

Review of the 110th Christmas Bird Count in the Central Valley of California: December 2009-January 2010

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INTRODUCTION

This is the fourth in an ongoing annual series reviewing the results of the Central Valley (CV) Christmas Bird Counts (CBC). This series notes high species counts of the 2009-2010 CBC season and examines some of the interesting trends the data suggest.

Data used for this series come from 24 CBC circles within or overlapping the CV (Figure 1). Of these, all 24 were conducted during Count Year (CY) 110. Special thanks go to the local birders who revived the Red Bluff CBC, a count with a long history of consistent compilation.

I used only data obtained from the actual CBC count day, omitting records reported as occurring within the "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.

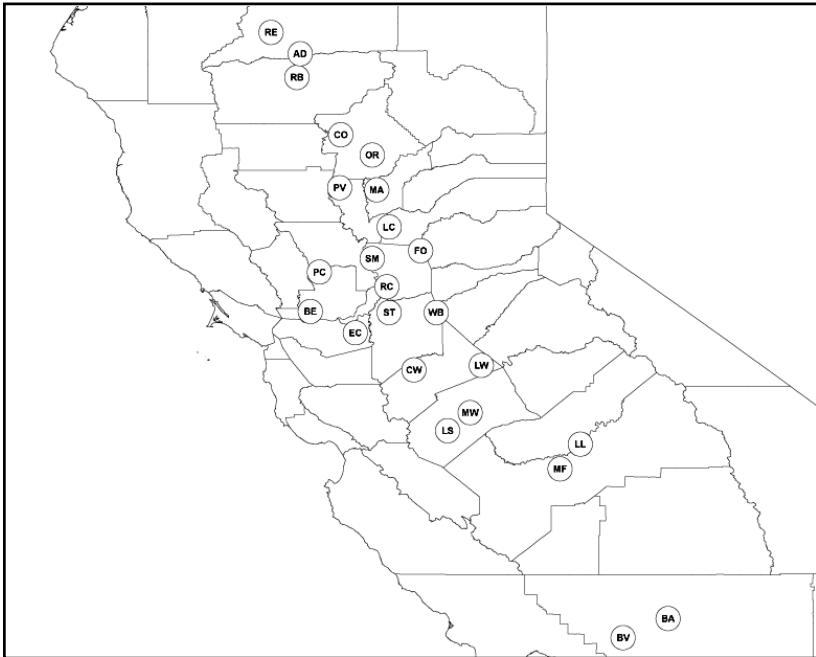
RESULTS AND DISCUSSION

High Species Counts

As I have noted in previous articles in this series, tracking which of North America's 2000-plus CBCs record the highest number of a particular species provides some basis to assess the relative importance of various regions to winter populations of birds. CV circles continue to consistently record high counts of an astounding number of species with waterfowl, raptors, and species associated with oak woodlands and grasslands comprising a large proportion of those high counts. While CV circles represent just over 1% of all the CBCs circles in the U.S. and Canada (1.4% in terms of total party hours), in CY 110, CV circles recorded the highest totals for well over 3% (25) of all species recorded during all these counts.

For CY 110, the Merced National Wildlife Refuge (NWR) count led all others for Ross's Goose (*Chen rossii*) with a total in excess of 18,000. CV counts took 4 of top 5 places for Greater White-fronted Goose (*Anser albifrons*) with Lincoln, Sacramento, Marysville, and Stockton taking places 2 through 5, respectively. Caswell-Westley came in 3rd for Cackling Goose (*Branta hutchinsii*). Stockton's 20,231 Tundra Swans (*Cygnus columbianus*) was the top count with Marysville finishing 4th. Peace Valley had the highest count (15,981) of Gadwall (*Anas strepera*), more than double

Figure 1. Map of the 24 CV CBC circles used. From north to south, they are: Redding, Anderson, Red Bluff, Chico, Oroville, Peace Valley, Marysville, Lincoln, Folsom, Sacramento, Putah Creek, Rio Cosumnes, Benicia, Stockton, Wallace-Bellota, East Contra Costa, Caswell-Westley, La Grange-Waterford, Merced NWR, Los Banos, Lost Lake-Fresno, Milburn-Fresno, Bakersfield, and Buena Vista-Kern.



the total from the next-highest count (Wapanocca NWR, Arkansas). Los Banos took 5th place for Gadwall. For the 12th consecutive year, Sacramento led all counts for Cinnamon Teal (*Anas cyanoptera*) with over 1500 birds. The fact that Benicia's 197 Cinnamon Teal total was enough to take 3rd place shows just how disproportionately abundant this species is in the Sacramento circle (with nearly all these birds in the Yolo Basin Wildlife Area). CV counts took the top four places for Northern Shoveler (*Anas clypeata*) with Peace Valley's total of well over 47,000 taking first place. Los Banos, Sacramento, and Caswell-Westley took 2nd through 4th, in that order. Marysville led all counts for Northern Pintail (*Anas acuta*) (52,095), followed by Sacramento in 2nd and Peace Valley in 4th. CV counts nearly swept the top five for Green-winged Teal (*Anas crecca*), with only McClellanville, South Carolina, slipping in behind the Los Banos circle's leading total of nearly 15,000 and ahead of Sacramento, Merced NWR, and Benicia. The 28,391 Ruddy Ducks (*Oxyura jamaicensis*) found on the Los Banos count is one of the highest totals ever recorded for any CBC circle.

As it has for the last 4 years and for 8 of the past 12, Sacramento led all counts for Black-crowned Night-Heron (*Nycticorax nycticorax*) (1,936).

Although the explosive increase in wintering White-faced Ibis (*Plegadis chihi*) in the CV appears to be waning (see more on this below), Marysville and Los Banos still posted the 4th and 5th highest counts for this species.

CV counts continue to dominate any other region for high counts of wintering raptors. Benicia tallied the highest counts for White-tailed Kite (*Elanus leucurus*) and Northern Harrier (*Circus cyaneus*) (150 and 220, respectively), and Lincoln took first place for Red-tailed Hawk (*Buteo jamaicensis*) with 409. Lincoln also had the 2nd highest total for White-tailed Kite, 3rd highest for American Kestrel (*Falco sparverius*), and 4th highest for Northern Harrier. Benicia was 4th for American Kestrel and 5th for Red-tailed Hawk. Sacramento finished 3rd for White-tailed Kite and 5th for Northern Harrier. Rio Cosumnes was 2nd for Red-tailed Hawk and 5th for White-tailed Kite. Folsom's 10 Prairie Falcons (*Falco mexicanus*) was good enough to take 3rd place among all counts.

Stockton took 5th place for Sandhill Crane (*Grus canadensis*). Benicia had an outstanding rail year, taking first place for both Black Rail (*Laterallus jamaicensis*) and Virginia Rail (*Rallus limicola*) (13 and 244, respectively). Both totals were more than double those of the next highest counts (Sonoma Valley, California, for Black Rail and Crisfield, Maryland, for Virginia Rail). Benicia also finished 3rd for Sora (*Porzana carolina*), while Peace Valley finished 5th. Rio Cosumnes managed to edge out the perennial American Coot (*Fulica americana*) high count—Guntersville, Alabama—but was relegated to 2nd place by the 60,000 coots counted in Clewiston, Florida.

Caswell-Westley recorded the 5th highest Killdeer (*Charadrius vociferus*) total and three CV counts were in the top five for Long-billed Curlew (*Numenius americanus*) with Sacramento, Rio Cosumnes, and Lincoln taking 3rd through 5th places. Rio Cosumnes also finished 4th in Long-billed Dowitchers (*Limnodromus scolopaceus*). Sacramento and Lincoln finished in 3rd and 4th places, respectively, for California Gull (*Larus californicus*).

Our 3rd straight year with a good acorn crop produced a 3rd straight year with high Lewis's Woodpecker (*Melanerpes lewis*) numbers, though not as high as last year. Anderson again led all counts with 88 (well under the 221 counted last year) and Folsom took 4th with 65. Sacramento led all counts for Northern Flicker (*Colaptes auratus*) with 485. As usual, CV circles led in Nuttall's Woodpeckers (*Picoides nuttallii*) with Putah Creek taking first place for the 3rd straight year with a total of 245. Rio Cosumnes was 2nd and Sacramento 4th.

Although Yellow-billed Magpies (*Pica nuttalli*) finally seem to be showing signs of rebounding from the West Nile Virus (WNV) impacts of 2005, numbers are still well below historical levels (see more on this below). Sacramento continued to lead all counts with a total of 683 magpies. Los Banos, Putah Creek, Chico, and Wallace-Bellota rounded out the top five in that order. In contrast, Western Scrub-Jay (*Aphelocoma californica*) and Oak Titmouse (*Baeolophus inornatus*) both appear to have recovered from

WNV impacts (see below). Folsom took first place for Oak Titmouse (585) and 2nd place for Western Scrub-Jay while Putah Creek finished 4th for Western Scrub-Jay and Redding 5th for Oak Titmouse.

Benicia led all counts for Marsh Wren (*Cistothorus palustris*) (462) with Sacramento and Rio Cosumnes in 4th and 5th. The Folsom count, which has rarely been out of the top five for Western Bluebird (*Sialia mexicana*) since its inception, finished 4th this year. Putah Creek had the 4th highest total for Hermit Thrush (*Catharus guttatus*). The Folsom and Sacramento counts joined Rio Cosumnes in the top five for European Starling (*Sturnus vulgaris*). However, the 443,660 starlings tallied on the Rio Cosumnes count was only good enough for 3rd place behind the 1 million birds reported from Sooner Lake, Oklahoma, and half a million in Liberal-Seward County, Kansas. On a more 'native' note, Rio Cosumnes reported the 2nd highest numbers of Golden-crowned Sparrows (*Zonotrichia atricapilla*) and the 3rd highest numbers of Lincoln's Sparrows (*Melospiza lincolni*). Wallace-Bellota and Sacramento finished 2nd and 4th for White-crowned Sparrow (*Zonotrichia leucophrys*).

The CV regained its top place in Tricolored Blackbirds (*Agelaius tricolor*) with Merced NWR's 5,890. Stockton was 2nd and Lincoln 5th. Rio Cosumnes again led all counts with over 51,000 Brewer's Blackbirds (*Euphagus cyanocephalus*) with Stockton in 2nd and Lincoln in 5th. Overall, CV counts took 7 of the top 10 places for this species. CV circles also took 7 of the top 10 places for Western Meadowlark (*Sturnella neglecta*), with Lincoln in first place (as in every year since CY 105), and Sacramento, Wallace-Bellota, Rio Cosumnes, and Benicia rounded out the top 5 in that order. Rio Cosumnes was the high count for House Finch (*Carpodacus mexicanus*) (3,297) this year, with Benicia in 3rd. Lincoln repeated as Lesser Goldfinch (*Spinus psaltria*) champ with its total of 1,453 barely edging out the 1,429 counted in the Auburn, California, circle. Chico had the 5th highest total for this species.

West Nile Virus update

The 2005 outbreak of West Nile Virus (WNV) in the CV had a negative impact on populations of a number of species, including Yellow-billed Magpie, American Crow (*Corvus brachyrhynchos*), Western Scrub-Jay, Oak Titmouse, and Loggerhead Shrike (*Lanius ludovicianus*) (Airola et al. 2007, Crosbie et al. 2008, Pandolfino 2008a and 2008b, Smallwood and Nakamoto 2009). Since that outbreak, I have been tracking the numbers of each species recorded on CV counts to detect any signs of recovery (Pandolfino 2009). Figure 2 compares the pre-WNV ten-year averages to the results from subsequent CBCs. The data suggest that, while the American Crow, Western Scrub-Jay, and Oak Titmouse may have recovered to pre-WNV levels, both the Yellow-billed Magpie and Loggerhead Shrike have not. However, there is at least a suggestion of the beginning of a recovery

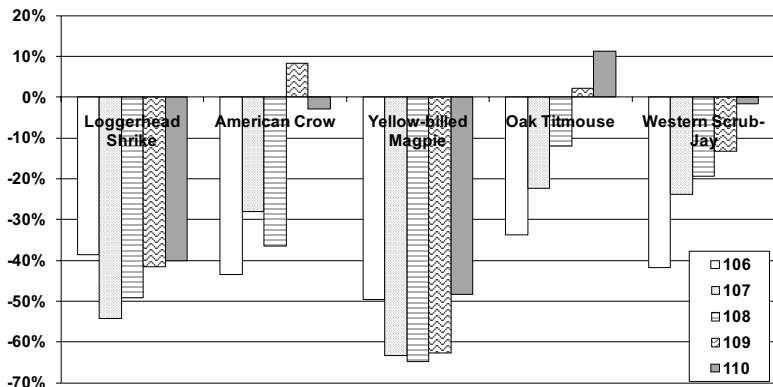


Figure 2. Abundance (birds/party hour) of five species for Count Years 106-110 compared to the ten-year average prior to the 2005 West Nile Virus outbreak (Count Years 94-105).

for both of the latter species with results from the current CBC year closer to historical averages than any previous post-WNV year. One possible confounding factor is that both the Yellow-billed Magpie and Loggerhead Shrike were showing long term declines in the CV even before WNV (Pandolfino 2006, Airola et al. 2007). Therefore, one might expect that their numbers may never return to pre-2005 levels, even if they recover completely from WNV effects.

Population expansions: some waning, some not

The dramatic increase in White-faced Ibis in the CV over the past few decades has been well-documented (Shuford et al. 1996, Pandolfino 2006, Pandolfino 2008b). The pattern in Figure 3 suggests that winter numbers of this species in the CV may have stabilized or may even be decreasing in recent years.

Since first appearing in South America in the 19th century, the Cattle Egret (*Bubulcus ibis*), spread rapidly throughout the western hemisphere and is now relatively common in most of the contiguous United States and has been recorded as far north as southern Alaska (Telfair 2006). This African species staged the same sort of range expansion throughout the old world as well. Data from Breeding Bird Surveys (Sauer et al. 2005) suggest that populations of this species in much of its North American range have stabilized or even decreased in the past 20 years. Figure 4 shows that the story may be more complex for birds wintering in the CV. Numbers appear to have peaked as many as three times, each peak followed by a decrease. This appears to be a widespread phenomenon in the CV as several different CBC circles show similar peaks and valleys roughly corresponding to the overall trend.

Range expansion of the Great-tailed Grackle (*Quiscalus mexicanus*) has

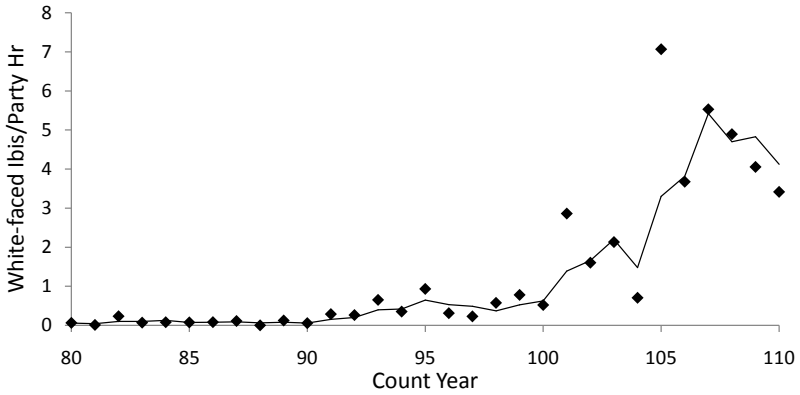


Figure 3. Abundance (birds/party hour) of White-faced Ibis on CV CBCs from Count years 80-110 with a 3-year moving average trendline.

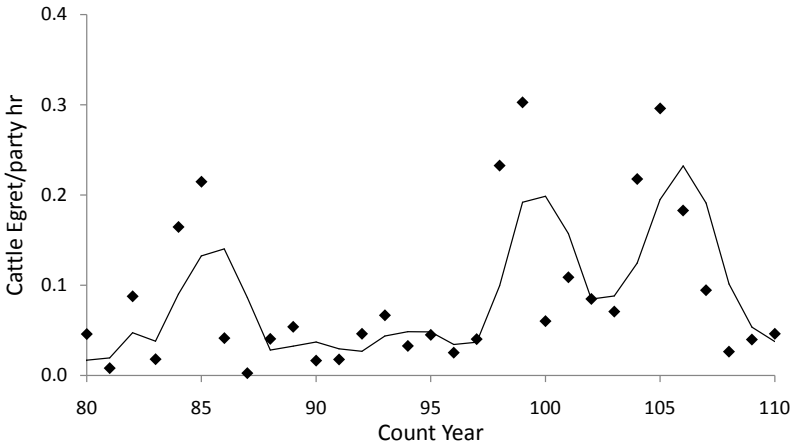


Figure 4. Abundance (birds/party hour) of Cattle Egret on CV CBCs from Count years 80-110 with a 3-year moving average trendline.

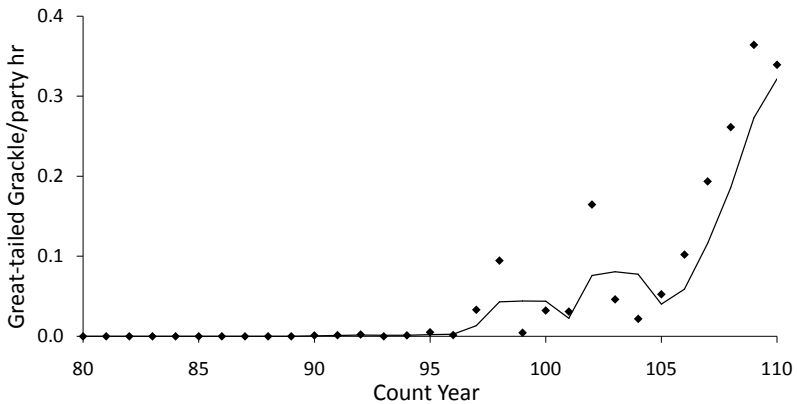


Figure 5. Abundance (birds/party hour) of Great-tailed Grackle on CV CBCs from Count years 80-110 with a 3-year moving average trendline.

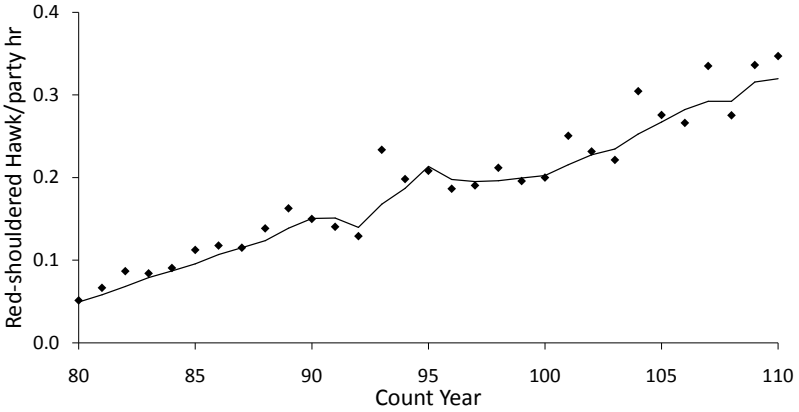


Figure 6. Abundance (birds/party hour) of Red-shouldered Hawk on CV CBCs from Count years 80-110 with a 3-year moving average trendline.

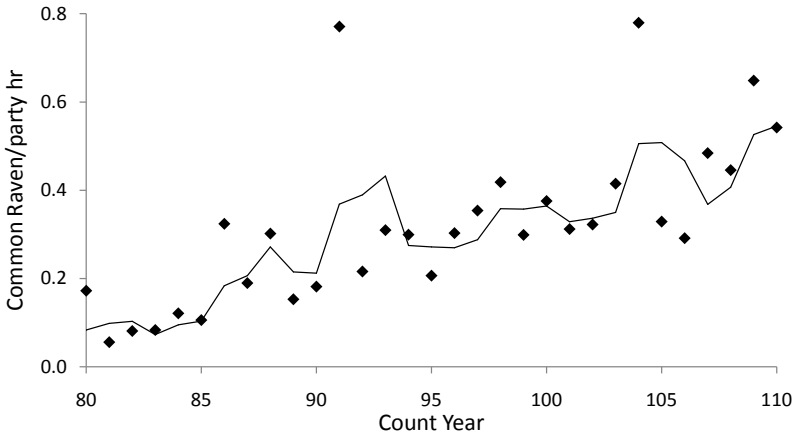


Figure 7. Abundance (birds/party hour) of Common Raven on CV CBCs from Count years 80-110 with a 3-year moving average trendline.

been even more rapid than that of the Cattle Egret (Dinsmore and Dinsmore 1993, Wehtje 2001, 2003). After five consecutive years of increasing numbers, CY 110 data suggest that winter populations of this species in the CV may have peaked (Figure 5). However, it is likely too early to draw any firm conclusions as Great-tailed Grackles tend to first colonize areas in the breeding season and only gradually become established as winterers afterward (Wehtje 2003, Pandolfino et al. 2009).

Red-shouldered Hawks (*Buteo lineatus*) have been increasing and expanding their range in California during the past few decades (Rottenborn 2000, Pandolfino 2008b). In the CV this increase is showing no signs of slowing down (Figure 6).

Since the middle of the 20th century, Common Ravens (*Corvus corax*) have increased and expanded their range through most of North America

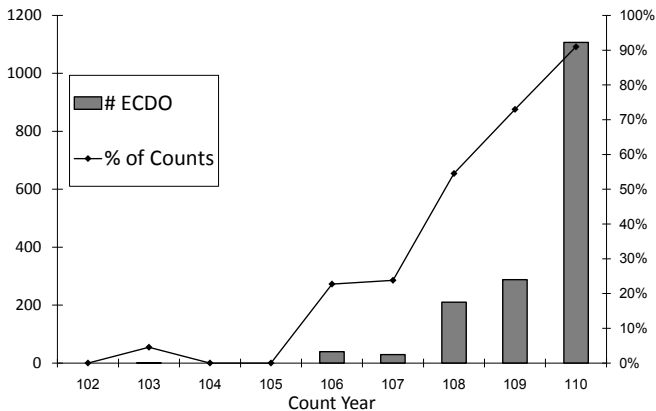


Figure 8. Total numbers of Eurasian Collared-Doves on all CV CBCs and percent of CV CBCs that recorded at least one individual.

(Boarman and Heinrich 1999). Increases in the CV were first noted by Boarman and Berry (1995). Prior to the 1980s, Common Ravens were rare in most of the CV north of the southern San Joaquin Valley. Since then, this species has been observed more frequently in all parts of the CV. For example, of the 20 CV CBC circles north of Fresno County, 12 recorded their highest numbers of ravens in the last five years with 7 of those 12 records set during Count Year 110. Figure 7 documents the increase in ravens in the CV and gives no indication that the trend has reached its peak. Note that the peaks seen in Count Years 91 and 104 appear to represent widespread ‘invasion’ events. In CY 91 new high-count records for Common Raven numbers were set on 5 different circles ranging from Putah Creek in the north to Bakersfield in the south. In Count Year 104, 7 different circles set new records from Chico to Bakersfield.

No current or past avian range expansion rivals that of the ongoing spread of the non-native Eurasian Collared-Dove (*Streptopelia decaocto*) (Romagosa and McEneaney 1999, Romagosa 2002). Hampton (2006) documented the early phases of the expansion of this species into the CV and Figure 8 shows that it continues to expand its range and increase in numbers throughout the CV. Indeed, of the 22 CV CBCs that have recorded the species, 17 (77%) set new high-count records for this species in CY 110. Only Milburn-Fresno and Wallace-Bellota remain Eurasian Collared-Dove ‘virgins’ at this point.

Feedback

Please feel free to contact me by email with comments or suggestions about this series. Let me know if you have particular species you would like me to review in future installments.

ACKNOWLEDGMENTS

My thanks go to all the compilers and all the participants from the CV.

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