

# Value of perennial archiving of data received through the North American Birds regional reporting system: Examples from the Baja California Peninsula

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## Abstract

Many bird-monitoring schemes are in place in North America, and probably even more are ongoing in Europe. One continent-wide program that counters the typically rigid structure of most others is the regional reporting system established for the journal *North American Birds*. With standardization and automation of data submission protocols, we suggest that the existing reporting system could evolve into an even more invaluable resource for bird conservation and its many stakeholders.

## Brief History

Beginning in 1917 quarterly summaries of bird observations from selected populated regions were published in the National Audubon Society's publication *Bird-Lore*. These summaries were later published in *Audubon Magazine* and supplements. By 1947, the regional reports had expanded enough to form the core of a new publication, *Audubon Field Notes*. The name of the journal changed over the years (*American Birds*, *National Audubon Society Field Notes*, *Field Notes*), coverage of the United States and Canada became complete, and responsibility for publication of the journal transferred to the American Birding Association in 1997. By 2002, regions covering the entire continent were in place.

## The Process

North America and the Hawaiian Islands are divided into 35 regions, each overseen by one or more regional editors. Each season, regional editors receive and vet reports from an ever-changing group of contributors. From these reports, the regional editors prepare a written summary for quarterly publication. Regional editors have great flexibility in what they publish, but rarities, range expansions and contractions, early arrivals and late departures, periodic irruptions by certain species, and obvious population trends are covered most consistently. The journal publishes over 1000 photographs annually, mostly images documenting rarities or highlighting seasonal phenomena. The journal editor and associates edit all reports for consistency and accuracy.



Map 1. Range contraction of Mountain Plover (*Charadrius montanus*) on the Baja California Peninsula. Historical records (open symbols) stretched the length of the peninsula, but recent ones (colored symbols; beginning in winter 2000-2001) are restricted to central Baja California (state).



**Map 2.** Eurasian Collared-Dove (*Streptopelia decaocto*) colonization of the Baja California Peninsula. This Old World species first appeared in the Mexicali Valley in 2001, after having spread westward across the southern United States. Toeholds for the species soon appeared in the northwest and mid-peninsula, and by 2006 most of the peninsula had become part of the species' range.

## Program Strengths

The *North American Birds* regional reporting system is unique in its combination of geographic scope, openness to all contributors, acceptance of reports of essentially any size or type related to bird status and distribution, vetting of reports by qualified regional editors, and most importantly, regular feedback and encouragement via quarterly reports that include complete acknowledgement of contributors in print. This interaction with contributors allows regional editors to nudge birders and others to report certain species or issues more completely, to look at things differently, or to visit certain areas more often. Rather than constraining observers to more formal monitoring regimes, this program recognizes that much valuable information can be gleaned from the uncoordinated efforts of multitudes of observers doing whatever it is that interests them most.

## Examples from the Baja California Peninsula Region

*North American Birds* regional coverage for the Baja California Peninsula began in August 2000, fortuitously just at the cut-off period for a review of the peninsula's birds published in 2001 (*Birds of the Baja California Peninsula: Status, Distribution, and Taxonomy*, edited by R. A. Erickson and S. N. G. Howell. *Monographs in Field Ornithology* No. 3, American Birding Association). Since that time, observations from more than 300 observers have been archived in a database of approximately 18,500 records and summarized in quarterly reports in *North American Birds*.

Maps 1-5 provide examples of the sort of information that has been



**Map 3.** Distribution of the endangered Bell's Vireo (*Vireo bellii*) on the Baja California Peninsula. Open symbols mark locations first reported before 1 August 2000 (start of regional coverage in *North American Birds*), colored symbols those reported since. Squares indicate breeding sites, circles denote winter sites, and Xs mark migrant or extralimital sites. The subspecies *pusillus* occurs in the northwest and *arizonae* in the Rio Colorado area, but the affinities of breeding birds in the Vizcaino Desert are unknown. Wintering birds are primarily *pusillus*, with *arizonae* also collected. At least one bird of an eastern subspecies (*bellii* or *medius*) has been photographed in winter as well.

harvested just since 2000. They refer to an expanding native species (Great-tailed Grackle, *Quiscalus mexicanus*), an expanding exotic species (Eurasian Collared-Dove, *Streptopelia decaocto*), and three species of conservation concern (Mountain Plover, *Charadrius montanus*; Bell's Vireo, *Vireo bellii*; and Tricolored Blackbird, *Agelaius tricolor*). Information gathered on Belding's Yellowthroat (*Geothlypis beldingi*) was presented elsewhere by Erickson, Hamilton, and S. G. Mlodinow (*Bird Conservation International* 18: 219-228, 2008). Although the overall range of the grackle has changed little, there has been considerable infilling, including new nesting locations. The spread of the collared-dove has been much more dramatic, as the species was unrecorded on the peninsula through 2000. After making an initial leap to the mid-peninsula in 2003, it appears the species made another significant push southward in 2006. The overall patterns of distribution for Tricolored Blackbird and Bell's Vireo were already apparent in 2000, but subsequent observations have established a number of new localities. Likewise, the distribution of Mountain Plover had been previously mapped, but recent observations of this threatened species show only a shadow of the former range.

## Opportunities and Suggestions

As important as the published seasonal summaries are, we do not believe they are the most important feature available through the *North*



**Map 4. Distribution of Tricolored Blackbird (*Agelaius tricolor*) in Baja California.** Open symbols mark locations first reported before 1 August 2000 (start of regional coverage in *North American Birds*), colored symbols those reported since. Squares indicate breeding sites; circles denote winter sites. The species is generally restricted to the California District.



**Map 5. Distribution of Great-tailed Grackle (*Quiscalus mexicanus*) on the Baja California Peninsula.** Open symbols mark locations first reported before 1 August 2000 (start of regional coverage in *North American Birds*), colored symbols those reported since. Squares indicate breeding sites; circles mark migrant and winter sites. The species was first reported in adjacent southeastern California in 1964, and it is now abundant in the Mexicali Valley. The first northwestern record was in 1986, and breeding was confirmed there in 1999. Mid-peninsular records followed in 1995, with nesting in 2005. Settled portions of the Cape District should prove to be very hospitable for the first arrivals there.

*American Birds* reporting system. The value of the system is enhanced enormously by the consistent archiving of selected observations in a standard electronic database, a practice common in many if not all regions in the network. Such a database allows the easy evaluation of trends over the long run which, in turn, feeds back into the communication between editors and contributors. Examining such a database should be among the first things done by regulatory agencies contemplating changes to the legal status of any bird species within the region. Researchers, managers, authors of regional or state-level monographs on bird status and distribution, and other stakeholders will also find much of value in the database.

The upkeep of a regional database is very time-consuming for a small editorial group, and for some regions, particularly heavily populated regions, the volume of reporting has made such an enterprise impractical. While a relative wilderness such as the Baja California Peninsula currently produces a manageable number of records, it has become clear in other regions that a paradigm shift in how data are gathered, archived, and analyzed is overdue.

Certain tools that would work across the continent would greatly facilitate the reporting and archiving process. Rather than each region developing its own way, standardized methods and centralized technical support would be of great value. Ideally, contributors could access a regional site online, linked to all other regions, where information specific to their region would be available. This might include regional and sub-regional checklists, information identifying species of par-

ticular concern locally, a photographic gallery, maps, and even some kind of access to the master database itself. Certainly, the speed of communication between editors and observers would be facilitated and likewise the relationship between editors and database managers. Regional editors would need only confirm their acceptance of the information conveyed before formally adding it to the database. Even without a web-based system, contributions following a standard format could save regional editors considerable time.

Money would be required to make all of this happen as envisioned here. In addition to the mostly up-front cost to develop and maintain an interactive web site, the issue of regional editor compensation must be mentioned. Because of the considerable amount of time and required to maintain a database, those devoting the time to it may legitimately consider the database proprietary. To make information fully accessible to the public, the public ought to invest in the program. The online archiving program eBird, launched in 2002 by the Cornell Lab of Ornithology and National Audubon Society, has continued to grow in popularity and value and could serve as ideal repository for birding data on a regional level, particularly when a state-level or regional portal is available, as for many areas now. A close coordination of the *North American Birds* reporting network and the eBird group began several years ago, with many of the *North American Birds* regional edi-

tors serving as volunteer consultants with eBird. The journal has actively promoted the electronic database since its inception, while the managers of eBird have provided quarterly spreadsheets of data to the journal's regional editors. As this relationship is refined in years to come, we envision a streamlining of data flow and analytical tools among editors, database managers, and contributors, one that may revolutionize both the journal and eBird—and indeed, how birders come to view their contributions to field ornithology altogether.

The *North American Birds* reporting and archiving system will never replace the species-specific and habitat-specific monitoring done by many other means, but they should serve as an important complement. The amount of information on all species that is potentially available from the army of today's recreational birders cannot be matched in any other way, and it is painful to contemplate the amount of useful information otherwise lost in the ephemeral field notes of countless observers. It is hard to imagine a more efficient use of scarce bird conservation dollars than through the ongoing public or institutional sponsorship of the electronic archival of bird observations described above.

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**Table 1. Sample from the Excel database maintained for the North American Birds Baja California Peninsula region [Bell's Vireo].**

299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	4-8 Sep 2000	9	4	2000	Cataviña		RAE, RAH, SNGH, PP
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	4 Sep 2000	9	4	2000	Arroyo Santo Dominquito	RAH, RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	5 Sep 2000	9	5	2000	Rancho San José de Castro	RAH, RAE, SNGH	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	8 Sep 2000	9	8	2000	El Rosario		RAE, RAH, SNGH
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	15	15 singing males	24 May 2001	5	24	2001	lower Río Santo Tomás	RAH, RAE, SNGH	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	2	singing males	25 May 2001	5	25	2001	Río Guadalupe estuary	RAE, RAH, SNGH	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	5		18 Jul 2001	7	18	2001	Las Cabras Creek at Rancho San José	DSC, RAH, MSM	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		19 Jul 2001	7	19	2001	Valle San Telmo (~1.7-2.6 miles upstream from Hiway 1)	DSC, RAH, MSM	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	6	incl. 1 juv.	20 Jul 2001	7	20	2001	lower Río Santo Tomás	DSC, RAH, MSM	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing male	17 Apr 2002	4	17	2002	Morelos Dam, Algodones	RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing (presumably a migrant)	20 Apr 2002	4	20	2002	Maneadero Plain, La Grulla	RAH, RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	4	singing	21 Apr 2002	4	21	2002	Río Santo Domingo (above the mission)	RAE, RAH, OH-H, EP+	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	3	singing above the campground	22 Apr 2002	4	22	2002	lower Río Santo Tomás	RAE, RAH	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing male	22 Apr 2002	4	22	2002	Santo Tomás Winery	RAE, RAH	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		8 May 2002	5	8	2002	Río Colorado 1 km downstream of railroad bridge	fide OH-H	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		9 May 2002	5	9	2002	Río Colorado 2 km downstream of Vado Carranza	fide OH-H	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	26	26 singing males	31 May 2002	5	31	2002	Río Santo Domingo (above the mission)	RAE, RAH, ERL	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	31 May 2002	5	31	2002	El Rosario		RAE, ERL
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	2	pair	1 Jun 2002	6	1	2002	Santo Tomás Winery	RAE, ERL	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	5	4 singing	1 Jun 2002	6	1	2002	lower Río Santo Tomás	RAE, RAH, ERL	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1-3	singing	1 Jun 2002	6	1	2002	Ensenada, Presa Emilio López Zamora	RAE, RAH, ERL	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	21 Jun 2002	6	21	2002	Tijuana, Presa Rodriguez	RAE, PU	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	21 Jun 2002	6	21	2002	Río de las Palmas, La Mesa(?)	RAE, PU	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	6 Jul 2002	7	6	2002	Ensenada, Presa Emilio López Zamora	RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		19 Sep 2002	9	19	2002	Santa Inés		MSM, HGdS, RAH
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	29 May 2003	5	29	2003	mesquites west of Algodones	MJI, RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	possible	29 May 2003	5	29	2003	Río Colorado, near Ejido Chiapas	MJI	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	silent adult	3 Jul 2003	7	3	2003	Río Guadalupe estuary	RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	2	h.o.	12 Jul 2003	7	12	2003	lower Río San Telmo (1.6 and 3.2 miles above hiway 1)	MJI	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	juv.	13 Jul 2003	7	13	2003	La Genega (5.6 mi below La Corona de Arriba)	MJI	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	14	incl. 4 juv	14 Jul 2003	7	14	2003	Rancho San José	MJI	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		14 Jul 2003	7	14	2003	mile 3.4, San Telmo road	MJI	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		19-Dec-03	12	19	2003	N Maneadero Plain	DSC, PP	†DSC
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	6+		27-Mar-04	3	27	2004	Arroyo San Carlos, above Baja Country Club	DSC	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	2	singing	6-Apr-04	4	6	2004	La Misión bridge	RAE, MJI	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing below the bridge	13-Apr-04	4	13	2004	La Misión		RAE
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	3	singing above the bridge	13-Apr-04	4	13	2004	La Misión		RAE
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	16-Apr-04	4	16	2004	El Descanso		SNGH
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	2		17-Apr-04	4	17	2004	lower Río San Telmo	Larry Sansone	[ph. L. Sansone]
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	18-19 Apr 2004	4	18	2004	Cataviña, S wash	Larry Sansone	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	30-Apr-04	4	30	2004	Cataviña, S wash	Larry Sansone	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		7-May-04	5	7	2004	Río Guadalupe estuary	L.A. Comrack, SNGH	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	11	males	8-May-04	5	8	2004	lower Río Santo Tomás	L.A. Comrack, SNGH	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	male	9-May-04	5	9	2004	Rancho Agua Caliente, E of Ensenada	L.A. Comrack, SNGH	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		10-Jun-04	6	10	2004	Río Guadalupe estuary	RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	3	pair plus singing male	10-Jun-04	6	10	2004	Lagunita El Ciprés	RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	2	pair	10-Jun-04	6	10	2004	Arroyo San Carlos, above Baja Country Club	RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	4	singing males	11-Jun-04	6	11	2004	Ensenada, Presa Emilio López Zamora	RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	4	incl. 2 juv.	11-Jul-04	7	11	2004	km 65.5, hiway 3, S of Tecate	MSM, DSC, A. Harper	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	12	males	12-Jul-04	7	12	2004	Arroyo San Carlos, above Baja Country Club	MSM, DSC, A. Harper	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	13-Jul-04	7	13	2004	above San Antonio Necua	MSM, DSC, A. Harper	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	5	incl. FL	16-Jul-04	7	16	2004	Misión San Borja	RC, JAC	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	possibly last year's wintering bird	24-Oct-04	10	24	2004	N Maneadero Plain	SGM, KAR, BT	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	4	pair plus 2 males	1-Apr-05	4	1	2005	Ensenada, Presa Emilio López Zamora	MJI	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	19	"...occupied territories in both the desert and the arroyo. They have a definite greenish cast to their wings and back with yellow-olive on the flanks."	3-Apr-05	4	3	2005	vic. Santa Inés (1 mile stretch of arroyo)	KLW	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	3	singing	3-Apr-05	4	3	2005	km 16, just S of Punta Prieta	KLW	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	x	singing	8-Apr-05	4	8	2005	road to Ejido Eréndira	KLW	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	3	pair plus male	19-May-05	5	19	2005	Cañon de Guadalupe	DSC, RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing adj. upstream pond	21-Jun-05	6	21	2005	La Misión		RAE, MJB
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	3	singing males	21-Jun-05	6	21	2005	Ensenada, Presa Emilio López Zamora	RAE, MJB	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	21-Jun-05	6	21	2005	Maneadero Plain slop ponds	RAE, MJB	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	4-Sep-05	9	4	2005	Santo Tomás Winery	MJB, B.L. Carlson, M.A. Matson	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	4-Sep-05	9	4	2005	lower Río San Telmo	MJB, B.L. Carlson, M.A. Matson	

299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		4-Sep-05	9	4	2005	Maneadero Plain	MJB, B.L. Carlson, M.A. Matson	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		20-Dec-05	12	20	2005	E Maneadero Plain	TJM, MJB, RAE, PAG, D. Gant, AG-A, EDZH	ph. MJB
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		6-May-06	5	6	2006	Ensenada to San Quintin, Km 72	REW	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	2		7-May-06	5	7	2006	Rancho El Descanso	REW	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	12		7-May-06	5	7	2006	Misión San Fernando	REW	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	4		7-May-06	5	7	2006	Cataviña		REW
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		8-May-06	5	8	2006	above San Telmo, 100m	REW	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	2		8-May-06	5	8	2006	above San Telmo, 200m	REW	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	15		8-May-06	5	8	2006	Rancho San José, 600m	REW	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	6-Jun-06	6	6	2006	Rosarito Creek	RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	2		24-Jul-06	7	24	2006	Arroyo Santo Domingo	RAE, MJI, TM	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		24-Jul-06	7	24	2006	Arroyo San Telmo, just below San Telmo	RAE, MJI, TM	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		24-Jul-06	7	24	2006	Rancho Melling	RAE, MJI, TM	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	2-3	singing	9-Sep-06	9	9	2006	El Rosario		SNGH, RAH
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		9-Sep-06	9	9	2006	Santa Inés		SNGH, RAH
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	10-Sep-06	9	10	2006	Cataviña		RAH, SNGH
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	2	pusillus	29-Dec-06	12	29	2006	Maneadero Plain	fide MJB, EM	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	"eastern"	29-30 Dec	12	29	2006	Maneadero Plain	DSC, MSM	ph. †DSC
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	4		27-Apr-07	4	27	2007	Arroyo San Juan de Dios at Lagunita del Saucito near the junction with Arroyo El Cartabon	GR-C+	ph. GR-C
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	singing	5-Jun-07	6	5	2007	km 109, ~8 km north of Ejido Bonfil	RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	5		5-Jun-07	6	5	2007	Misión San Fernando	RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	3		6-Jun-07	6	6	2007	El Rosario		RAE
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		6-Jun-07	6	6	2007	Arroyo San Telmo, ~3 miles above the highway	RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	HY	27-Aug-07	8	27	2007	Santo Tomás Winery	MJB, P.A. Ginsburg, WTH	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		27-Aug-07	8	27	2007	Río Santo Tomás estuary	MJB, P.A. Ginsburg, WTH	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		27-Aug-07	8	27	2007	Maneadero Plain slop ponds	MJB, P.A. Ginsburg, WTH	
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1		10-Oct-07	10	10	2007	El Rosario		MSM
299	Bell's Vireo	<i>Vireo bellii</i>	BC	S*, #	1	HY "eastern"	14-15 Dec 07	12	14	2007	E Maneadero Plain	MJB: "identified by bright yellow/green plumage, pale lores, and inconspicuous wing bar"	PAG, WF; MJB, RAE, PP
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #									
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		24 Oct 2001	10	24	2001	El Triunfo		RAH, RAE
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	3		30 Oct 2001	10	30	2001	Todos Santos		RAH, RAE
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		23 Mar 2002	3	23	2002	Estero San José del Cabo	SGM	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		25 Oct 2002	10	25	2002	San Antonio		SGM, BT
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		29 Oct 2002	10	29	2002	Miraflores		SGM, BT
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		25 Jan 2003	1	25	2003	Caduaño		SGM, CB
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		26 Jan 2003	1	26	2003	Miraflores		SGM, CB
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		28 Jan 2003	1	28	2003	San Bartolo		SGM, CB
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		28 Jan 2003	1	28	2003	Las Cuevas		SGM, CB
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	x	more than on past trips	16-24 Jan 2004	1	16	2004	La Paz south		SGM
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		5-Jan-04	1	5	2004	12 km N San José del Cabo	Dennis R. Paulson	
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1	singing	9-Jan-04	1	9	2004	road to San Antonio de la Sierra (near hiway 1)	Arroyo Cholla	Dennis R. Paulson
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	6		18-Jan-04	1	18	2004	Miraflores		SGM, CB
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		18-Jan-04	1	18	2004	San José del Cabo	SGM, CB	
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		19-Jan-04	1	19	2004	Santiago		SGM, CB
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		19-Jan-04	1	19	2004	Agua Caliente		SGM, CB
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		20-Jan-04	1	20	2004	Las Cuevas		SGM, CB
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		21-Jan-04	1	21	2004	Lagunas de Chametia	SGM, CB	
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		22-Jan-04	1	22	2004	Todos Santos		SGM, CB
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2	singing	6-Feb-04	2	6	2004	Rancho El Sauzal (west of Santa Agueda and Santa Rosalia)	JEP, DVP	
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		7-Feb-04	2	7	2004	San Javier		JEP, DVP
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		10-Feb-04	2	10	2004	Ciudad Constitución	JEP, DVP	
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	4		x Feb 2004	2	x	2004	Todos Santos		JEP, DVP
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	4		x Feb 2004	2	x	2004	Agua Caliente/Santiago	JEP, DVP	
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	6		x Feb 2004	2	x	2004	Caduaño/Miraflores	JEP, DVP	
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		x Feb 2004	2	x	2004	in or near the oak belt of the Sierra de la Laguna biosphere reserve	JEP, DVP	
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	x	flowering acacia is best	x Feb 2004	2	x	2004	Cape District		JEP, DVP
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		8-Mar-04	3	8	2004	road to San Antonio de la Sierra (km 9.0)	MJI	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		10-Jun-04	6	10	2004	Isla San Francisco	JAC, Andrea Cuéllar	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		30-Jul-04	7	30	2004	Estero San José del Cabo	MDC+	

VALUE OF PERENNIAL ARCHIVING OF DATA

299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		27-Aug-04	8	27	2004	Estero San José del Cabo	RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		22-Jan-05	1	22	2005	Estero San José del Cabo	SGM	
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		22-Jan-05	1	22	2005	Caduaño		SGM
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	3		23-Jan-05	1	23	2005	Miraflores		SGM
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		24-Jan-05	1	24	2005	Santiago		SGM
293	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		24-Jan-05	1	24	2005	Agua Caliente		SGM
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		21-Mar-05	3	21	2005	Estero San José del Cabo	MB, OJ, D. Vander Pluym	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		1-Oct-05	10	1	2005	Estero San José del Cabo	SGM, Charlie Wright, Ryan Shaw	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		1-Oct-05	10	1	2005	Caduaño		SGM, Charlie Wright, Ryan Shaw
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	8 total		1-9 Oct 05	10	1	2005	Miraflores		SGM, Charlie Wright, Ryan Shaw
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	3		3-Oct-05	10	3	2005	Agua Caliente		SGM, Charlie Wright, Ryan Shaw
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		3-Oct-05	10	3	2005	Santiago		SGM, Charlie Wright, Ryan Shaw
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		4-Oct-05	10	4	2005	Las Cuevas		SGM, Charlie Wright, Ryan Shaw
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		4-Oct-05	10	4	2005	San Bartolo		SGM, Charlie Wright, Ryan Shaw
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	7		6-Oct-05	10	6	2005	Todos Santos		SGM, Charlie Wright, Ryan Shaw
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		6-Oct-05	10	6	2005	El Pescadero		SGM, Charlie Wright, Ryan Shaw
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		6-Oct-05	10	6	2005	Rancho San Miguel	SNGH, RAE, RAH	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		7-Oct-05	10	7	2005	Bahía Tortugas	RAE, RAH	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		7-Oct-05	10	7	2005	Chametla		SGM, Charlie Wright, Ryan Shaw
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		8-Oct-05	10	8	2005	road to San Antonio de la Sierra	SGM, Charlie Wright, Ryan Shaw	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	3		19-Jan-06	1	19	2006	Santa Anita		DSC
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		21-22 Jan 06	1	21	2006	Estero San José del Cabo	SGM	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		22-Jan-06	1	22	2006	Miraflores		SGM
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		23-Jan-06	1	23	2006	Santiago		SGM
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		24-Jan-06	1	24	2006	Las Cuevas marsh	SGM	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		27-Jan-06	1	27	2006	Todos Santos		SGM
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1 singing		17-Mar-06	3	17	2006	Estero San José del Cabo	MJI	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1 singing		20-Mar-06	3	20	2006	road to San Antonio de la Sierra, km 22.5 wash	MJI	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		25-Mar-06	3	25	2006	Todos Santos		MJI
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	x more than on winter trips		Sep/Oct 06	9	x	2006	8 Cape District locations	SGM	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	6		Sep/Oct 06	9	x	2006	Estero San José del Cabo	SGM	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		Sep/Oct 06	9	x	2006	Ejido Calle, vic. El Gaspareno	SGM	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		Sep/Oct 06	9	x	2006	San Bartolo		SGM
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		Sep/Oct 06	9	x	2006	Agua Caliente		SGM
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		Sep/Oct 06	9	x	2006	Rancho Guamuchilar area	SGM	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		Sep/Oct 06	9	x	2006	Lagunas de Chametla	SGM	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	3+		Sep/Oct 06	9	x	2006	Santiago		SGM
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	7+		Sep/Oct 06	9	x	2006	Miraflores		SGM
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1 possible arizonae		26-Sep-06	9	26	2006	Miraflores		SGM
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		7-Oct-06	10	7	2006	Todos Santos		MJB+
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	6 some singing		9-Oct-06	10	9	2006	Caduaño		MJB+
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	4		9-Oct-06	10	9	2006	Todos Santos		RAE, RAH
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		9-Oct-06	10	9	2006	Alianza Campo, just S of Ciudad Constitución	RAE, RAH	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		10-Oct-06	10	10	2006	Santiago, zoo		MJB+
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	5		11-Oct-06	10	11	2006	Miraflores		RAE, RAH
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		11-Oct-06	10	11	2006	Rancho San Dionisio	RAH, RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		11-Oct-06	10	11	2006	Santiago, zoo		RAH, RAE
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		11-Oct-06	10	11	2006	Punta los Mangles	RAE	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		12-Oct-06	10	12	2006	Estero San José del Cabo	RAE, RAH	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		6-Jan-07	1	6	2007	Miraflores		SGM+
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		6-Jan-07	1	6	2007	Caduaño		SGM+
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		7-Jan-07	1	7	2007	Estero San José del Cabo	SGM+	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		9-Jan-07	1	9	2007	La Ribera		SGM+
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		12-Jan-07	1	12	2007	El Centenario (tanque)	SGM+	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1 singing		3-Mar-07	3	3	2007	El Centenario (tank)	MJI	ph. MJI

299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		4-Mar-07	3	4	2007	Todos Santos		MJI
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		5-Mar-07	3	5	2007	Las Cuevas		MJI
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		6-Mar-07	3	6	2007	Estero San José del Cabo	MJI	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		27-Mar-07	3	27	2007	Miraflores		SGM
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		1-Dec-07	12	1	2007	Miraflores		JSF, R. Fogg
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		23-Dec-07	12	23	2007	Migraño		DSC
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		12-Jan-08	1	12	2008	Miraflores	SGM: "some yellow wash on flanks and greenish wash on back... I have noticed in past winter trips that the phenotype seems somewhat bimodal, with a grouping of exceptionally gray birds and those with some color. Only a few in between."	SGM
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	2		15-Jan-08	1	15	2008	Santiago	SGM: "one with some yellow wash on flanks and greenish wash on back"	SGM
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		15-Jan-08	1	15	2008	El Rosario		SGM
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		15-Mar-08	3	15	2008	Caduaño		SGM
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	5		16-17 Mar 08	3	16	2008	Estero San José del Cabo	SGM	
299	Bell's Vireo	<i>Vireo bellii</i>	BCS	R*, #	1		18-Mar-08	3	18	2008	Santiago		SGM