Faber and Robert F. Holland: Pickleweed Press*

Lifesize pictures of the plants! And an excellent introductory article on riparian ecology.

#### **Trees of North America: a guide to field identification.**

*Golden Press*

A good general all-purpose identification handbook for trees.

#### **Handbook of California Birds**

*Brown, Weston Jr., & Buzzell: Naturegraph*

A very good beginner's birding book.

#### **Field Guide to the Birds of North America: 2nd Edition**

*National Geographic Society*

#### **Western Birds: 3rd Edition**

*Roger Tory Peterson: Houghton, Mifflin Co.*

Most experienced birders carry one or both of these two guides in the field. They are both excellent.

These field guides and many more are generally available at local bookstores, visitor centers at state and national parks, and from the Effie Yeaw Nature Center in Ancil Hoffman Park and the Sacramento Science Center on Auburn Blvd.

## NOTES

Bobelaine Sanctuary is located 35 miles north of Sacramento on the bank of the Feather River. Two miles after Highway 99 crosses the Feather River, turn right onto Laurel Avenue and drive approximately one-half mile to the parking area.



#### RULES

*...pass and leave no trace, like a fish through the water or birds through the air...*

*willa cather*

Bobelaine is open to the public to walk through during daylight hours. It is a sanctuary. Please respect it. Walk quietly: the less impact you make, the more you see and experience.

NO'S dogs, horses, bikes, vehicles, smoking, fires, hunting, fishing, picking flowers.

DON'T remove anything from the Sanctuary, and please stay on the trails.

