

Birds of the BCCER

The **Wood Duck** (*Aix sponsa*) is a year-round resident of the reserve. It feeds on acorns, seeds, stems, and leaves, grasses, forbs, berries and invertebrates. It nests in tree cavities. The usual clutch is 9-14; larger sets frequently result from communal laying by several females. Incubation takes 27-35 days. The precocial young are chaperoned by the female but may become independent at 5-6 weeks.

Mallards (*Anas platyrhynchos*) can sometimes be seen along Big Chico Creek in the reserve, even breeding there on occasion.

The **Common Merganser** (*Mergus merganser*) breeds regularly in the reserve. It swims on the surface, searching underwater, then dives for fish, particularly California roach. Nests are in cavities or dark recesses in trees, snags, and stumps near the creek. The nest is lined, and the eggs covered with grass and down. This merganser breeds from late March through late September with peak activity in June. Clutches average 9 eggs and are incubated by the female for 28-32 days. The precocial young stay with the mother, becoming independent at about 5 weeks.

The **Turkey Vulture** (*Cathartes aura*) is a summer and sometimes year-round resident of the reserve. Most migrate to Central America, for the winter. Turkey vultures forage by soaring over roads, grasslands, and open forests. They feed on carrion; rarely eats rotting fruit, live birds, eggs, or live mammals. Large trees and rock outcrops are used for roosting, perching, and sunning. Cliffs, rock outcrops with rims, ledges, and cavities in trees, snags, and logs are used for nesting. One clutch per year of 2 eggs is produced and incubated 38-41 days. The semialtricial young are fed for by both parents for 80 days, or more.

The **Northern Harrier** (*Circus cyaneus*) is occasionally seen in the reserve. It prefers open habitats, such as grasslands and marshes, and is common in some nearby areas, but finds little suitable habitat in the reserve. It hunts by cruising a few feet above the ground, searching for small mammals, birds, frogs, reptiles, and insects.

The **Cooper's Hawk** (*Accipiter cooperii*) prefers dense stands of live oak, riparian, or other forest habitats near water. It preys on small birds, especially young during the nesting season, and small mammals, reptiles and amphibians. It hunts in broken woodland and habitat edges; catches prey in the air, on the ground, and in vegetation, typically dashing from a perch in dense cover and pursuing prey in air through branches. It nests in deciduous trees in crotches 10-80 feet from the ground. The Cooper's hawk breeds March through August, producing a single clutch of 4-5 per year. The female incubates 35-65 days while the male provides food.

The **Northern Goshawk** (*Accipiter gentilis*) is an uncommon resident of fir forests at higher elevation. It is a casual winter visitor in the reserve. It hunts in wooded areas, using snags and dead-topped trees for observation perches. Prey, mostly birds, but including squirrel-size mammals, is taken in air, on the ground, or in vegetation with a rapid dash from the perch.

The **Sharp-shinned Hawk** (*Accipiter striatus*) prefers higher elevation habitats for nesting, but is a fairly common migrant and winter resident in the reserve. It usually hunts from a perch, but sometimes cruises rapidly in low gliding flights, looking for startled prey. It eats mostly small birds, no larger than jays, but also takes small mammals, insects, reptiles, and amphibians.

The **Red-tailed Hawk** (*Buteo jamaicensis*) is common in the reserve, which is used by both year-round residents and winter migrants. It eats small mammals up to hares in size, small birds, reptiles, amphibians, and some carrion. It searches by soaring, sometimes hovering on wind or air currents. It feeds in grasslands and grass/shrub stages. The red-tailed hawk breeds March through July. It usually nests in large trees near

openings, in older, mature forests, especially riparian deciduous habitats, but occasionally on cliffs. The clutch of 2-3 eggs is incubated 28-32 days. The semialtricial young fledge in 40-45 days.

The **Red-shouldered Hawk** (*Buteo lineatus*), while much more common in riparian forests in the valley, may also be expected to utilize the reserve as habitat. It forages mostly in open forests and along forest edges. Its diet is highly varied, including small mammals, snakes, lizards, amphibians, small or young birds, large insects, and even earthworms. Hunting is from a perch or from a searching glide below the tree canopy. It breeds February through July, with peak activity in April and May. It prefers to nest in dense riparian habitats, building a nest of sticks about half way up in a tall tree. Clutch size is usually 3.

The **Golden Eagle** (*Aquila chrysaetos*) has been known to nest in or near the reserve. Our largest raptor, it preys mostly on rabbits and ground squirrels but also takes other mammals, birds, reptiles, and carrion. It needs open terrain for hunting; grasslands, savannahs, and early successional stages. The golden eagle nests on cliffs and in large trees in open areas. It uses sticks and twigs to build a huge platform nest, often 10 feet across and 3 feet high. It breeds from late January through May. Clutch size is usually 2. Eggs are laid from early February to mid-May. Incubation requires 43-45 days, and young remain in the nest for 65-70 days.

The **Bald Eagle** (*Haliaeetus leucocephalus*) is an uncommon winter visitor to the reserve.

The **American Kestrel** (*Falco sparverius*) utilizes open habitats in the reserve. It eats small mammals, birds, insects, earthworms, reptiles, and amphibians captured with a variety of hunting techniques: perching and pouncing, hovering and pouncing, or aerial pursuit. The kestrel nests in cavities in trees, snags, rock crevices, cliffs, or banks. It breeds from early April to August, with peak activity in May and June. The average clutch size 4-5. Incubation lasts 28-31 days and the young fledge after 29-31 days.

The **Peregrine** (*Falco peregrinus*) may be found using the reserve as winter feeding habitat. It likes to perch on rock outcrops. While it occasionally hunts from its perch, it more commonly swoops from flight onto a flying bird. It takes a variety of birds up to ducks in size; occasionally takes mammals, insects, and fish. Band-tailed pigeons, mergansers, and wood ducks are likely prey in the reserve.

The **Wild Turkey** (*Meleagris gallopavo*) is an introduced permanent resident of the reserve. It feeds on seeds, leaves, fruits, buds, acorns, pine nuts, and arthropods. It scratches and gleans from the ground, plucks, and picks and strips seeds from low plants. The peak breeding season is May to June. Males call and strut and gather harems of 5, or more, females. They nest in thick, low vegetation in well concealed depressions on the ground. Clutches of 10-12 eggs are incubated about 28 days by females only. Young are precocial; able to fly short distance into a roost tree by 1 wk. A female and her brood may remain together until spring, occasionally mixing with other broods. Males remain in separate flocks.

The **California Quail** (*Callipepla californica*) is a common, year-round resident of the reserve. It forages on the ground and in low vegetation, scratching, gleaning, grazing, and browsing to collect seeds, green vegetation, arthropods, and fruits. Quail nest in a small grass-lined depressions hidden in herbage among shrubs. Pairs form around April; peak nesting is May and June. Clutches average 14 eggs; incubation by the female takes 23 days. In favorable years, the female may reneest while the male cares for first brood. The chicks are precocial and the brood remains together until the next spring.

The **Great Blue Heron** (*Ardea herodias*) forages occasionally along Big Chico Creek in the reserve. Nearly 75% of the diet is fish, mostly California roach in the reserve. It opportunistically eats small rodents, amphibians, snakes, lizards, insects, crustaceans, and even small birds. The heron stands motionless, or walks very slowly, when searching for prey in shallow water.

The **Green heron** (*Butorides virescens*) is an uncommon, yearlong resident along Big Chico Creek in the reserve. It forages by walking very slowly or waiting in shallow water or a perch at the water's surface. It eats mostly fish, insects, and miscellaneous invertebrates captured from water, land, or air, with a lightning thrust of its beak. It breeds late March to July, building a nest of sticks among the outer or upper branches of a tree near the creek. It is usually a solitary nester, but has been known to nest in small groups. Clutch size is usually 4-5, incubated for 19-21 days. The semi-altricial, downy young are tended by both parents. They fly at 21-23 days, and are independent at about 30-35 days.

The **Band-tailed Pigeon** (*Columba fasciata*) is very common in the reserve. Band-tailed pigeons are gregarious and usually seen in flocks. They feed on acorns, fruits of dogwood, coffee berry, elderberry, grape, manzanita, and some blossoms and green shoots. Although not usually a colonial nester, pairs often nest close together and join others while feeding. The nest is an open platform of twigs in a tree, usually 20-35 feet above the ground. Band-tails breed from February to mid-October, peaking in May, and may produce up to 3 clutches of 1 or 2 eggs per year. Both male and female share in the 18-20 day incubation. The young are initially fed crop milk by the parents.

The **Mourning Dove** (*Zenaida macroura*) is a year-round resident of the reserve. It feeds almost entirely on seeds, forbs, and grasses pecked from the ground. It breeds from late January to late September, raising 2-6 broods (2 per clutch) a year. The mourning dove usually breeds solitarily, but sometimes more than 1 nest in the same tree. The nest is a loose platform of twigs on a horizontal limb or in a crotch. The male incubates most of the day and female at night, for 14-15 days. The young are fed seeds and crop milk by both adults during the nestling period of 13-15 days.

The **Western Screech-Owl** (*Otus kennicottii*) is a year-round resident of the reserve. It perches near openings in the trees and pounces on mice and other small mammals, birds, fish, reptiles, amphibians, and arthropods. Small birds are commonly taken in nesting season. Insects are important in summer and fall. The screech owl roosts and nests in a woodpecker hole or other cavity in a snag or tree, under moderate canopy. Pairs often remained on the same territory for several years. It breeds between early February and June. Clutch size is usually 3-4; incubation is 21-30 days, and nestlings fledge at 28-35 days.

The **Barn Owl** (*Tyto alba*) is a year-round resident of the reserve. It forages at night for mice, rats, voles, pocket gophers, and ground squirrels. Less important food items include shrews, insects, crustaceans, reptiles, and amphibians. Small birds may be important food in winter. The barn owl hunts on the wing or from a perch, usually in open fields, wetlands, and grasslands. Breeding occurs January through November. Nests are built in cavities in rock cliffs or large trees. The clutch size is usually 5-7 and 2 broods may be produced per year. The young fledge at 52-70 days.

The **Great Horned Owl** (*Bubo virginianus*) is a permanent resident of the reserve. It makes low, rapid flight from a perch to capture prey on the ground. Rabbits, rodents, and other small to medium-sized mammals make up 90% of the diet. It also eats smaller birds, amphibians, reptiles, fish, and arthropods. The great horned owl nests in abandoned hawk, crow, raven, or squirrel nests, in caves, crevice, or cliff ledges, and occasionally in tree cavities. It breeds from mid-January through June. The clutch size of about 3 eggs is incubated 26-35 days; young fledge in 35-56 days. The male may assist with nest activities.

The **Spotted Owl** (*Strix occidentalis*) is an uncommon winter visitor to the reserve. Nocturnal, it searches from a perch then swoops or pounces on prey in vegetation or on the ground. It feeds in forest habitats upon a variety of small mammals, including flying squirrels, woodrats, mice, voles, and a few rabbits. It occasionally eats small birds, bats, and large arthropods.

The **Northern Saw-whet Owl** (*Aegolius acadicus*), while relatively uncommon, should find suitable habitat in the reserve. It prefers mature riparian and oak habitats with intermediate canopy closure. Nocturnal, it perches and pounces on prey on the ground, eating mostly woodland mice and other small mammals but also takes a few birds and arthropods. It breeds from early March through August. The clutch size of 5.6 eggs is incubated 21-28 days. The young fledge at about 30 days.

The **Common Poorwill** (*Phalaenoptilus nuttallii*) may be found occasionally in the reserve. It feeds nocturnally on insects caught in the air during short, vertical flights from the ground, often foraging from cleared areas or roads in brush or open woodlands. It prefers rocky outcrops, canyon walls or slopes in some habitats. The poorwill breeds from late March through August. Its nest is a scrape on the ground, on rock, gravel or litter of forest floor, typically, placed near a log, rock, shrub, or herbage for some shade, yet with a wide-angle view of surroundings. One brood of 2 is produced per season. The chicks are semiprecocial.

The **Lesser Nighthawk** (*Chordeiles acutipennis*) is an uncommon summer (April to August) resident particularly in the chaparral of the reserve. It is a crepuscular and nocturnal forager feeding on flying insects, which it hawks on long, low flights over open areas. May become torpid in cold weather or when insects scarce. The lesser nighthawk uses sandy or gravelly open surfaces for roosting and nesting. It nests from April through July, with peak activity in May and early June. The female incubates 2 eggs for 18-19 days. Young are semiprecocial, and tended by both parents. They can walk soon after hatching, are fully feathered in 12 days and fledge in about 3 weeks.

The **White-throated Swift** (*Aeronautes saxatalis*) is fairly common year-round in the reserve. It nests and roosts in deep crevices in rocky cliff faces and feeds exclusively on flying insects captured in long, continuous foraging flights, usually high in the air. This swift breeds from early May to mid-August, often nesting in a small colony. Clutch size is usually 4-5. The young are altricial, and probably tended by both parents, as in other swifts.

Anna's Hummingbird (*Calypte anna*) is a common year-round resident. During the spring flowering season it feeds on nectar from many herbaceous and woody plants but shifts to small insects, spiders, and plant sap during the dry season. It breeds from mid-December to mid-August, with peak activity from February to May. The minute nest may be placed in a wide range of locations in shrubs and trees. Incubation for 14-19 days is entirely by the female, who also cares for the altricial chicks for another 18-23 days. The mother continues to feed her offspring for up to 2 weeks after they fledge.

The **Belted Kingfisher** (*Ceryle alcyon*) hunts by diving beak-first into water from a perch or from hovering. It captures mostly fish, but also takes amphibians and insects. Feeds insects to young initially, larger foods later. For nesting, it excavates a nest burrow in a steep earthen bank. It breeds from April to mid-August with peak activity in May and June. The clutch of 6-8 eggs is incubated by both parents for 23-24 days. The altricial young are tended by both parents. they leave the burrow in 30-35 days.

The **Northern Flicker** (*Colaptes auratus*) is a common year-round resident throughout the reserve. It forages in open forest areas, on the ground, in shrubs, and on branches and the trunks of trees, using its bill to probe, dig, and glean. The flicker's annual diet is about 55% animal matter (mostly insects) consumed primarily in spring and summer, and 45% plant matter, eaten mostly in fall and winter. It breeds from April through July in a nest cavity excavated in the soft wood of a snag or the dead branch of live tree. The clutch of 6-7 eggs is incubated 11-16 days, by both sexes. The male provides most of the care for the altricial young, which fledge at 25-28 days.

Lewis' Woodpecker (*Melanerpes lewis*) is an uncommon preserve resident. It forages primarily on insects in spring and summer, fruits and berries in late summer and fall, and acorns, other nuts and seeds, and emerging

insects in winter. Lewis' woodpecker breeds from early May through July. The clutch of 6-7 eggs is incubated 13-14 days; fledging occurs at 28-34 days. The male incubates and broods at night and the pair alternates in daytime.

Nuttall's Woodpecker (*Picoides nuttallii*) is a common, year-round resident of the reserve. It forages mostly in oak and riparian habitats where it pecks, probes, and gleans from trunks, branches, twigs and foliage. Adult and larval insects, mostly beetles, make up most of its diet but it eats some fruit, acorns, and sap. Nuttall's woodpecker breeds from late March to early July. It excavates a nesting cavity in a dead trunk or limb of a willow, sycamore, cottonwood, or alder; rarely in an oak. The average clutch size is 5. The male does much of the incubating and feeding of the altricial young.

The **Acorn Woodpecker** (*Melanerpes formicivorus*) is a common, yearlong resident within the reserve. Acorn woodpeckers live in communal groups of 2-16, including at least 2 breeding adults. They store acorns individually in holes drilled in snags, dead limbs, and the bark of living trees. Each group defends a territory containing large oaks with sparse canopy and one or more large, isolated trees or snags used for acorn storage. Acorn woodpeckers eat mostly acorns in fall and winter. In late winter and spring they drill holes in trees to feed on sap. In spring, flying insects are taken on short hawking flights from a high perch. The woodpeckers excavate nesting cavities in winter and spring, preferring soft, decayed wood of live trees or snags of oaks, sycamores, or conifers. They breed from early April through late July, often nesting communally. The average clutch size is 4-5.

The **Red-breasted Sapsucker** (*Sphyrapicus ruber*) usually nests at higher elevation but is a fairly common winter resident on the reserve. It drills both horizontal and vertical holes about 0.25 inches in diameter in the trunks of deciduous hardwoods and, less often, in conifers, producing sap wells that attract insects. It eats insects, sap, cambium, and other soft plant tissues.

The **Downy Woodpecker** (*Picoides pubescens*) is an uncommon, year-round resident of the reserve. It is most likely to be seen near the creek, favoring willow, cottonwood, and alder for foraging. Beetles, ants, caterpillars, and other larvae comprise 75-80% of the downy's annual diet. Other foods include cambium, fruit, nuts and seeds. The downy excavates a nest cavity in a well-rotted snag or dead branch 4-50 feet above the ground. As with most woodpeckers, courtship includes the male drumming on dry, resonant limbs to attract a female. Breeding occurs from late March to early September with peak nesting activity May through June. Average clutch size is 4-5 eggs; incubation requires 12-13 days. Both parents incubate and care for the altricial young.

The **Hairy Woodpecker** (*Picoides villosus*) is a relatively uncommon, permanent resident of the reserve. It forages by drilling, pecking, and probing in bark crevices of dead and live trees, logs, and stumps. Approximately 80% of its diet is animal matter: beetles, ants, caterpillars, spiders, millipedes, aphids. It also eats acorns, some berries, sap and cambium. The hairy woodpecker breeds from mid-March to late August. The male drums on dry resonant limbs to announce territory. Male and female work together to excavate a nest cavity in the soft interior of a snag or dead branch, incubate the eggs, and care for the altricial young. Incubation lasts about 12 days. One brood per year averaging 4 eggs is produced.

The **Western Kingbird** (*Tyrannus verticalis*) is a common summer resident in grasslands and open shrublands. It arrives from wintering grounds in Mexico and Central America in late March, and departs in August or September. It feeds almost entirely on flying insects, pursued over open terrain from a conspicuous perch, but occasionally eats seeds and berries. It breeds from April into late July. The nest is a cup; usually 5-40 feet above the ground on a horizontal branch of an oak, cottonwood, or willow. The clutch of 4 eggs is incubated 12-14 days. Both parents feed the altricial nestlings.

The **Ash-throated Flycatcher** (*Myiarchus cinerascens*) is a summer resident of the reserve. It nests in tree holes in oaks or gray pines and forages in the chaparral, hawking flying insects from a perch. On occasion it gleans insects from bark and foliage or eats fruits and seeds. It lines its tree-cavity nest with hairs, herb stems, and feathers. 4-5 eggs are laid mid-May to mid-June. Incubation takes about 15 days and the altricial young are cared for by both parents. Fledging age is 16-17 days.

The **Black Phoebe** (*Sayornis nigricans*) is a common yearlong resident of the riparian zone in the reserve. It generally perches on branches over or adjacent to the creek from which it makes short flights to capture flying insects. Occasionally, it picks insects or even small fish from the water surface. It builds a nest of mud and plant matter near the water on a cliff face. Nesting is from March to August with peak activity in May. Two broods of 4 may be raised per season. Incubation requires 15-18 days. The altricial young are tended by both parents and leave the nest at around 21 days.

The **Pacific-slope Flycatcher** (*Empidonax difficilis*) may be found as a summer resident of the riparian strip in the reserve. It arrives in mid-March from Mexico and leaves by late October. It feeds mostly on flying insects; usually pursued from a perch, sometimes gleaned from foliage. It chooses shady alder and willow thickets or similar habitats for nesting. The nest is built near water in a crotch of a tree, or on a ledge. Nesting is from May to August with peak activity in June. 2 broods of 3-4 eggs may be raised per year. The female incubates the eggs 14-15 days, and the altricial young fledge at 14-18 days.

The **Olive-sided Flycatcher** (*Contopus borealis*) is an uncommon transient in the reserve during its spring migration to higher elevation habitat. It prefers high, conspicuous perches on dead limbs from which to launch wide-ranging flights for flying insects. It takes a variety of flying insects, but favors honeybees.

The **Western Wood-Pewee** (*Contopus sordidulus*) is a common to abundant summer resident of the reserve. It arrives from South American wintering areas in early May and departing again mid-August. It pursues flying insects, especially flies and wasps, from an exposed perch. It also rarely gleans insects from foliage and feeds occasionally on berries and grass seeds. Breeding is in June. An open cup nest of plant fibers, fine grasses, and dead leaves is saddled on a horizontal branch well out from trunk. A clutch, typically of 3 eggs, is incubated 12-13 days. Both sexes care for the altricial young.

The **Tree Swallow** (*Tachycineta bicolor*) is a common summer resident of the reserve. It migrates to Mexico and Central America for the winter. It feeds mostly on flying insects hawked in long, cruising flights but may eat some small seeds and berries. It breeds April to August. It prefers to nest near water, chiefly in tree holes, but may use cavities in a cliff or bank. It usually nests solitarily, but sometimes in small groups, depending on site availability. It commonly produces two broods of about 5 each. Incubation takes 13-16 days and the altricial young are tended by both parents and fledge at 16-24 days.

The **Violet-green Swallow** (*Tachycineta thalassina*) is a common summer resident of the reserve. Some arrive as early as January and some may remain until October. The Violet-green Swallow captures flying insects with prolonged, gliding flights. It feeds over fields, lakes and streams, and over forests and woodlands. It breeds from April through August in old woodpecker holes in a tree or snag. Pairs will nest solitarily or in small, loose colonies if sites are available. A single brood of 4-5 eggs is produced each year. Incubation requires 13-15 days and the altricial young are tended by both parents, and fledge at 16-24 days.

The **Western Scrub-Jay** (*Aphelocoma californica*) is a common and conspicuous year-round resident of the reserve. Omnivorous, it eats acorns, nuts, seeds, fruits, insects, other invertebrates, small vertebrates, bird eggs and young. It gleans and picks food from the ground, foliage, bark and wood. It hammers nuts open and often caches acorns and other food in soil, typically tucking it under leaves or debris. The nest, built by both sexes is a cup of twigs and grasses lined with rootlets and other plant fibers located in dense foliage in a tree

or shrub. Scrub jays breed from early March to mid-August, laying 2-3 eggs. Incubation is 15-18 days, by the female only. The male feeds the female during incubation and helps feed the altricial young. Fledglings leave the nest at 18-23 days but continue to beg food from the parents.

The **Steller's Jay** (*Cyanocitta stelleri*), while usually associated with conifer stands at higher elevations, is common in the reserve in winter. It is omnivorous; eating seeds, acorns, fruits, insects and other invertebrates, small vertebrates, carrion, and bird eggs and young. It forages by gleaning and picking food from ground, foliage, bark, and wood.

The **American Crow** (*Corvus brachyrhynchos*), while common in nearby urban and agricultural regions, is only an occasional visitor to the reserve. The omnivorous crow eats nuts, seeds and grains, fruits, insects, bird eggs and nestlings, carrion, small vertebrates, and garbage. Its nest is a large stick platform with an inner cup lined with mud and fine vegetation typically placed in the crotch of a tree 10-25 feet above ground. The typical clutch size is 4-5. Incubation lasts about 18 days and both parents tend the altricial nestlings until they fledge at about 35 days.

The **Common Raven** (*Corvus corax*) is a conspicuous year-round resident of the reserve. It feeds opportunistically on carrion, small vertebrates, bird eggs and young, insects, seeds, nuts, and fruits. It gleans from the ground, searches for food in flight, and pursues prey. Ravens nest on cliffs. The nest is a mass of twigs and sticks bound with earth and moss and lined with soft vegetation and hair. They nest from mid-February into July with peak activity in May and June. The female incubates the clutch of 4-6 eggs for 20-21 days. The male brings food to the incubating female and later helps tend the altricial young. Nestlings fledge at 5-6 weeks.

The **Oak Titmouse** (*Baeolophus inornatus*) is a common yearlong resident of the reserve. It forages over foliage, twigs, branches, trunks, and occasionally on the ground. It gleans, cracks seeds, chips at bark, and sometimes hovers to collect its food of insects and spiders, berries, acorns, and seeds. The titmouse roosts and nests in a cavity in a tree or snag in which it builds a nest of grass, moss, hair, feathers, and fur. It breeds from March into July. The clutch of 6-8 eggs is incubated 14-16 days by the female. The young are tended by both parents in the nest about 20 days, and for another 3-4 weeks after fledging.

The **Bushtit** (*Psaltriparus minimus*) is abundant all year within the reserve. It feeds in flocks except during breeding season, eating mostly insects and spiders gleaned from foliage, twigs, and branches. It builds a pendant nest approximately 8 inches long of spider webs and delicate plant material usually less than 12 feet from the ground. The bushtit breeds from February to early August, with peak activity between April and June. Pairs nest solitarily. Usually 5-7 eggs are produced and incubated for 12-13 days. The altricial young are tended by both parents and leave the nest at 14-15 days.

The **Wrentit** (*Chamaea fasciata*) is abundant within the chaparral zone in the reserve. Camouflaged and secretive, it is seldom seen, but its characteristic series of calls ending in a trill can be heard at any time. It stays in dense shrubbery, gleaning insects, spiders, berries from foliage, twigs, and bark. Breeding is from March to mid-September with peak activity in June. Its nest is concealed in a shrub within 4 feet of the ground. The wrentit lays 3-5 eggs, which are incubated 15-16 days. The altricial young are tended by both parents and leave the nest at 15-16 days.

The **Brown Creeper** (*Certhia americana*) is a year-round resident of higher elevations. Occasionally, it may be found in the reserve in winter. The creeper gleans insects and their larvae, as well as other invertebrates, from bark of tree trunks and branches spiraling up tree trunk as it feeds.

The **Red-breasted Nuthatch** (*Sitta canadensis*) is a common resident in higher elevation conifer forests. It sometimes disperses down into the reserve for winter foraging. It gleans insects from trunks, branches, twigs, and foliage of trees.

The **White-breasted Nuthatch** (*Sitta carolinensis*) is a common year-round preserve resident. It gleans from trunks and branches of trees and snags, mostly eating insects and spiders during the breeding season. It eats acorns and large seeds in fall and winter, storing them in defended caches. It breeds from mid-March to late July, usually excavating its own cavity in a tree or snag. A single brood of 6-7 eggs is produced. The female incubates for about 12 days while the male brings her food. The altricial young are fed by both parents.

Bewick's Wren (*Thryomanes bewickii*) is a year-round resident of the reserve, primarily within the chaparral. It gleans lower limbs and branches of small trees and shrubs, stems of large herbaceous plants and occasionally flycatches or hovers to pick prey from foliage. It feeds on insects, spiders, other small invertebrates; rarely on seeds. It mostly forages within the cover of dense, shrubby vegetation within 4 feet of the ground. It nests in virtually any cavity in ground, snag, rock crevice, or woodpecker hole. Bewick's wren breeds from mid-February into early August. Clutch size is 5-7. Up to three broods may be produced some years. Incubation is about 14 days, by the female. The altricial young are tended by both parents. They leave the nest at 14 days but are fed by the parents for 2 more weeks.

The **House Wren** (*Troglodytes aedon*) is a common summer resident of the reserve, arriving in April. It feeds on insects, spiders, and other small invertebrates gleaned from shrubs, trees, brush piles, logs, rocks, ground, and other surfaces. Most foraging is within 4 feet of the ground within deciduous thickets, low trees, or chaparral. The house wren nests in virtually any cavity or crevice; commonly in a woodpecker hole. It breeds from May to July, usually producing 2 broods of 5 or 6 eggs. The female incubates 13-15 days then both parents feed the altricial young for 12-18 days.

The **Winter Wren** (*Troglodytes troglodytes*) is an uncommon winter resident of the reserve. This active and secretive tiny bird gleans larval and adult insects, spiders, and other small invertebrates from or near the ground in tangled vegetation or fallen wood in moist, shady habitats, usually near water.

The **Canyon Wren** (*Catherpes mexicanus*) prefers cool, shaded canyons with rock outcrops so should find ideal habitat in the reserve. It forages around cliffs and large jumbles of boulders, often in concealed sites, for insects, spiders, and other small invertebrates. The Canyon Wren breeds around April and May. It nests on a ledge in a rock cavern or crevice on a cliff or bank. Clutch size is 5 or 6. Both sexes share domestic activities.

The **Rock Wren** (*Salpinctes obsoletus*) is a common resident within the reserve. Its habitat is restricted to rock outcrops, talus slopes, cliffs and banks. It gleans and probes for insects, spiders, and other small invertebrates from the ground, rocks, and crevices, seeming to scurry rather than fly, while foraging. It breeds from February into September with a peak between May and July nesting under a large rock, in a cavity in cliff or bank, or in a crevice among rocks. Two or more clutches of 5 or 6 may be reared per season. Both parents incubate and tend the altricial young.

The **California Thrasher** (*Toxostoma redivivum*) is a year-round resident of the reserve. It prefers moderate to dense chaparral habitats, where it forages by digging, rakings, and probing in litter and loose soil with its recurved bill, feeding on insects, spiders, and other terrestrial invertebrates. It also takes some fruit, acorns, and seeds. The thrasher rarely forages more than a few feet from shrub cover. Breeding season lasts from early December into early August. It builds its nest well inside a large shrub or scrubby tree, usually 2-5 feet above ground. The clutch size is 3 and frequently 2 broods are raised each year. Incubation is 14 days, by both parents. The altricial young are tended by both parents and leave the nest at 12-14 days.

The **American Robin** (*Turdus migratorius*) is an abundant winter resident of the reserve. A few may nest there in spring, but most move to higher elevation or latitude. The robin prefers open, wooded areas with moist, herbaceous understories. Animal foods predominate in the breeding season when it eats mostly earthworms, caterpillars, beetles, and snails. In nonbreeding season, the robin eats more berries and other fruits, particularly toyon, elderberry, and mistletoe. The robin breeds from April to August, building a nest of mud, twigs, and plant materials in a fork or on a horizontal branch of a tree. It is a monogamous, solitary nester. with a clutch size around 4 and may raise 2 broods per season. Incubation lasts 11-14 days. The altricial young are tended by both parents and fledge at 14-16 days.

Townsend's Solitaire (*Myadestes townsendi*) is an uncommon winter visitor to the reserve. Although it feeds extensively on invertebrates in nesting season, its winter diet consists almost entirely of berries and other fruits, especially, toyon, manzanita , and mistletoe.

The **Hermit Thrush** (*Hylocichla guttata*) is a winter resident of most habitats in the reserve. The basic requirement is for shrubs or undergrowth for concealment as it forages on the ground and in shrubs. Toyon berries are a favorite winter food.

The **Mountain Bluebird** (*Sialia currucoides*) is a common resident at higher elevations and occasionally winters in the reserve. It hunts from a low, exposed perch or hovers and stoops on insects on foliage or the ground, and hawks flying insects. It also eats berries and other fruits, especially in winter.

The **Western Bluebird** (*Sialia mexicana*) is a common year-round resident of the reserve. It roosts and nests in tree holes in oak woodlands. It eats insects, including grasshoppers, caterpillars, beetles, and ants; also earthworms, snails, and other small arthropods. It flies out from a low perch to capture prey on the ground or plants, sometimes hovering before attacking. It also sometimes hawks flying insects. The Western bluebird breeds from April into July. One to two clutches of 5 are produced. Incubation lasts 13-14 days then the altricial young are tended by both parents. Sometimes the male tends the fledglings while the female renests.

The **Blue-gray Gnatcatcher** (*Polioptila caerulea*) is an uncommon summer resident in chaparral and woodland habitats within the reserve. It gleans insects, spiders, and other small invertebrates from foliage of shrubs and low trees, hovering to search the outermost foliage. It builds lichen-covered, open-cup nest of plant fibers usually within 25 feet of the ground and typically anchored to a 2 inch horizontal branch with spider silk. The peak of egg laying is May and June. Clutch averages 4-5 eggs; frequently double-brooded. Incubation is by both sexes for 13-15 days, The altricial young are cared for by both parents and fledge at 10-13 days

The **Golden-crowned Kinglet** (*Regulus satrapa*) is common at higher elevations and may winter in the reserve. This active little bird gleans, hovers, and flycatches, eating insects, spiders, other small invertebrates, and their eggs.

The **Ruby-crowned Kinglet** (*Regulus calendula*), though it breeds in higher elevation coniferous forest habitats, is commonly found as a winter resident of the reserve. This "hyperactive" little bird feeds on insects, spiders, and small arthropods, gleaning and hovering to snatch them from foliage, small twigs, and canopy branches. It occasionally eats some fruits and seeds.

The **Cedar Waxwing** (*Bombycilla cedrorum*) breeds mostly in Canada but is a common winter resident (September to May) of the reserve. It travels in flocks, raiding berry crops, particularly toyon and mistletoe. It also feeds on buds and flower parts.

The **European Starling** (*Sturnus vulgaris*) while still uncommon, may be expected in the reserve in summer breeding season. It breeds in tree cavities and aggressively displaces native species from suitable holes.

The **Loggerhead Shrike** (*Lanius ludovicianus*) is a year-round resident of the reserve, but is more common in winter when migrants from further north are also present. It prefers open habitats with scattered shrubs, trees, posts, or other perches. It eats mostly large insects but also takes small birds, mammals, amphibians, reptiles, fish, carrion, and various other invertebrates. It usually searches for prey from a perch then flies directly to the attack but sometimes hovers. It is known for its habit of caching prey by skewering it on a thorn, sharp twig, or wire barb. It builds its nest on a stable branch in a densely-foliaged shrub or tree. 4-8 eggs are laid between March and May, and the young become independent by July or August.

Cassin's vireo (*Vireo solitarius*) is a common nesting resident of the reserve, particularly around riparian areas. It gleans food from twigs and foliage, eating mostly insects, plus a few spiders and small fruits.

Hutton's Vireo (*Vireo huttoni*) is a year-round resident of evergreen oak groves in the reserve. It gleans insects and spiders from twigs and leaves of shrubs and trees; occasionally hawking flying insects and eating berries and other small fruits. It builds a cup nest suspended by the rim from forks of a twig, usually in live oak, but sometimes in bay, pine, willow, or large Ceanothus.. Hutton's Vireo breeds from late February through May. A clutch of 3-5 eggs is incubated 14-16 days, then the altricial young are tended by both parents until they fledge at approximately 14 days.

The **Warbling Vireo** (*Vireo gilvus*) is a fairly common resident of the reserve, particularly near the creek, from mid-April into September. It gleans foliage and twigs, often hovers, and sometimes hawks flying insects. Most of its food is insects and spiders but it occasionally takes fruits and seeds. This vireo nests from late April into August with peak activity in June. The pair shares domestic duties. A clutch of 4 is incubated for 12 days then the young are tended until fledging at about 16 days.

The **Nashville Warbler** (*Vermivora ruficapilla*) is a common summer resident at higher elevations than the reserve. Migrants are frequently present in the reserve and an occasional pair may breed there.

The **Orange-crowned Warbler** (*Vermivora celata*) is a common breeding resident and migrant in the reserve. It usually feeds by gleaning and hovering 5-30 feet above the ground in shrubs and small trees. It eats mostly insects but takes some seeds, small fruits, plant galls, nectar, and tree sap. Spring migrants begin arriving in late March from wintering grounds in Mexico, becoming common by April. Most have departed by mid-October, but a few regularly overwinter. The Orange-crowned Warbler breeds from mid-April to mid-July in dense, brushy habitats, nesting on the ground or in a low shrub in brushy cover. One brood of 4 or 5 altricial young is raised per year.

The **Yellow Warbler** (*Dendroica petechia*) is an uncommon summer (April to October) resident. It gleans and hovers in the upper canopy of deciduous trees and shrubs. Eating insects and spiders. It places its open-cup nest 2-16 feet above ground in a deciduous sapling or shrub. A clutch of 4 or 5 eggs is incubated by the female for 11 days. Both parents care for the altricial young until fledging at 9-12 days.

The **Yellow-rumped Warbler** (*Dendroica coronata*) breeds at higher elevations but is a common transient, and abundant winter resident in the reserve. It eats mostly insects and spiders but also fruits, seeds, and occasionally nectar. It forages at all levels by hawking insects from air, gleaning from foliage, twigs, and branches, and by searching on the ground. It is most abundant in the reserve from October through March.

The **Black-throated Gray Warbler** (*Dendroica nigrescens*) prefers to forage in canyon live oaks, where it gleans caterpillars and other insect larvae from leaves and twigs in the upper crown. It builds a cup nest far

out on a forked twig of a shrub, sapling, or low tree. This warbler arrives in California between March and May from Mexico and South America, and leaves by the end of October. It breeds from early May to late July with peak activity in June. The clutch of 4 eggs is incubated by the mother, but father helps bring food to the chicks.

The **Yellow-breasted Chat** (*Icteria virens*) is an uncommon summer resident and migrant in the reserve. It usually arrives in April and departs by late September for wintering grounds in Mexico and Guatemala. It requires riparian thickets of willow or other brushy tangles near watercourses for cover. It gleans insects and spiders and some berries from shrubs and low trees. The chat's nest is usually 2-8 feet above the ground in dense shrubs along a stream. It breeds from early May into early August with peak activity in June. The clutch of 3 or 4 eggs is incubated 11-15 days, then the altricial chicks are tended by both parents for 8-11 days.

MacGillivray's Warbler (*Oporornis tolmiei*) is a summer resident of dense brush in moist habitats. It frequents valley foothill riparian where it forages in low shrubs or on the ground in dense thickets. It gleans foliage and branches and scrapes and probes ground litter, apparently eating mostly insects. It nests from May through July with peak activity in June. The nest is usually placed 2-6 feet above the ground in a shrub in a moist thicket; sometimes in ground herbage. Clutch size is 4. Incubation is 11-13 days, by the female only. The altricial nestlings are tended by both parents until fledging in 8 or 9 days.

Wilson's Warbler (*Wilsonia pusilla*) nests at higher elevation. It is found in the reserve as a transient in April and September. It feeds on insects gleaned from foliage low in the canopy or in the understory, sometimes flycatching.

The **Brown-headed Cowbird** (*Molothrus ater*) forages commonly in grasslands and pastures. From there it flies to nearby wooded areas where it lays eggs in the nests of other birds. It is uncommon in the reserve.

Bullock's Oriole (*Icterus bullockii*) is a colorful summer resident usually found in or near the riparian zone. It arrives around the first of April and leaves around September. About 80% of the oriole's diet is insects and spiders gleaned from foliage. The remainder consists of berries, other fruits, buds, and nectar. Breeding takes place from early April to late July. A pendant nest is hidden in foliage; usually 6-15 ft above ground. Clutch size is 4 or 5 in a single annual brood. Incubation is about 14 days; then the altricial young are tended by both parents until they fledge in about 14 days.

The **Western Tanager** (*Piranga ludoviciana*) generally nests at higher elevations. It may be seen in the reserve foraging for fruits or insects during migration in August or September, April or May.

The **Black-headed Grosbeak** (*Pheucticus melanocephalus*) is a common summer resident of the riparian zone in the reserve. It arrives around April and departs for its Mexican wintering ground in August or September. While nesting, it feeds primarily on insects and spiders, also taking buds, berries, and seeds. More plant foods are taken after breeding and during migration. The grosbeak builds its nest in a shrub or tree, usually in or near the riparian zone. It breeds from late April into August, producing a single annual clutch of 3 or 4 eggs. Incubation is by both parents for 12-13 days. The altricial young are tended by both parents and leave the nest at 11-12 days.

The **Evening Grosbeak** (*Coccothraustes vespertinus*) nests at higher elevation, but in winter may sometimes be found in the reserve where it feeds on seeds and fruit.

The **Lazuli Bunting** (*Passerina amoena*) is a summer resident, migrating to wintering grounds in southern Arizona and Mexico in August and September and returning in April and May. It breeds in open chaparral

and brushy understories of open wooded habitats, especially riparian. It feeds mostly on insects and small seeds, foraging in or beneath dense vegetation. It builds its nest in a dense thicket of shrubs, vines, low trees, or tall forbs; usually 2 to 4 feet above the ground. A clutch of 4 is incubated 12 days, by the female. The altricial young are cared for by both parents and leave nest at 10-15 days.

The **House Finch** (*Carpodacus mexicanus*) is a common year-round resident of the reserve. Seeds of grasses and forbs are its principal foods; buds, berries and other small fruits are also important, and a few insects are taken. It forages on the ground or picks seeds and fruits from plants while clinging to stems or branches. Nesting usually begins in March or April. The nest is a sturdy cup of grass or other stringy material built in a site shaded overhead and often partly enclosed. 4 or 5 eggs are laid per clutch, and 2 or even 3 broods may be produced per year. The eggs are incubated 12-14 days, then the altricial young are fed by both parents. The young fledge at 14-16 days, but are fed by the parents for several more days.

The **Purple finch** (*Carpodacus purpureus*) is an erratic winter resident of the reserve. They feed mainly on seeds, often taken directly from trees and shrubs.

Lawrence's Goldfinch (*Carduelis lawrencei*) is an uncommon summer resident, present from April through September. It breeds in open oak woodland and chaparral, usually near water. It eats seeds and a few insects. Favored seeds include amaranth, fiddleneck, starthistle, and chamise. It plucks seeds from the plants or gleans them from the ground. It builds its nest in the dense foliage of a tree or shrub, preferring an oak. Breeding season begins in April. A clutch of 4 or 5 eggs is incubated for 12-13 days, then the altricial young are tended by both parents for another 11 days.

The **American Goldfinch** (*Carduelis tristis*) may be found both breeding and wintering within the reserve. It is primarily a seedeater, plucking seeds from trees, shrubs, and composite forbs. In nesting season about half its diet consists of insects, mostly aphids and lepidopteran larvae. This goldfinch prefers to nest near water in foothill riparian habitat but also uses oak woodlands. It often builds its nest in willow, cottonwood, or other riparian deciduous tree, but sometimes in an oak, shrub, or even in a patch of stout herbs. The nesting season lasts from April into July. The American goldfinch is a monogamous, solitary nester with a clutch size of 4-6. Incubation is mostly by the female and requires 10-14 days. The altricial young are tended by both parents, and fledge at about 14 days.

The **Lesser Goldfinch** (*Carduelis psaltria*) is the most common goldfinch in the reserve. Resident all year, it feeds on seeds, with some buds, fruits, leaves, and a few insects. It commonly feeds on composites and shrubs, plucking seeds directly from the plants. It also gleans from the ground, but feeds only occasionally in trees. The Lesser Goldfinch typically begins nesting in April, often building the nest in a deciduous shrub or tree, occasionally in a tall herb. The nest is often placed on a drooping branch, shaded by dense outer foliage. As many as 3 broods of 4 or 5 eggs per year may be produced. Incubation lasts about 12 days. The altricial young are tended by both parents and leave the nest at 12-15 days.

The **American Dipper** (*Cinclus mexicanus*) is a common resident along Big Chico Creek in the reserve. It feeds on aquatic insects, small fish, snails, tadpoles, and occasionally flying insects. The dipper is the only small bird that routinely walks into and under the water while foraging. It gleans rocks in the stream and on shore, sometimes swimming after small fish or tadpoles. The dipper builds a domed nest of grass, moss, and leaves, usually within 3-6 feet of the stream in a location difficult for mammals to access. The nest may be in a crevice in rocks, behind a waterfall, or in a stump or log. A yearlong resident, the dipper breeds from March to August, with peak activity between May and July. Females lay 4 or 5 eggs and incubate them 16 days. The altricial young are tended by both parents. They leave the nest at 18-25 days.

The **California Towhee** (*Pipilo crissalis*), formerly known as brown towhee, is a common, year-round resident of the reserve. It prefers edges of dense chaparral and the brushy edges of densely wooded habitats. This towhee breeds and seeks cover in dense thickets and forages in adjacent open areas for seeds, insects, and some fruits. It gleans and scratches in litter, picks seeds and fruits from plants, and rarely flycatches. The breeding season peaks in May. The nest is a bulky cup of thin twigs, with leaves and flower-heads, lined with fine stems, grasses, and hairs and concealed in the low, dense foliage of a shrub or tree. Clutch size is 3 - 4 eggs; 2 or 3 broods may be raised each year. Incubation (by the female) takes about 11 days. The altricial young are tended by both parents and leave the nest at about 8 days.

The **Spotted Towhee** (*Pipilo maculatus*) is a very common year-round resident of the reserve. It usually forages beneath overhanging vegetation of shrubs or thickets, feeding on seeds, invertebrates, berries, and acorns. Insects make up about half the diet in spring and summer, but plant foods predominate at other seasons. The towhee mostly scratches and gleans in litter, but also gleans foliage, and plucks seeds and fruits from plants. Its nest, built in a concealed depression on the ground, is a stout cup of grasses, bark shreds, rootlets, and dead leaves; lined with fine grasses and hair. The towhee breeds from April to August and may raise 2 broods of 3-4 per year. The female does all the incubating and brooding, but the male helps with the feeding. The young fledge at 8-11 days.

The **Dark-eyed Junco** (*Junco hyemalis*) nests at higher elevation, but is very common in the reserve in winter. Traveling in flocks, juncos feed mostly on the ground, gleaning seeds, insects and spiders.

The **Golden-crowned Sparrow** (*Zonotrichia atricapilla*) nests far to the north, but is very common from October to April in the reserve. Its winter diet is almost 100% plant foods, mostly buds, seedlings, flowers, and seeds of grasses and forbs. It usually forages in flocks on the ground, sometimes scratching in leaf litter.

The **White-crowned Sparrow** (*Zonotrichia leucophrys*) nests at higher elevations and latitudes, but is very common in winter in the reserve. It forages in flocks on the ground and in shrubs and large forbs for seeds.

The **Fox Sparrow** (*Passerella iliaca*) nests at higher elevation, but is common in the reserve in winter. It favors dense brush habitats, including chaparral and understories of open forests. It often forages near or beneath brush by scratching vigorously in litter and duff, feeding on seeds, berries, and invertebrates.

The **Song Sparrow** (*Melospiza melodia*) may use the reserve year-round or just for wintering. It usually forages on the ground or in low vegetation, under cover of dense thickets. Seeds are the most important foods in its annual diet, but insects, spiders and other small invertebrates make up almost half the diet in nesting season. The song sparrow usually builds its nest on the ground, but may nest in a shrub, thicket, emergent vegetation, or small tree, usually within 4 feet of the ground. Nesting season begins in April. 2-3 broods of 3-4 eggs are produced per year. Incubation lasts 12-14 days then the altricial young are fed by both parents for another 10 days before and for up to 25 days after fledging.