



Photo: Redwood National and State Parks

REDWOOD NATIONAL AND STATE PARKS
2012 BREEDING BIRD SURVEY
Kristin Schmidt and Heather Brown

The 2012 Breeding Bird Survey (BBS) route in Redwood National and State Parks (RNSP) was conducted on 14 June. A new observer, Heather Brown, started this year with Kristin Schmidt, the previous observer, acting as data recorder and quality control. The route was not run in 2011 due to a slide on Coastal Drive that made access impractical to a large portion of the survey route, and leaving the route impossible to complete within the time constraints of the BBS survey protocol. Since there is no plan to open this road to car traffic in the future, a new route was created using as many of the old survey points as possible. Twenty five of the survey points from the old route were incorporated into the new route and twenty five new points were added to meet the BBS 50 point protocol. The new route switches directions heading from north to south along the Newton B. Drury Parkway, and continuing south along Highway 101, then turning east up Bald Hills Road. Two stops on Bald Hills Road were not surveyed due to road construction using a pilot car that prohibited stopping. Unfortunately, after this new route was run for the first time this year, it was learned that the route slightly overlaps another active, existing BBS route. A revision of the route will need to be created in 2013 using the majority of the old and new points, but leaving Bald Hills Road, perhaps

using the park-side of the K & K Road. Route reconnoitering will be done this spring before the next BBS route survey planned for June, 2013.

The survey followed established BBS protocol. Data were entered into the on-line data entry system, checked, and corrected. Hard copies of all field and transcribed data were sent to the U.S. Geological Service Wildlife Research Center at Laurel, Maryland for use in analyses of bird population trends throughout the United States, Canada, and Mexico. This year X/Y coordinates (Zone 10, NAD 83) were recorded for all 50 stops with a Global Positioning System unit and sent to the U.S.G.S. office.

Numbers of species detected and numbers of individuals within species detected have been compared each year to the data captured in previous years since 1995. Due to the change in the route, it will no longer be possible to compare this data set from year to year. As long as RNSP is able to maintain a consistent route starting in 2013, there should be comparable data within a couple of years. While it is unfortunate to lose such a long term data set, this change of route will give RNSP the opportunity to look at different habitat types and the bird species using those habitats over the long run. Count data for this year are included in Table 1.

The most frequently detected species on this new route was the Pacific Wren with a total of 77 individuals counted; it was also detected at the most stops. Varied Thrush and Swainson's Thrush were the second and third most often detected species, with 62 and 40 individuals, respectively. Following close behind the Varied Thrush were Chestnut-backed Chickadee and Pacific-slope Flycatcher both with 39 individuals. The other high-number species were Golden-crowned Kinglet with 37 individuals counted, Wilson's Warbler with 34, Hermit Warbler with 29, Marbled Murrelet with 25, Steller's Jay with 18, and Song Sparrow with 17. With the exception of Marbled Murrelet (a federally threatened species), the top species appear to be good indicators of environmental stability within our parks, representing both neotropical migrants and year-round residents.

Marbled Murrelet numbers were up from previous years with a total of 25 detections. This is probably due to the change in direction of the route, causing many of the same stops from the previous route, and in prime old growth habitat, along the Newton B. Drury Parkway to be surveyed earlier in the morning. Marbled Murrelets are well known to be most active in the predawn and early morning hours.

Four new species were added to the route's list in 2012, Gray Jay, Red-breasted Nuthatch, Hermit Thrush, and Lazuli Bunting. Gray Jays are relatively common in the redwoods so it is interesting that they have not been detected previously by either of the 2 previous observers. However, it could be due to their propensity to move around silently, and their minimal vocalizations especially when compared to other corvids. The other explanation could be that a change in observers resulted in "observer difference"; Sauer et al. (1994) found there were observer effects on the total number of species detected among different observers on the same route. Future surveys may provide an answer to this question.

Red-breasted Nuthatches and Hermit Thrushes are also common in Redwood National and State Parks, but are more closely associated with more inland (often conifer) habitat types (Hunter et al. 2005). Now that the route travels up Bald Hills Road and moves away from the immediate coast, these species will likely continue to be present.

Lazuli Buntings are closely tied with open habitats (Hunter et al. 2005), e.g. prairies or clearcuts. Since this route now travels through areas of prairie, it is highly likely this species will continue to be encountered in future surveys.

The change in the route caused the elimination of some of the more common species from the route, as reported in previous years. These species are frequently associated with the beaches, lagoons, and urban areas. These species included, but were not limited to, Osprey, European Starlings, and Red-winged Blackbirds.

A total of 550 individuals was recorded with a total of 46 species detected. This is up from any of the previous year's survey efforts. In 2010 there were a total of 528 individuals and 45 species. This change in numbers could be a reflection of the change in the survey route direction, a change in observer, or both. Future surveys may clarify the reason for these changes.

Table 1. Species and numbers of individuals detected during the 2012 breeding bird survey in Redwood National and State Parks.

<i>Species</i>	<i>Number</i>	<i>Species</i>	<i>Number</i>	<i>Species</i>	<i>Number</i>
Great Blue Heron	2	Barn Swallow	3	White-crowned Sparrow	9
Turkey Vulture	3	Chestnut- backed Chickadee	39	Oregon Junco	5
Red-Shouldered Hawk	1	Red-breasted Nuthatch	8	Black-headed Grosbeak	1
Marbled Murrelet	25	Brown Creeper	4	Lazuli Bunting	3
Band-tailed Pigeon	7	Pacific Wren	77	Brown-headed Cowbird	1
Northern Pygmy Owl	4	Marsh Wren	4	Purple Finch	1
Vaux's Swift	5	Golden-crowned Kinglet	37	Red Crossbill	4
Allen's Hummingbird	9	Wrentit	4	American Goldfinch	6
Belted Kingfisher	1	Swainson's Thrush	40		
Red-shafted Flicker	2	Hermit Thrush	7		
Western Wood-Pewee	4	American Robin	6		
Pacific-slope Flycatcher	39	Varied Thrush	62		
Black Phoebe	1	European Starling	1		
Hutton's Vireo	7	Cedar Waxwing	2		
Warbling Vireo	2	Orange-crowned Warbler	1		
Gray Jay	5	Common Yellowthroat	2		
Steller's Jay	18	Hermit Warbler	29		
Common Raven	7	Wilson's Warbler	34		
Cliff Swallow	1	Song Sparrow	17		

References:

- Sauer, J.R., B.G. Peterjohn, and W.A. Link. 1994. Observer differences in the North American breeding bird survey. *The Auk*, 111 (1):50-62.
- Hunter, J.E., D. Fix, G.A. Schmidt, and J.C. Power. 2005. *Atlas of the Breeding Birds of Humboldt County, California*. Redwood Region Audubon Society.