



WILDLIFE NOTES

Bell's Vireo

The vireo family is small in numbers and size. Most New Mexico vireo species are smaller than sparrows. The name means "I am green" though most vireos are grey with tinges of olive. Audubon named Bell's Vireo, *Vireo bellii*, for John Bell, a taxidermist who accompanied him in the 1840s.

RANGE

The Bell's Vireo is a neotropical migrant that winters in southern Mexico and breeds from southern California to the Great Plains and adjoining parts of the Midwest to northern Mexico. Bell's Vireos summer locally along the Gila watershed, along the lower Rio Grande near Socorro and Bosque del Apache and in the lower Pecos valley where an estimated 90% of New Mexico's population of Bell's Vireo nests are at Carlsbad Caverns National Park. Occasional birds are seen in far southwestern Hidalgo County, and in Taos and DeBaca Counties.

HABITAT

In New Mexico, these birds are most often found in dense shrubs or woods along lowland streams where willows, mesquite and seep willows (*Baccharis*) grow. They have also been found in introduced Salt Cedar. Bell's Vireos seem particularly dependent on corridors of riparian habitat that have a dense shrub

layer 2-15 feet from the ground. They are largely absent in intensively cultivated areas, forests, grasslands, and arid areas lacking riparian or other dense vegetation.

DESCRIPTION

If not detected by their unique song, Bell's Vireos can be difficult to find and identify due to their dull coloration, skulking behavior and the dense shrubby habitats they frequent. They resemble warblers or kinglets in size, being 4-5 inches long, but they have chunkier bodies and heavier, slightly flattened bills with slightly hooked tips. Warblers have thinner, unhooked bills. Bell's Vireo wingspan is about 7 inches.

Their backs are brownish-grey; the underparts are white with a grayish wash to the breast. Their sides may be washed with olive or yellow in newly molted birds. The sexes are similar. The bill and legs are grayish blue to black. The head is somewhat large for the size of the body and the legs are relatively heavy.

The faint white eye ring of the



Photos: US Fish and Wildlife

Bell's Vireo is broken in front of and behind the eye. There is an indistinct gray line through eyes. Two pale wing bars may also be seen, the lower bar more prominent.

BEHAVIOR

The movements of Bell's Vireos are slower than those of flitty warblers and kinglets as they hunt through the branches, but they are more often heard than seen. The song is unlike that of most vireos in being unmusical. It is a varied sequence of sharp, slurred phrases that seem to repeatedly ask and answer a question: zwee-

dle zweedle zweedle twee? zweedle zweedle zweedle chew! The first phrase has rising inflection; the second has a downward inflection. The birds sing incessantly early in the nesting season even in mid-day when other birds are silent.

DIET/FEEDING

The strong, thick beak with a slight hook at the end, like a miniature of a shrike's beak, reminds us that Bell's Vireos are determined predators. These birds feed on caterpillars, aphids, beetles, bees and wasps and spiders. They move about slowly but may sometimes hover while feeding. A vireo pair may forage together during the breeding season, progressing up the tree in a spiral.

REPRODUCTION

Bell's Vireos nest in summer, usually producing a single brood but second broods are documented. Both sexes participate in the building of an open cup nest suspended from the fork of a twig only a few feet above the ground. The nest is lined with fine grass and the outside may be decorated with spider egg cases. The 3-5 sparsely spotted eggs hatch in about two weeks. Both sexes incubate and feed young through post-fledging. Bell's Vireos are generally the only vireo species breeding along lowland stream-sides, although other species occur there in migration; Gray Vireos (*V. vicinior*) may breed on nearby slopes that are dotted with junipers. The Bell's Vireo makes a well-camouflaged nest but when found the bird will stand its ground against intruders.

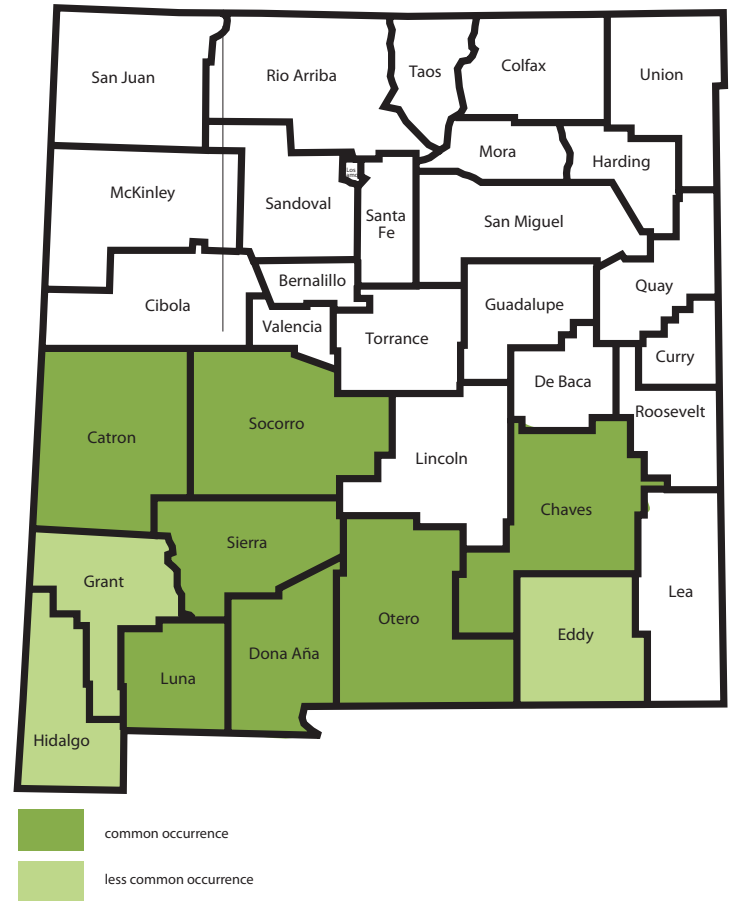
CONSERVATION

Breeding Bird Survey data indicate that Bell's Vireos have shown an overall decline of 2.8% per year from 1966-2001 across their U.S. range.

Habitat fragmentation and/or degradation, especially along stream and river corridors is the greatest threat to the continued health of populations. Development, river channelization and water impoundment, firewood cutting, and agriculture have impacts. Large water releases from dams and reservoirs in summer can inundate low-lying vireo nests. Overgrazing has been estimated to reduce nesting sites by 50% in some areas and has contributed to an increase in non-native invasive plant species that do not provide suitable habitat for the species. Domestic cats are significant predators in some areas.

Bell's Vireos are unfortunately very common victims of Brown-headed Cowbirds (*Molothrus ater*) which lay their eggs in vireo nests. The cowbird young crowd and starve out their hosts' smaller offspring. Up to 70% of nests in some areas may be parasitized.

Fragmentation of habitat increases parasitism by the edge-loving



Brown-headed Cowbird. Increased habitat patchiness also acts to segregate remaining birds into disjunct subpopulations that are very susceptible to localized extinctions.

New Mexico Bell's Vireos are listed as state-threatened. In California, the "Least" Bell's Vireo subspecies is federally endangered.

Conservation and restoration of riparian areas is critical to the long-term success of this species. Removal of exotic vegetation and revegetation with native plants to increase nesting habitat and cowbird trapping programs may increase productivity of Bell's Vireo populations.

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