

Review of the 107th Christmas Bird Count in the Central Valley of California: December 2006 - January 2007

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INTRODUCTION

This is the first contribution to what I hope will become a regular feature in the Central Valley Bird Club Bulletin, an annual review of the results of the previous year's Christmas Bird Counts (CBCs) from the Central Valley (CV). With over 2,000 count circles tallied each year throughout North America, an enormous volume of data is collected. My intent is to focus on the CV and attempt to extract some insight from all those data.

For this analysis I used the 22 CBC circles within or overlapping the CV (see Figure 1 in Pandolfino 2006). From north to south they are: Redding, Red Bluff (not conducted in 2006-2007), Chico, Oroville, Peace Valley, Marysville, Lincoln, Folsom, Sacramento, Putah Creek, Rio Cosumnes, Benicia, Stockton, Wallace-Bellota, East Contra Costa, Caswell-Westley, LaGrange-Waterford, Los Banos, Lost Lake-Fresno, Milburn-Fresno, Bakersfield, and Buena Vista-Kern. I used only data obtained from the actual CBC count day, omitting records reported as 'Count Week.' Data were obtained from the National Audubon Society's online data base (<http://www.audubon.org/bird/cbc/index.html>) and supplemented with data from individual compilers when needed.

RESULTS AND DISCUSSION

High Species Counts

CBC circles cover nearly all the great wildlife refuges of the continent. Therefore, it is a quite a testament to the productivity and importance of the CV that our local count circles recorded the highest totals for 16 different species among all 2,000 counts conducted during the 107th CBC.

The Peace Valley count, which includes Gray Lodge State Wildlife Area, had an outstanding waterfowl turnout recording the continent's highest counts for Gadwall (*Anas strepera*), Northern Shoveler (*Anas clypeata*) and Northern Pintail (*Anas acuta*). Three of the top five counts for pintail came from the CV with Marysville coming in third and Sacramento fifth. Continuing the CV's domination in ducks, the Sacramento CBC led all counts for Cinnamon Teal (*Anas cyanoptera*).

CV counts took three of the top five spots for Red-tailed Hawks (*Buteo jamaicensis*), with Benicia, Rio Cosumnes, and Stockton taking the first, third and fourth, respectively. The top two counts for White-tailed Kites (*Elanus leucurus*) were Sacramento and Benicia. Normally, our small wintering population of Sacramento/San Joaquin Delta Swainson's Hawks (*Buteo swainsoni*) assures the CV of having no competition for the highest count for this species. However, this year the two birds found on each of the Stockton and East Contra Costa counts were tied with count circles in Florida (Key West), Texas (La Sal Vieja) and Louisiana (Venice).

Sacramento retained its perennial position as the top count for Yellow-billed Magpie (*Pica nuttalli*), although the total count of 425 was the second lowest for Sacramento in at least the last four decades (see more on this below). Sacramento also led all counts for Black-crowned Night-Heron (*Nycticorax nycticorax*). Rio Cosumnes tallied the highest numbers of Nuttall's Woodpeckers (*Picoides nuttallii*) and Lincoln's Sparrows (*Melospiza lincolni*) in the continent. A more dubious distinction for Rio Cosumnes was winning the European Starling (*Sturnus vulgaris*) prize with over a million birds reported. Benicia continued to lead all counts for Black Rail (*Laterallus jamaicensis*). Lincoln reported the nation's high for Western Meadowlark (*Sturnella neglecta*) for the second straight year and Stockton recorded the highest number of House Finches (*Carpodacus mexicanus*).

Corvids and West Nile Virus

Using data from the 106th CBC (winter 2005-06), Airola et al. (2007) showed that numbers of Yellow-billed Magpies and Western Scrub-Jays (*Aphelocoma californica*) significantly declined following the outbreak of West Nile Virus (WNV) in the lower Sacramento Valley and Sacramento-San Joaquin Delta region (8 CV count circles) during the preceding summer. One of the confounding factors these authors dealt with in analyzing the data was the unusually bad weather on most CBCs during that winter. This past winter the weather was more typical for our CV CBCs. Also, there appeared to be lower incidence of WNV during the summer of 2006 than in 2005. I looked at the numbers of Yellow-billed Magpies and Western Scrub-Jays from the CV CBCs for the 2006-07 count year and found that Yellow-billed Magpies appear to have declined even below numbers from the previous winter while Western Scrub-Jay numbers appear to have rebounded somewhat (Table 1). Indeed, the number of Yellow-billed Magpies reported from the last two CBCs are the two lowest (whether on a per count or a per party hour basis) from at least the last forty years. The drop this year was widespread, with declines in 12 of the 14 circles within this species' normal range from count year 106 to count year 107.

Table 1. A comparison of the numbers of Yellow-billed Magpie (YBMA) and Western Scrub-Jay (WSJA) per party hour for the Count Years 106 and 107 vs. the averages and range over the preceding 29 Count Years.

	YBMA ¹	WSJA ²
Birds/hour (average) for CBC years 77-105	4.5 ± 1.2 ³	3.6 ± 0.6 ³
Birds/hour (range) for CBC years 77-105	2.7 - 6.7	2.4 - 5.0
Birds/party hour for CBC year 106	2.1	1.9
Birds/party hour for CBC year 107	1.5	2.5

¹ Data from Chico, Caswell-Westley, Folsom, Lincoln, Los Banos, LaGrange-Waterford, Marysville, Putah Creek, Peace Valley, Rio Cosumnes, Redding, Sacramento, Stockton, and Wallace-Bellota

² Data from all 21 CV CBCs except Buena Vista-Kern

³ (±SD)

Ups and Downs

CBC data show dramatic variation in the numbers of Lewis's Woodpeckers (*Melanerpes lewis*) and Varied Thrushes (*Ixoreus naevius*) wintering in the CV from year to year (Pandolfino 2006). The winter of 2006-2007 was a big year for Varied Thrush and a nearly complete bust for Lewis's Woodpecker (Figure 1). Throughout Northern California, the influx of Varied Thrushes this year was extraordinary, with numbers rivaling the remarkable winter of 1994-95 (Pandolfino et al. 2007). The showing in the CV was less dramatic, but still one of our best winters for this species. In stark contrast, the lack of Lewis's Woodpeckers was unprecedented with only a single bird (Peace Valley) reported in the entire CV. The winter abundance of Lewis's Woodpecker in the CV seems to be roughly correlated with the quantity of acorn production from Blue Oak (*Quercus douglasii*) and Valley Oaks (*Quercus lobata*) (pers. obs.). As of early September 2007, it appears that oaks in the lower Sierra foothills are producing a large crop of acorns, so it will interesting to see if this year is a good one for Lewis's Woodpeckers in the CV.

Good News/Bad News

Peregrine Falcons (*Falco peregrinus*) have shown a steady increase in numbers throughout North American CBCs since the late 1980s. Though still hardly a common species on CV CBCs, the numbers from our area show a directly parallel increase. During the 107th count, the CV reported more Peregrines on more counts than in any previous year. The nearly exponential increase in White-faced Ibis (*Plegadis chihi*) in the CV (Shuford et al. 1996, Pandolfino 2006) continued unabated this year.

Loggerhead Shrikes (*Lanius ludovicianus*) appear to be in a widespread and long term decline, with both Breeding Bird Survey data (Sauer

et al. 2005) and CBC data (Pandolfino 2006) from across the US showing statistically significant declines. Data on Loggerhead Shrikes from CV CBCs also show a general decline, but the last two years have been particularly bad with numbers from both years lower than any of the 31 count years I analyzed (Figure 2). It is possible that this recent decline may be linked to WNV since it coincides with the 2005 outbreak and Loggerhead Shrikes have been shown to be susceptible to WNV in studies of both wild (Tesh et al. 2004) and captive (Bertelsen et al. 2004) birds.

Figure 1. Average numbers of Varied Thrush and Lewis's Woodpecker per party hour from CV CBCs. Data for Lewis's Woodpecker from Chico, Folsom, Lost Lake-Fresno, LaGrange-Waterford, Marysville, Oroville, Putah Creek, Peace Valley, Red Bluff, Redding Wallace-Bellota. Data for Varied Thrush from all 21 CV CBCs except Buena Vista-Kern and Los Banos. Counts dropped from analysis are those that have not recorded at least 10 Lewis's Woodpeckers on two or more occasions and counts that have recorded no Varied Thrushes.

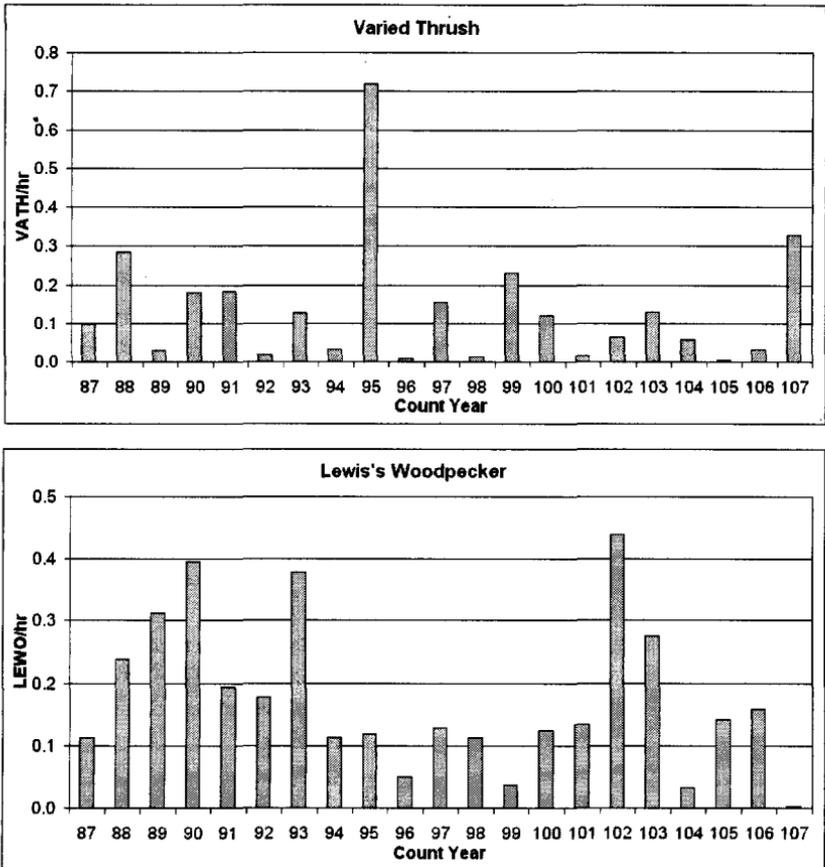
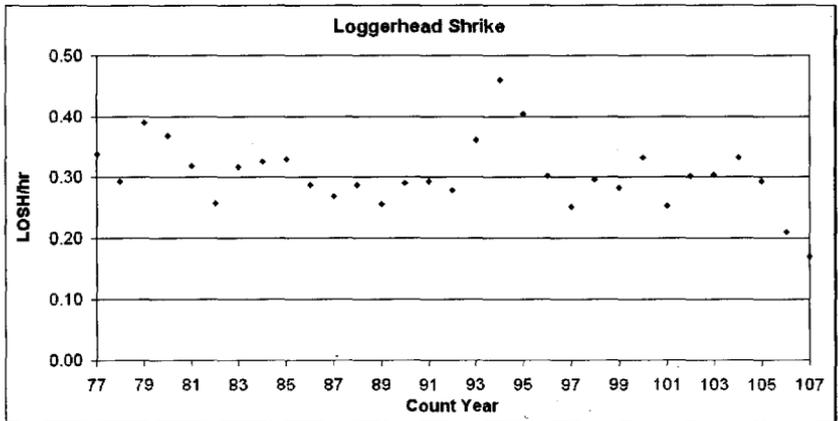


Figure 2. Average numbers of Loggerhead Shrike per party hour from CV CBCs. Data from all 21 CV CBCs.



Invaders

Great-tailed Grackles (*Quiscalus mexicanus*) continue their conquest of the CV with the 107th CBC recording the highest cumulative total of individuals (382) and highest percentage of CV counts that recorded the species (57%).

The latest invader is the introduced Eurasian Collared-Dove (*Streptopelia decaocto*). Since first being released in the Bahamas in the 1970s, this bird has spread across the country at an unprecedented rate (Romagosa 2002). Its rapid colonization of Northern California has been well documented (Cole et al. 2006, Hampton 2006). Since this bird was only deemed 'countable' recently in California, many birders still tend to overlook this species because of its superficial similarity to the Mourning Dove (*Zenaida macroura*), and it has likely been undercounted on many CBCs. Still, it has been reported on 7 of 21 CV CBCs, from Buena Vista-Kern in the south to Lincoln in the north. With more people paying attention, I expect to see this bird become a regular on CBCs throughout the CV in the next few years.

Future CBC Analyses

I would appreciate hearing from you about other species you would like to see covered in future versions of this feature. Are there species which you think are trending up or down in the CV in winter? Do you think there are correlations between certain local or regional factors and numbers of some of our wintering birds? Did you note something of interest in your local area and would like to see if it seems to be part of a wider trend? Also,

if you have been independently collecting data and would like share those data with me, or publish a note in collaboration with me or independently, that would be much appreciated.

Although lack of a high degree of consistency and rigor in methodology limits the analysis and conclusions that can be drawn from CBC data, properly analyzed data can alert us to areas that deserve more careful attention. Your participation in our CV CBCs can be a lot more than just a fun way to spend a winter day—it can make a real contribution to our understanding of factors affecting our birdlife.

If you haven't been doing CBCs, start. If you have been doing one, think about doing another. Some counts really need more people to help out. You can access nearly all the information you might need about all of California's CBCs at Alison Sheehey's excellent web site: <http://www.natureali.org/cbcs.htm>.

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