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# 2010 Survey for Least Bell's Vireo

## FINAL

Ballona Wetlands Ecological Reserve  
Los Angeles (Playa del Rey), California

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### Summary

The results of a protocol survey for the least Bell's vireo (*Vireo bellii pusillus*) at the Ballona Wetlands Ecological Reserve (BWER) during May-July 2010 are presented. Nest-building by one pair of vireos, and subsequent fledgling of two young from the same nest, was confirmed during this survey. The nest was located in the lower branches of an arroyo willow (*Salix lasiolepis*) within a dense willow clump at the southeastern corner of the Reserve, adjacent to the Freshwater Marsh (Playa Vista). The understory was largely non-native, consisting of scattered pampas grass (*Cortaderia selloana*) and open ground. During the spring of 2010, least Bell's vireo staged an unprecedented colonization of the Ballona area, with nesting confirmed in two locations, BWER and along the Playa Vista Riparian Corridor, just east of the Reserve. This represents the first known nesting by least Bell's vireo along the immediate coast of Los Angeles County.

### Background

In April of 2010, during the first full year of Baseline bird surveys at the Ballona Wetlands Ecological Reserve (BWER), several territorial least Bell's vireos (State/Federally Endangered) were detected here and in riparian habitat at nearby Playa Vista to the east (D.S. Cooper, unpublished

notes). Prior to 2010, the vireo was known from the Ballona/west Los Angeles area only as a vagrant, with a handful of records during migration (Cooper 2006).

## Description of Work

From 19 May to 30 July 2010, Cooper Ecological Monitoring, Inc. performed a protocol survey for presence/absence of the least Bell's vireo *Vireo bellii pusillus*, as outlined by U.S. Fish and Wildlife Survey (2001), at the Ballona Wetlands Ecological Reserve (BWER). The reserve is located along the coast of Los Angeles north of Los Angeles International Airport (Figure 1). The survey covered an approximately two-kilometer-long strip of naturally-occurring, willow-dominated riparian scrub along the southeastern edge of the reserve, at the base of a line of natural bluffs extending from the coast at Playa del Rey east to Westchester (Figure 2). These willows lie directly adjacent to the recently-established (2003) Freshwater Marsh (property of Playa Vista), a freshwater lagoon with riparian, scrub and wetland plantings<sup>1</sup>. Other, smaller clumps of willows are scattered around BWER (mainly south of Ballona Creek); however, none has supported the least Bell's vireo, even in migration (D.S. Cooper, unpublished data). In performing a comprehensive baseline bird study on the reserve during 2009-2010 (Cooper, in prep.), all other riparian habitat areas of BWER were visited repeatedly (by D.S. Cooper and other observers) during the nesting season (April - July) without recording another least Bell's vireo; nor have several other characteristic riparian that typically co-occur with the least Bell's vireo, including the downy woodpecker (*Picoides pubescens*), yellow warbler (*Dendroica petechia*), yellow-breasted chat (*Icteria virens*), or the blue grosbeak (*Passerina caerulea*) at any other area of the reserve. For this reason, the willow strip that was surveyed, located at the southeastern corner of the reserve, appeared to be the only location at BWER supporting the vireo in spring 2010, and thus the protocol survey was limited to this site.

Figure 1. Regional setting; see Figure 2 for detailed view.



<sup>1</sup> The Freshwater Marsh was not formally surveyed during 2010, since it lies outside the boundaries of BWER. However, it is visited on a near-daily basis year-round by experienced birders who share their sightings, and no least Bell's vireos have been suspected of breeding here during 2010 or before.

For the 2010 survey walking transect survey of the entire willow strip was employed, conducted between 8:00 AM and 11:00 AM. Numbers and locations of all bird species detected were recorded directly onto aerial photographs, and observations of both least Bell's vireo and brown-headed cowbird (*Molothrus ater*), a known nest parasite of the vireo and other breeding songbirds, were subsequently transcribed and mapped electronically, as required by USFWS protocol (USFWS 2001). All surveys but one were conducted by Daniel S. Cooper; the 10 July 2010 survey was conducted by Don Sterba, a long-time birder in the area with familiarity with the fieldmarks and vocalizations of the Bell's vireo and other North American riparian species. Each visit lasted 2-3 hours (Table 1). Wind, generally calm at the start of the survey, rose to a light breeze on each visit, and temperatures were in the mid-60s F during each survey. Neither wind nor temperature appeared to affect detection of the vireo or any other species.

Table 1. Survey dates for 2010 least Bell's vireo protocol survey.

<b>Date</b>	<b>Time start</b>	<b>Temp, start/end (degrees F)</b>	<b>Wind, start/end (mph)</b>	<b>Observer</b>
19 May 2010	07:20	58/63	0/9	DSC
31 May 2010	06:55	62/70	6/7	DSC
10 June 2010	09:10	65/66	6/10	DSC
20 June 2010	08:15	64/68	0/10	DSC
30 June 2010	07:15	62/63	3.5/9	DSC
10 July 2010	08:00	62/65	3.5/7	D. Sterba
20 July 2010	07:45	66/69	3.5/9	DSC
30 July 2010	07:20	61/65	7/9	DSC

Figure 2. Locations mentioned in report.



## Results

Over the course of eight surveys (Table 2) a single nesting pair of least Bell's vireo at BWER was confirmed as present, and physical nest was discovered in one of the willow clumps along the survey route (Figures 3a, 3b). The female had apparently been banded as a fledgling at Camp Pendleton, San Diego Co., in 2008 (B. Kus, USGS, *via email*). Two young fledged successfully between 31 May and 10 June 2010, and all four birds (two adults, two juveniles) were observed by D.S. Cooper and several others (incl. D. Sterba) on multiple subsequent visits as the adults foraged both at BWER and within the adjacent Ballona Freshwater Marsh, bringing food to young.

The nest was discovered within a dense willow clump (located at the extreme southeastern corner of BWER), suspended on thin branches of an arroyo willow (*Salix lasiolepis*), and appeared to be composed mainly of plant fibers (see Appendix A). It was placed approximately 0.5 meters off the ground, within an area that appeared to be subject to winter flooding, based on dried mud on the surface of the soil, and suspended dried plant material in the surrounding vegetation. The understory was comprised of both live and dead willow branches, forming a nearly impenetrable thicket. Large, impenetrable pampas-grass (*Cortaderia selloana*) plants were scattered throughout this willow clump, occasionally forming hedges reaching over 2 meters high. The nest was located approximately five meters from the outer edge of the willow clump, and birds could be observed from an unobtrusive distance by walking just inside the canopy.

A single, singing least Bell's vireo made a brief appearance in the survey area on 10 July 2010 (likely the same individual seen a few days prior at the adjacent Ballona Freshwater Marsh, *fide* D. Sterba);



this bird did not linger, and may have either been a transient, or a bird from a failed territory elsewhere. Just east of the survey area, along the Playa Vista Riparian Corridor, a pair of least Bell's vireo made two nesting attempts in spring/summer 2010, the latter successful, and a single unmated male was detected on territory during the same time period (D.S. Cooper, unpubl. data). Therefore, it appears that the Ballona area (i.e., the Ballona Wetlands and adjacent Playa Vista) supported two successful breeding pairs of least Bell's vireo during summer 2010. However, only one (discussed here) was located on BWER.

Table 2 presents the results, by date, of the 2010 survey for the least Bell's vireo at BWER, and also summarizes observations of brown-headed cowbirds, as required by the survey protocol<sup>2</sup>. An aerial photograph showing the survey area and locations mentioned (e.g., "southeastern willow clump") is provided in Figure 2. Photographs of the study area and the least Bell's vireos observed are presented in Appendix A. Appendix B contains a list of all species detected during the protocol survey, and notes on their status.

Table 2. Summary of least Bell's vireo (LBV) and brown-headed cowbird (BHCO) observations.

Date	LBV	BHCO
19 May 2010	Singing male @ 07:41, southeastern willow clump.	Male (same?) perched in three areas along route; juvenile BHCO being fed by common yellowthroat ( <i>Geothlypis trichas</i> ) in southeast corner of study area.
31 May 2010	Nest with 2 LBV fledglings discovered in southeastern willow clump; singing/scolding male nearby.	Single male at far western end of survey route.
10 June 2010	Apparent LBV pair observed flying north a short distance from BFM into southeastern willow clump; female LBV carrying food in tall willow of same clump; male LBV singing constantly 10:17-11:05	Pair, female near center of study area, perched in willows.
20 June 2010	Female (banded) accompanied by two juveniles foraging along lower slope of bluff, south of BFM and southeastern willow clump; singing male (09:30) at southeastern willow clump.	2-3 male, 2 female BHCO perched along survey route.
30 June 2010	Male (singing) accompanied by two juveniles (begging) foraging at BFM, east of southeastern willow clump, wholly within BFM property.	Male "singing" from large Brazilian pepper ( <i>Schinus terebinthifolius</i> ) at northeastern edge of survey route.
10 July 2010	Male singing from southeastern willow clump; second LBV singing north of here, moving west through study area; juvenile LBV calling/ begging along inner path at BFM, north of southeastern willow clump.	Two (sex unk.) at northeastern edge of survey route.
20 July 2010	Male singing @ 09:20, southeastern willow clump; female or juvenile calling nearby in same willow clump.	None detected
30 July 2010	None detected	None detected

<sup>2</sup> Brown-headed cowbirds were only recorded if perched in the study area; small numbers were observed flying overhead (generally 1-5/visit), but it was impossible to tell if they were local birds, multiple birds, etc.

Figure 3a. Overview of least Bell's vireo (LBV) and brown-headed cowbird (BHCO) sightings at Ballona Wetlands Ecological Reserve during 2010 protocol survey. Note: this does not include brown-headed cowbirds recorded only as "fly-overs".

Key:

Triangle = LBV nest (see also Fig. 3b)

Box = male/singing LBV

Circle = female LBV

Diamond = juvenile LBV

Clear push-pin = adult BHCO

Push-pin with dot = juvenile BHCO

(White lines show observed or suspected movement paths)

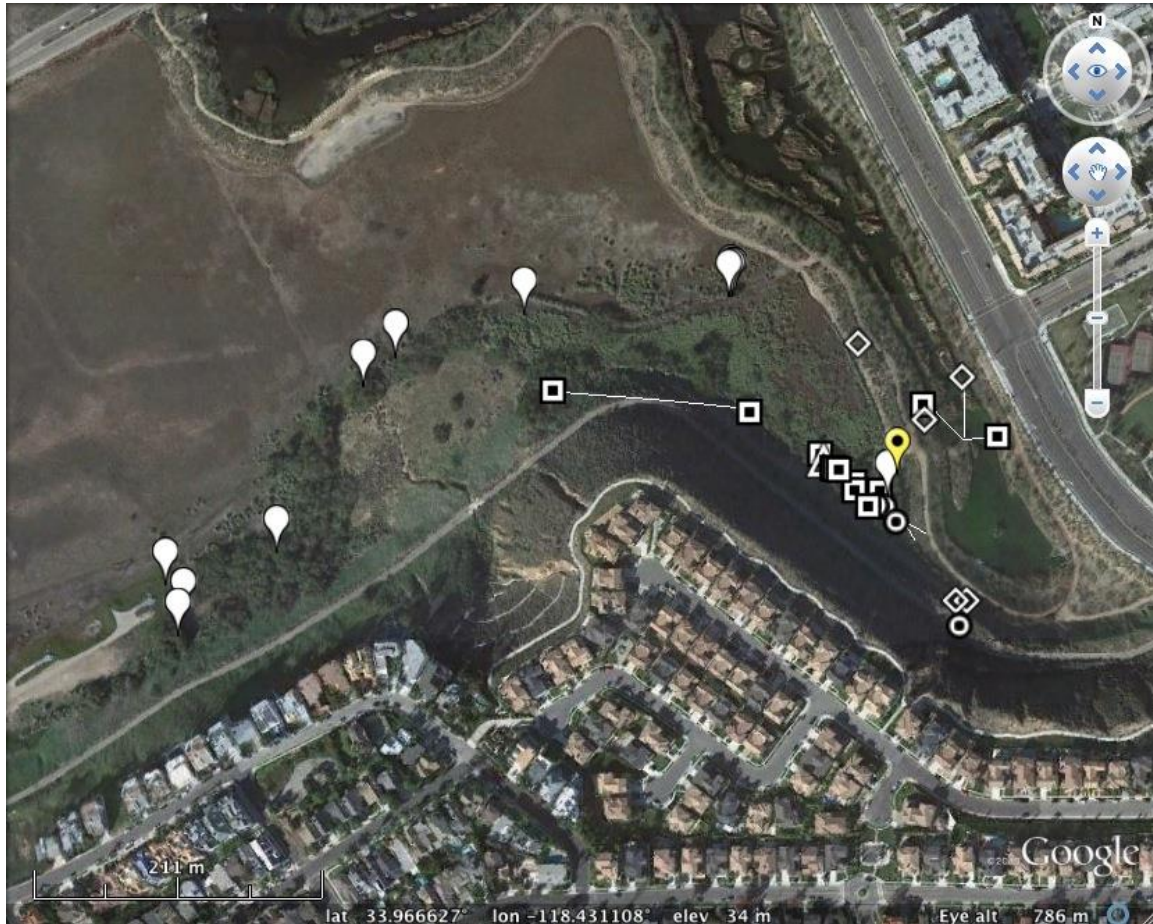
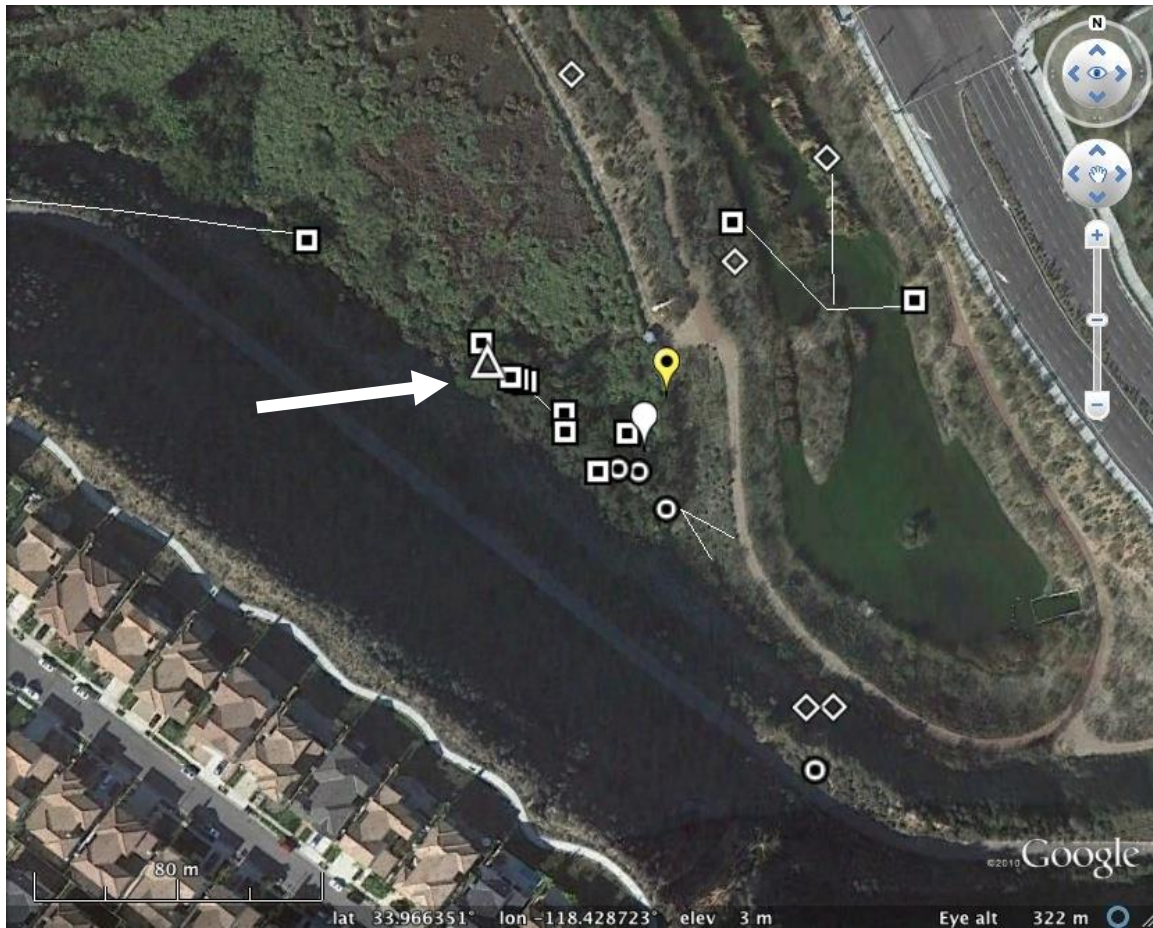


Figure 3b. Detailed view of 2010 least Bell's vireo nest area (white arrow/triangle).



## Sources cited

Cooper, D.S. 2006. Annotated checklist of extirpated, reestablished, and newly-colonized avian taxa of the Ballona Valley, Los Angeles County, California. Bull. Southern California Acad. Sci. 105(3):91-112. *Addenda posted at [www.cooperecological.com/BallonaBirds.htm](http://www.cooperecological.com/BallonaBirds.htm)*

USFWS 2001. Least Bell's Vireo Survey Guidelines. United States Fish and Wildlife Service, Carlsbad Fish and Wildlife Office. Jan. 19, 2001.



**Appendix A. Photographs**  
(All by Daniel S. Cooper on 31 May 2010, unless noted)



Figure A1. View southeast showing "southeastern willow clump" at Ballona Wetlands Ecological Reserve. The southern lagoon of Ballona Freshwater Marsh is visible at right. Lincoln Blvd. is in the background, and, just beyond Lincoln, Playa Vista. Red arrow shows approximate location of vireo nest (see A2).



Figure A2. Understory view of vegetation surrounding vireo nest (red arrow), located in a tangle of thin willow branches roughly 0.5 meters off the ground. Visible plants include arroyo willow (*Salix lasiolepis*), date palm (*Phoenix dactylifera*), and pampas-grass (*Cortaderia selloana*).





Figure A3. Only photograph obtained of female (at nest) where bands are visible, apparently a gold anodized band on left leg, and a (split?) pink/violet band on right let.



Figure A4. Adult (at left) and juvenile least Bell's vireo (note greenish edging on primaries) in riparian plantings of Ballona Freshwater Marsh (11 June 2010, DSC).



Figure A5. Juvenile least Bell's vireo at Ballona Freshwater Marsh (11 June 2010, DSC).

## Appendix B. Birdlist for 2010 protocol survey of least Bell's vireo<sup>3</sup>.

		May 19	May 31	June 10	June 20	June 30	July 20	July 30
Cinnamon Teal	<i>Anas cyanoptera</i>	X						
Cooper's Hawk	<i>Accipiter cooperi</i>	X						
Mourning Dove	<i>Zenaida macroura</i>	X	X	X	X	X	X	
Anna's Hummingbird	<i>Calypte anna</i>	X	X	X				
Allen's Hummingbird	<i>Selasphorus sasin</i>	X	X	X	X	X		
Downy Woodpecker	<i>Picoides pubescens</i> <sup>4</sup>				X	X		
Western Wood-Pewee	<i>Contopus sordidulus</i>	X						
Pacific-slope Flycatcher	<i>Empidonax difficilis</i>	X	X					
Black Phoebe	<i>Sayornis nigricans</i>			X		X	X	
Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>						X	
Cassin's Kingbird	<i>Tyrannus vociferans</i>						X	
Bell's Vireo	<i>Vireo bellii</i>	X	X	X	X	X	X	
No. Rough-wing. Swallow	<i>Stelgidopteryx serripennis</i>		X	X				
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	X				X		X
Barn Swallow	<i>Hirundo rustica</i>		X				X	
Bushtit	<i>Psaltiriparus minimus</i>	X	X	X		X		X
House Wren	<i>Troglodytes aedon</i>						X	X
Swainson's Thrush	<i>Catharus ustulatus</i>	X	X					
Northern Mockingbird	<i>Mimus polyglottos</i>						X	
European Starling	<i>Sturnus vulgaris</i>		X		X			
Orange-crowned Warbler	<i>Vermivora celata</i>	X						
Common Yellowthroat	<i>Geothlypis trichas</i>	X	X	X	X	X	X	X
Yellow-breasted Chat	<i>Icteria virens</i>	X						
California Towhee	<i>Pipilo crissalis</i>	X	X	X	X		X	X
Song Sparrow	<i>Melospiza melodia</i>	X	X	X	X	X		X
Lazuli Bunting	<i>Passerina amoena</i>	X						
Brown-headed Cowbird	<i>Molothrus ater</i>	X	X	X	X	X	X	
Hooded Oriole	<i>Icterus cucullatus</i>	X		X	X		X	X
Bullock's Oriole	<i>Icterus bullocki</i>					X		
House Finch	<i>Carpodacus mexicanus</i>	X	X	X	X	X	X	
Lesser Goldfinch	<i>Carduelis psaltria</i>	X	X	X		X	X	X
American Goldfinch	<i>Carduelis tristis</i>	X	X			X	X	
Orange Bishop	<i>Euplectes franciscanus</i>			X				

<sup>3</sup> Complete birdlist for 10 July unavailable; only least Bell's vireo and brown-headed cowbird were recorded on that day; survey on 30 July was abbreviated, and only covered the southeastern willow clump (i.e., the site of vireo nest/activity). Birds seen only flying-over (e.g., Red-tailed Hawk *Buteo jamaicensis*) were excluded.

<sup>4</sup> This species appeared in mid-summer (adult plus juvenile); they were not recorded earlier in the spring and apparently moved in from outside BWER. There are no known nesting records for the Downy Woodpecker at Ballona, current or historical (Cooper 2006).