

THE LEAST BELL'S VIREO IN BAJA CALIFORNIA, MEXICO

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The Least Bell's Vireo (*Vireo bellii pusillus*) has been recorded as a breeding species in California and in Baja California, Mexico, south to about latitude 30° N (AOU 1957). Recent field work has shown this vireo to be rare or absent from about two-thirds of its former breeding range in California (Goldwasser et al. 1980), so it seemed desirable to make a preliminary survey of its status in Mexico.

Review of literature and museum records and consultation with ornithologists resulted in the identification of 14 Mexican locations where Least Bell's Vireos had been seen or collected during the breeding season (April-July), and that probably represented breeding localities (Figure 1 and Appendix). During 19-23 June 1980, Keith Axelson and I visited eight of those localities to see if vireos were present. We also checked for vireos in potential habitat enroute. Because habitat loss and degradation and brood parasitism by Brown-headed Cowbirds (*Molothrus ater*) are implicated in the decline of the Bell's Vireo in California (Goldwasser et al. 1980), we made a preliminary assessment of these factors.

RESULTS

Bell's Vireos were found at five of the eight historical locations checked, as described below.

San Fernando Mission, 20-21 June. The habitat at San Fernando is apparently much as Anthony (1895) described it, consisting of about 1.5 km of dense Catclaw (*Acacia greggii*) and related species along an open stream bed. We located at least eight singing male Bell's Vireos in about 0.5 km of habitat downstream from the Mission site, and two more at the Mission. Habitat between the two points was similar and presumably supported similar densities of vireos.

Valladares, 21 June. We were not at the exact location visited by other observers, but we did see and hear a male Bell's Vireo in the vicinity. The habitat was atypical—the bird was singing from a lone dense bush near an open stream bed—and there did not seem to be other vireos nearby.

Rancho San José (Melting Ranch), 21-22 June. Altogether, riparian woodland extends for about 10 km along Arroyo San José in the vicinity of the Meling Ranch (Short and Crossin 1967). We surveyed about 0.75 km at the north end adjacent to the San Telmo-Observatory road, and located at least 10 singing males. Most were in the younger denser growth of willows (*Salix* sp.) near the road,

LEAST BELL'S VIREO

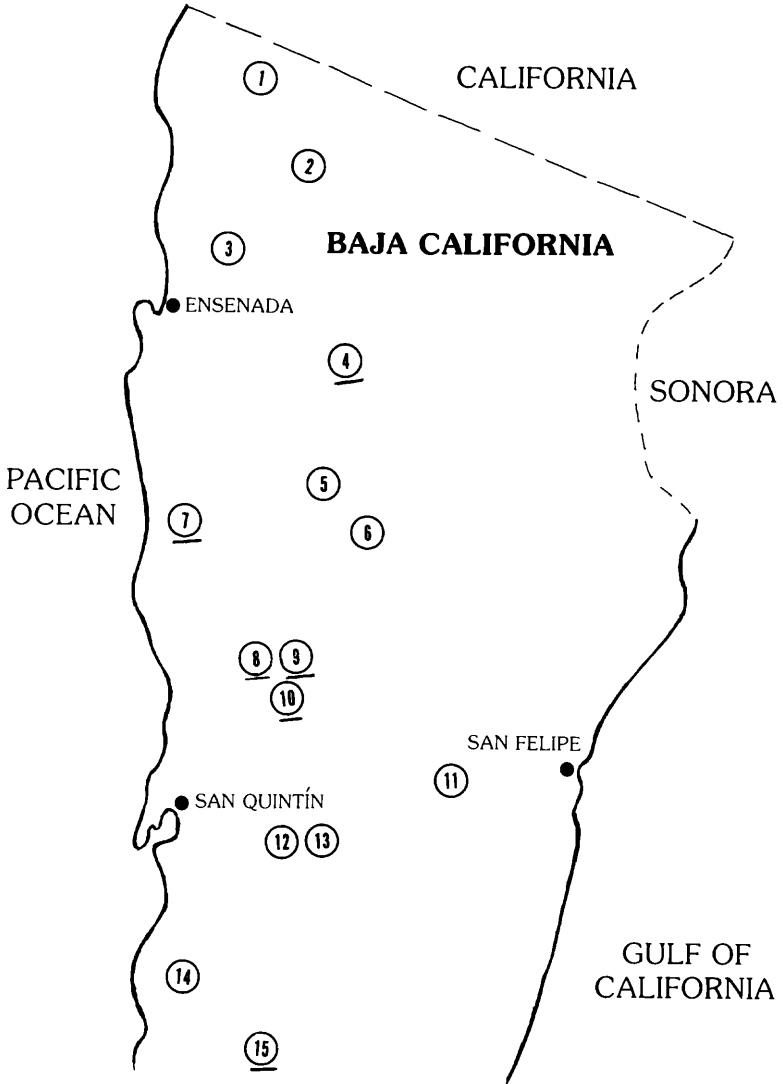


Figure 1. Northern Baja California, Mexico, showing locations where Bell's Vireos have been recorded during the breeding season. Locations where vireos were recorded in 1980 are underlined. 1. Carrizo Valley. 2. Valle de las Palmas. 3. Guadalupe Valley. 4. El Gato. 5. San Ysidro. 6. Cerro Prieto. 7. Erendira. 8. Las Cabras. 9. Rancho San José. 10. Valladares. 11. Cañon El Cajón. 12. El Salto. 13. Rancho Rosario. 14. El Rosario. 15. San Fernando.

LEAST BELL'S VIREO

where several could be heard at one time within 20 m of one another, but some were found in the older, more open woods downstream.

Las Cabras, 22 June. Riparian woodland formerly occurred along the Río San Telmo at this point (Short and Crossin 1967). Now the only dense vegetation in the vicinity is just upstream from Rancho Cortez, and consists of about 500 m² of 3-4 m tall Tree Tobacco (*Nicotiana glauca*) and tamarisk (*Tamarix* sp.). We found a pair of Bell's Vireos at that site, apparently the only ones in the otherwise open river bottom.

El Gato, 22-23 June. About 22 km SE of Ojos Negros, a spring-fed stream flows from the Sierra Juárez and is lined with willows, cottonwoods (*Populus* sp.), and Catclaw for about 1.5 km (Short and Crossin 1967). In about 0.5 km of this habitat, we located 10 singing males. Most of the birds were in Catclaw rather than the more open willow or cottonwood growth. At one point four males were singing simultaneously within 15 m of one other.

We also found Bell's Vireos at one location where they had not been reported previously:

"*Erendira*," 8.8 km SW of Highway 1 at El Descanso, 19-20 June. About 1.5 km of dense willows grow along a tributary to Río San Isidro. We accounted for six singing males in about one-third of the available habitat.

We were unable to find any suitable habitat for Bell's Vireos in Guadalupe Valley, Valle de las Palmas or at El Rosario, the other historical locations checked. In fact, the only other location we found on the entire trip that looked suitable for Bell's Vireos was a 0.5 km stretch of dense willow growth along a stream at Santa Rosa on Highway 1, 20 km south of La Misión. No Bell's Vireos were seen or heard there. Agricultural development has resulted in the elimination of river bottom vegetation in the Guadalupe Valley, at El Rosario and elsewhere. More importantly, the severe floods of 1978-1979 eradicated major areas of riparian growth, leaving virtually all streams in northern Baja California denuded from the coast far back into the mountains.

Cowbirds were seen at San Fernando (7 birds), Rancho San José (7), Erendira (1), and in agricultural areas around Ensenada (3).

DISCUSSION

No firm conclusions can be drawn about the status of the Least Bell's Vireo in Mexico from such a brief survey, but a few observations seem appropriate.

1. The populations found at San Fernando, Rancho San José, El Gato and Erendira are probably healthy and relatively secure at pre-

LEAST BELL'S VIREO

sent. Breeding densities (8 to 20 pairs per km of habitat) are greater than any found in California recently (Goldwasser et al. 1980), and rival the greatest densities reported in California historically (Grinnell and Storer 1924). The habitat is not immediately threatened with destruction or modification. Cowbirds are present in some areas, but apparently not in numbers likely to be a serious detriment to the vireo population.

2. While we certainly did not find all the Bell's Vireos in Baja California, it is obvious that habitat of the "classic" type is limited both naturally and (more recently) as a result of agricultural development and floods. It seems likely that the number of breeding pairs is measurable in hundreds rather than thousands.

3. Bell's Vireos will probably be adversely affected by the continuing development of Baja California. Mexican Highway 1 has recently been paved and improved the length of the peninsula, as has Highway 3 from Ensenada to San Felipe. Concurrently, the Mexican Government has been working to improve water distribution for irrigation and other uses. Together, these improvements are making agriculture in Baja California much more feasible and profitable. Farm crops will continue to replace bottomland vegetation. Brown-headed Cowbirds can be expected to increase in numbers as agriculture provides more attractive habitat for them, and they may eventually reach levels of significance for vireos. As in California, only the larger and more isolated populations of Bell's Vireos can be expected to remain unaffected.

ACKNOWLEDGMENTS

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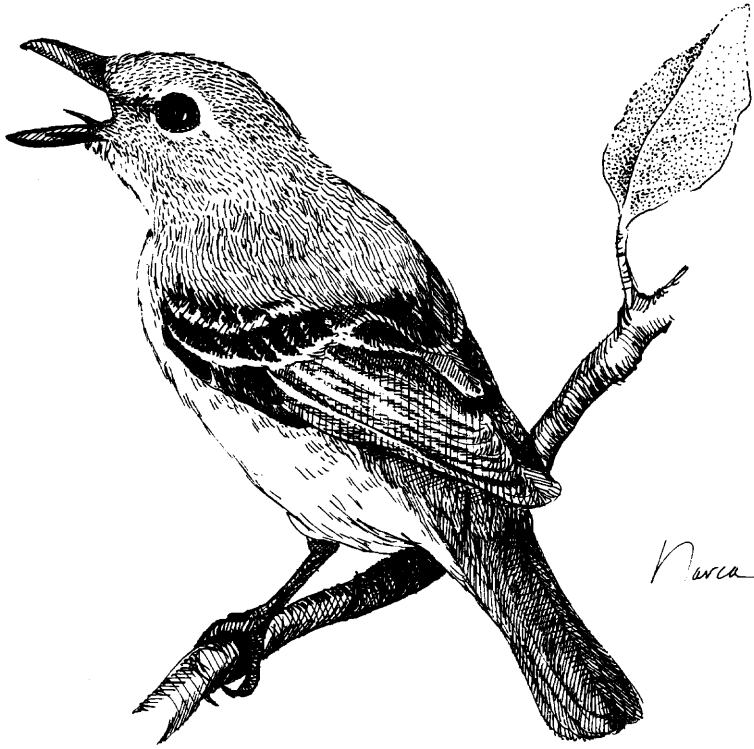
LEAST BELL'S VIREO

APPENDIX

Previous breeding season records of Least Bell's Vireos in Baja California. Locations are shown in Figure 1.

CARRIZO VALLEY: specimens 20-21 April (year?) (Grinnell 1928). GUADALUPE VALLEY: specimens 28 April and 2 June (year?) (Grinnell 1928). VALLE DE LAS PALMAS: specimens 5-6 April (year?) (Grinnell 1928). 22 KM SE OF OJOS NEGROS: up to 10 birds, 4-15 April 1967 (Short and Crossin 1967). SAN YSIDRO (ISIDRO?): 2 egg sets 1936, Western Foundation of Vertebrate Zoology (WVZ). 11 KM E OF CERRO PRIETO: 2 collected June 1928, Museum of Vertebrate Zoology (MVZ). LAS CABRAS: 1 collected 4 June 1923, San Diego Natural History Museum (SDNHM). RANCHO SAN JOSÉ (MELING RANCH): common 20-28 April 1967 (Short and Crossin 1967); 1 pair seen 5 May 1975 (S. Wilbur field notes); 1 pair seen 3 August 1977 (Wilbur field notes). VALLADARES: 2 collected April 1925 (MVZ); 6 seen 24-25 April 1967 (Short and Crossin 1967). CAÑON EL CAJÓN: 15 collected May 1926 (MVZ). EL SALTO, 48 km E of San Quintín: several seen 28 April 1964 (Short and Banks 1965). RANCHO ROSARITO, 54 km E of San Quintín: "common," 2 collected 27 April 1964 (Short and Banks 1965). EL ROSARIO: 5 collected May 1925 (SDNHM); 3 egg sets 1925 (WVZ); 3 collected April 1926 (Los Angeles County Museum of Natural History). SAN FERNANDO: "quite common" 1894 (Anthony 1895); 2 collected 28 April 1928 (SDNHM).

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Narca

Bell's Vireo

Sketch by Narca Moore