Brushy Peak Regional Preserve's wide variety of wildlife species is supported by a similarly broad range of plant communities, among which California annual grassland is dominant. Non-native herbaceous plants and annual grasses (ryegrass, wild oats, soft chess, etc.) predominate—a consequence of the land's continued cultivation in the past. Native perennial grasses (purple needlegrass, creeping wildrye, etc.) are sporadic and widely scattered; saltgrass is found in the alkali seasonal wetlands, such as in the main valley drainage within which the staging area lies. Common native wildflowers include the California buttercup, Johnny jump-up, lupine, blue-eyed grass, fiddler-grass, and many others. These and non-native wildflowers provide sustenance for numerous insects—an important link in the food chain. The most obvious grassland wildlife species is the ground squirrel, whose burrows are inhabited by amphibians, reptiles, badgers, burrowing owls, and the San Joaquin kit fox. Squirrels and cottontails are prey to red-tailed hawks, ferruginous hawks, and golden eagles. Western meadowlarks feed and nest in the grasslands, and fill the air with beautiful song. Sandstone rock outcrops provide nest sites for a variety of raptors and rock wrens. Woodland habitats range from pure stands of coast live oak and California buckeye to intermixed habitats of valley oak, bay laurel, and sagebrush. Shrubs include poison oak, monkeyflower, gooseberry, and elderberry. The oak woodlands support deer, bobcats, rodents, and many bird species such as hummingbirds, cedar waxwings, orioles, robins, woodpeckers, and the various raptor species mentioned above. Several spring-fed ponds, constructed by ranchers in the past, lie along the seasonally wet drainages and provide habitat for federally protected California red-legged frogs and California tiger salamanders. Other native amphibian species that breed in the ponds include the western toad and Pacific tree frog. The Preserve's shrublands are dominated by California sagebrush, with some bush monkeyflower. The south-facing slopes of Brushy Peak support this coastal sage plant community, which represent a habitat that typically supports the state and federally threatened Alameda whipsnake.