

PRELIMINARY REPORT
 2016 A-V SURVEY RESULTS – MARBLED MURRELETS IN THE SANTA CRUZ MTNS.
 October 25, 2016
 -- S. W. Singer

Introduction

Simultaneous A-V surveys were conducted at the Butano, Gazos Mountain Camp, Portola, Big Basin, and Pescadero Creek County Park on five days in the 2016 breeding season. Station locations are shown in Map 1. The Pescadero site was new to the project this year, with the data being contributed by the San Mateo County Parks Department. Surveys were conducted on July 1, July 14, July 15, July 21, and July 22 by Ramona Arechiga, Portia Halbert, Michele Laskowski, Mark Morrissette, Sean McAllister, Bryan Mori, Bill Webb, and the author.

Preliminary Results

Total detections for each station are shown in Table 1 and Graph1.

Table 1. Mean Number of Total Murrelet A-V Detections 2003 - 2016						
Year	Big Basin	Portola	Gazos Mtn. Camp	Butano	Memorial	Pescadero Ck. Co. Pk.
2003	16.3	33.2	59.7	34	4.3	
2004	17	35.6	44.7	68.3	1	
2005	14	18		26.7	1.3	
2006	18.3	18.6	79.7	48	4.7	
2007	16.3	30.6	31.2	46.3	0.7	
2008	12	19	71.8	20.7	0.7	
2009	1.7	5.4	6.8	17.7	0.7	
2010	15.3	33	66	62	11	
2011	22	55	44.3	32	4.7	
2012			53.1			
2013			28.1			
2014	8.3	27.7	37	78	10.3	
2015	18	27.8	62.2	62.6		
2016	36.4	74.2	61.2	48.2		46.8

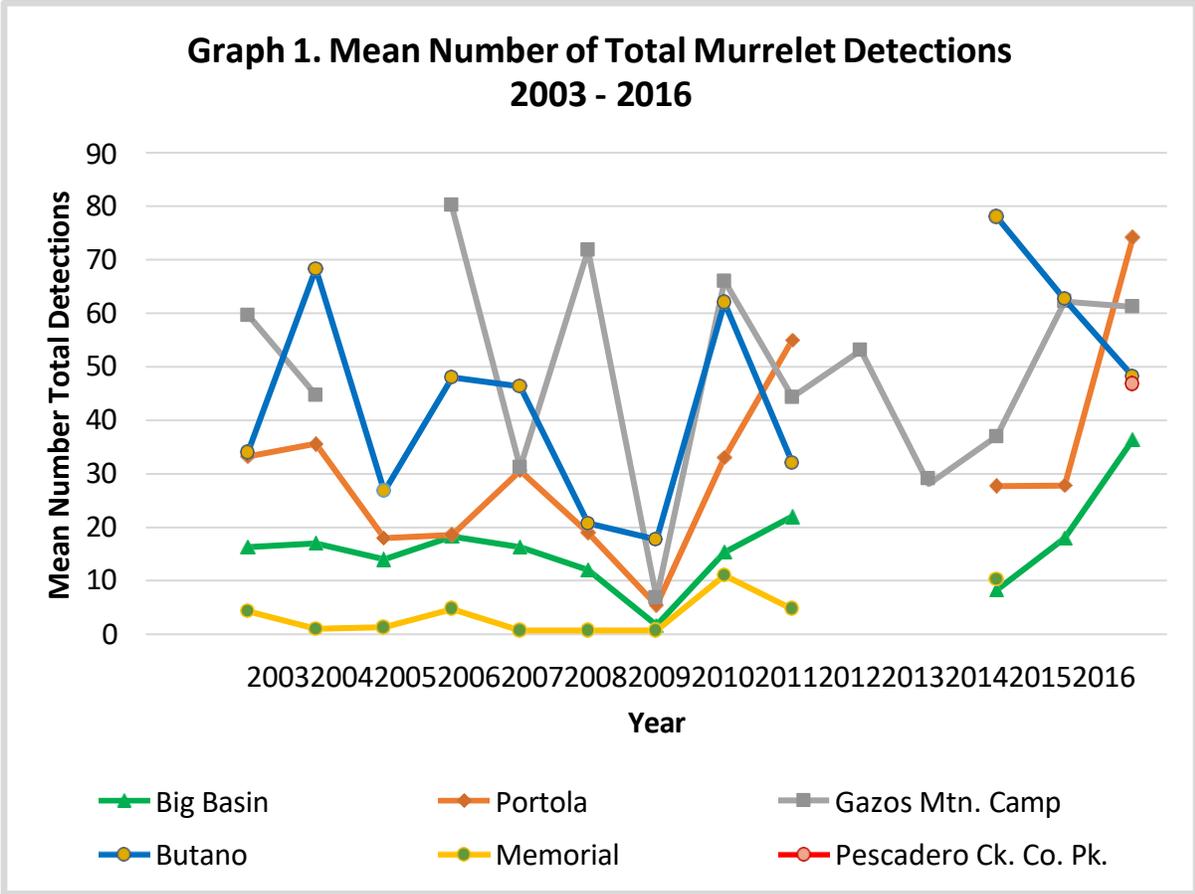
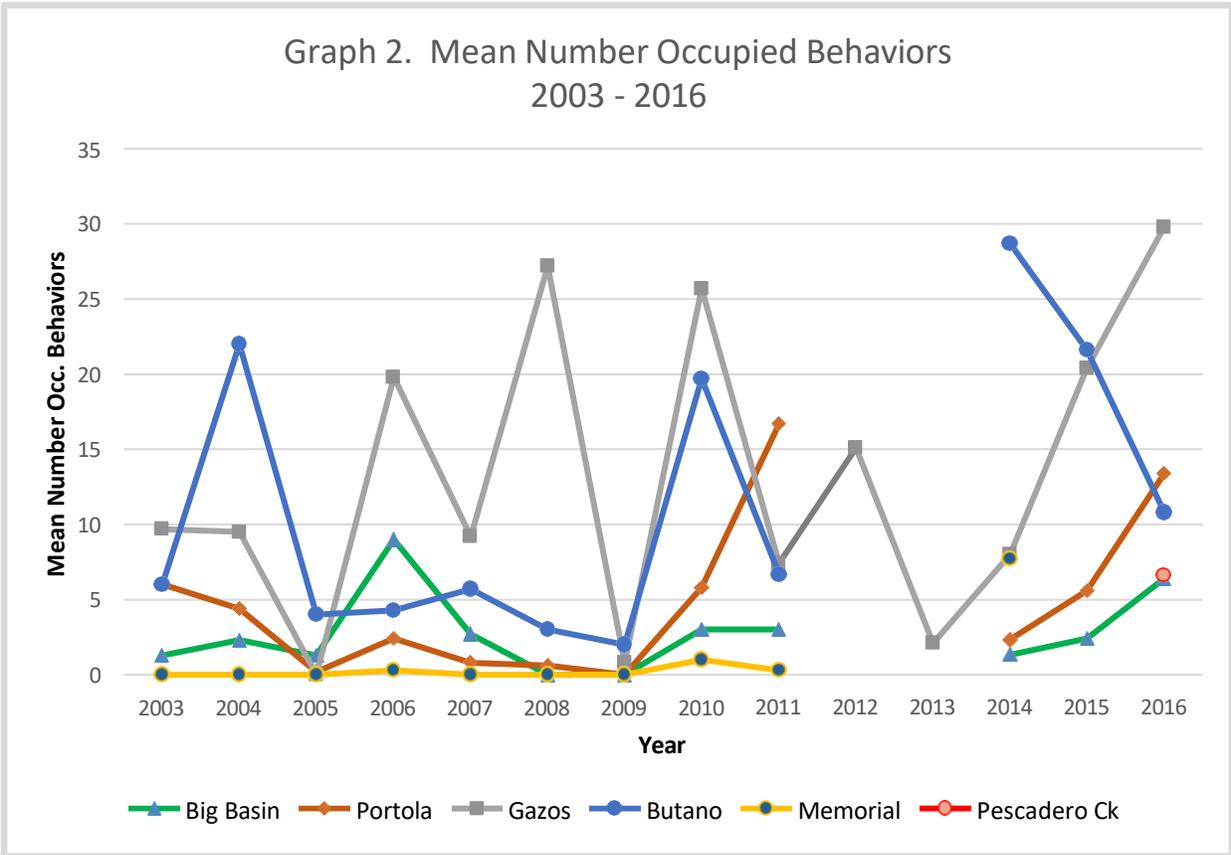


Table 1 and Graph 1 show that total detections were down this year at Butano, but up at Big Basin and Portola. Despite an increase in number of detections, Big Basin still had the fewest detections of any of the five stations. The highest number of detections this year was at Portola, which had more detections this year than ever before. The new station at Pescadero Creek was located only about 3 km. upstream of the old Memorial station, yet had many more detections than Memorial ever reported when it was being surveyed from 2003 to 2014. Possible reasons for these results will be discussed in the final report.

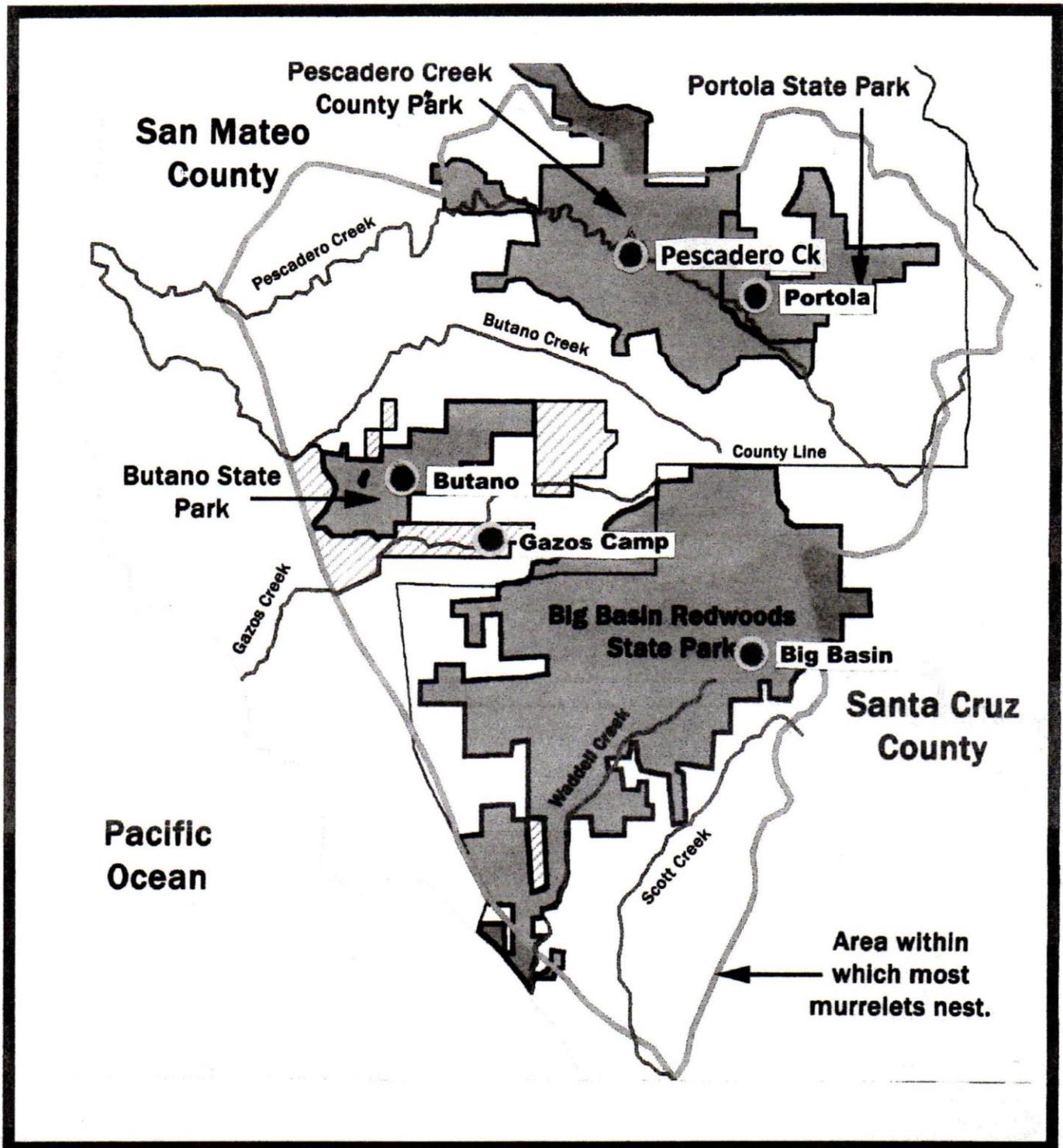
Table 2. Mean Number of Murrelet Occupied Behavior Detections 2003 - 2016						
Year	Big Basin	Portola	Gazos Mtn. Camp	Butano	Memorial	Pescadero Ck. Co. Park
2003	1.3	6	9.7	6	0	
2004	2.3	4.4	9.5	22	0	
2005	1.3	0.2	NA	4	0	
2006	9	2.4	19.8	4.3	0.3	
2007	2.7	0.8	9.2	5.7	0	
2008	0	0.6	27.2	3	0	
2009	0	0	0.8	2	0	
2010	3	5.8	25.7	19.7	1	
2011	3	16.7	7.4	6.7	0.3	
2012			15.1			
2013			2.1			
2014	1.33	2.33	8	28.7	7.7	
2015	2.4	5.6	20.4	21.6		
2016	6.4	13.4	29.8	10.8		6.6



The highest mean number of occupied behaviors was observed at Gazos Mountain Camp, with the value being a little higher than last year. The fewest of these detections were found at Big Basin and Pescadero Creek. There was a drop in occupied behaviors at Butano which also had a mean of only 4.4 wing sound detections this year compared to 10.4 last year. Further discussion of these findings will appear in the final report, which will also provide results for other behavior parameters recorded.

Map 1. Location of Marbled Murrelet A-V Survey Stations
(on following page)

Map 1. Location of Marbled Murrelet Audio-Visual Survey Stations



Map by L. Robinson, modified by S. Singer