

**2013 Annual Report to U.S. Fish and Wildlife Service:
California Clapper Rail (*Rallus longirostris obsoletus*)
TE-807078-14**

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INTRODUCTION

The California Clapper Rail (*Rallus longirostris obsoletus*), hereafter, CCR, is one of the most endangered species in California. The species is dependent on tidal wetlands, which have decreased over 75% from the historical extent in San Francisco Bay. A complete survey of its population and distribution within the San Francisco Bay Estuary was begun in 2005.

In 2013, Point Blue Conservation Science (formerly PRBO) completed the ninth year of field work designed to improve Estuary-wide population estimates, trends in abundance, and information on important habitat and landscape features for the CCR. Field work was performed in collaboration with partners conducting call-count surveys including Avocet Research Associates (ARA), California Department of Fish and Wildlife (CDFW), California Coastal Conservancy's Invasive Spartina Project (ISP), and U.S. Fish and Wildlife Service (USFWS). This report summarizes Point Blue's California Clapper Rail surveys in 2013 under U.S. Fish and Wildlife service permit TE-807078-14.

In previous years (2005-2011), Point Blue received funding to compile and analyze data from all agencies and organizations participating in standardized Baywide CCR surveys. The final results from this collaborative project are detailed in Liu et al. (2012). Beginning in 2012, Point Blue only received funding to conduct surveys and not to curate multi-partner data nor conduct analyses. Nevertheless, Point Blue staff compiled partner survey data and conducted a preliminary analysis of CCR trends baywide and by bay region (North and South Bay). These results were presented by Julian Wood on 26 October 2013 at the State of the Estuary Conference (Wood et al. 2013; Appendix A.), and at the Annual Clapper Rail Meeting on 11 December 2013 at Point Blue headquarters, Petaluma, CA.

METHODS

Type A call-count surveys were conducted from 17 January 2013 to 13 April 2013. Point Blue surveyed 18 sites in the Estuary; 11 sites were in San Pablo Bay, 4 sites in Central San Francisco Bay, and 4 sites in South San Francisco Bay (Table 1). Sites were surveyed three times by experienced permitted biologists using a point transect method with 10 minutes per listening station. Listening stations were located primarily at marsh edges, levees bordering and within marshes, boardwalks, and boat-accessible channels within the marsh. Stations were placed 200-400 m apart. Station locations (x, y coordinates) surveyed in 2013 are presented in Table 2.

All CCR, as well as California Black Rail (*Laterallus jamaicensis coturniculus*), Virginia Rail (*Rallus limicola*), and Sora (*Porzana carolina*), detected from a listening station were recorded along with the time, direction and distance from the listening station. The actual number of rails detected was recorded, or if the detection was not heard clearly because of confounding circumstances (e.g., distance from observer or environmental conditions) a range in number of rails (e.g., 1 to 2, 2 to 4) was recorded. If no CCR were detected within 200 m of a listening station after 2 passive surveys, playback (up to 1 minute) of CCR vocalizations (kek, clatter, and kek-burr calls) was used to stimulate a response at minute six of the third survey. Playback surveys consisted of 5 minutes of passive listening (with no CCR detected), then 1 minute of playback followed by 4

minutes of passive listening. CCR detected during transit between listening stations as well as before or after the 10-minute listening period were also recorded.

We summarized our 2013 data by selecting the survey visit with the greatest number of minimum unique CCR detections, which could include detections made outside of the official 10-minute survey period. For example, if on the first visit to a marsh the observer recorded 10 to 12 individuals, on the second visit recorded 14 to 16, and on the third visit recorded 8 to 10, the second visit would be the highest count (14 – 16) and the lower number of the reported range (14) would be used as the site estimate. This is referred to as the “highest minimum count” for a given site.

RESULTS AND DISCUSSION

Point Blue Conservation Science biologists documented a total of 254 CCR at 18 survey areas (Table 1). Although fewer areas were surveyed in 2013 than previous years, it appears the CCR population in the North Bay has declined over the past year. Prior to 2013, the population had maintained a stable to upward trend following the dramatic drop between 2007 and 2008 (Liu et al 2012). CCR numbers decreased in the majority of sites surveyed in 2013, but a small portion of sites were comparable to previous years (e.g., Laumeister and Palo Alto Baylands). CCR numbers at the Gallinas Creek sites increased slightly compared to 2012. Too few surveys were conducted by Point Blue in the South Bay to draw conclusions about the population in that region.

Central San Francisco Bay

In Central San Francisco Bay (Bay Bridge to Pt. San Pedro/Pt. San Pablo), we surveyed four sites in 2013, focused around the Corte Madera Ecological Reserve. This region continues to provide suitable habitat for CCR though total numbers of detections in 2013 continue to show a decline from previous years. Heerdt Marsh detections decreased from 32 detections in 2012 to 20 unique individuals in 2013. Muzzi Marsh increased greatly between 2010 and 2011, from 19 to 42, but then began to decline over the past two years from 28 individuals in 2012 to 15 in 2013. The number of individuals at Bothin Marsh/Tam High Fragment increased from two in 2012 to four in 2013 and is now closer to the five individuals reported in 2010.

San Pablo Bay

China Camp State Park and the Gallinas Creek Complex

Detections of CCR decreased at China Camp marsh from 32 individuals in 2012 to 16 in 2013, however the numbers are still greater than in 2010 when 11 were reported. Two other sites were surveyed in 2013 along Gallinas Creek, including McInnis Marsh, which has supported between 40 and 50 CCR since 2010. In 2013, 44 CCR were detected in McInnis Marsh. In the remaining Gallinas Creek sites there was a slight increase from 18 recorded individuals in 2012 to 21 thus maintaining that this complex is one of the richest areas of CCR in San Pablo Bay.

Petaluma River Complex

A total of 21 CCR were detected at sites surveyed in the Petaluma River complex. Surveys in northern Petaluma Ancient Marsh yielded six CCR along False Slough and five along Shultz Slough. In the middle Petaluma River reach, nine CCR were detected at Black John Slough North. In the upper Petaluma River, only one CCR was detected at Petaluma Dog Park Marsh and none at the Gray’s Field restoration site.

Richmond/Pinole complex

The total number of detections along the north Richmond shoreline remained stable from the previous two years, with a total minimum high count of 29 at the two surveyed sites, Richmond Fragment (San Pablo Creek Marsh) and Wildcat Marsh. Detections at Wildcat Marsh were similar to 2010 when 13 CCR were detected. Richmond Fragment declined from 22 individuals in 2010 to 12 individuals in 2013.

South San Francisco Bay

Faber-Laumeister

Detections at Faber-Laumeister showed a decline from the previous two seasons, with 50 detections, compared to 91 in 2012 and 94 in 2011. The Faber Tract alone has shown the greatest decrease from 69 individuals in 2012 to 25 individuals in 2013. Over the last three years, counts at Laumeister ranged from 30 detections in 2011 to 22 in 2012 and 25 in 2013.

Palo Alto Baylands

CCR detections at Palo Alto Baylands remained stable in 2013 with 12 detected, but is still reduced compared to the 20 detections in 2010. At the adjacent Palo Alto Harbor/Hooks Island site, detections showed a slight increase from 12 in 2012 to 15 Clapper Rails, but still down from 17 in 2010.

No nests were incidentally discovered during surveys, nor were any Clapper Rails harmed or killed.

REFERENCES

Liu, L., J. Wood, N. Nur, L. Salas, and D. Jongsomjit. 2012. California Clapper Rail (*Rallus longirostris obsoletus*) Population monitoring: 2005-2011. PRBO Technical Report to the California Department of Fish and Game.

Wood, J., L. Salas, N. Nur, M. Elrod, J. McBroom. 2013. Distribution and population trends for the Endangered California Clapper Rail. State of the Estuary Conference, 26 October 2013, Oakland, CA.

ACKNOWLEDGEMENTS

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Table I. Highest minimum number of Clapper Rails by site from Point Blue 2013 surveys.

Bay Region	Complex	Site Name	# of rounds	Date of High Count	Highest Min Count
Central San Francisco Bay	Corte Madera	Piper Park	3	3/12/2013	7
	Corte Madera Ecological Reserve	Heerdt Marsh	3	2/05/2013	20
		Muzzi Marsh	3	3/11/2013	15
	Richardson Bay	Bothin Marsh/Tam High Fragment	3	4/01/2013	4
San Pablo Bay	Gallinas Creek	China Camp	3	3/25/2013	16
		McInnis Marsh	3	3/08/2013	44
		Santa Venetia/Gallinas Creek Middle Reach	3	1/24/2013	21
	Petaluma Marsh	Black John Slough North	3	3/07/2013	9
		False Slough	3	3/01/2013	6
		Schultz Slough	3	3/19/2013	5
	Richmond Pinole	Richmond Fragment	3	2/26/2013	12
		Wildcat Marsh	3	3/26/2013	17
Upper Petaluma River	Petaluma Dog Park	3	4/05/2013	1	
	Gray's Field	3	-	0	
South San Francisco Bay	Palo Alto	Faber Tract	3	2/04/2013	25
		Laumeister Tract	3	2/28/2013	25
		Palo Alto Baylands	3	2/28/2013	12
		Palo Alto Harbor/Hook's Island/Charleston Slough	3	2/28/2013	15

Table 2. 2013 California Clapper Rail Station locations surveyed in 2013 (x, y coordinates in UTM NAD83, zone 10).

Station	Site Name	X Coordinate	Y Coordinate
BJSN01	Black John Slough North	542002	4221007
BJSN02	Black John Slough North	542255	4221258
BJSN03	Black John Slough North	541980	4221556
BJSN04	Black John Slough North	541669	4221802
BJSN05	Black John Slough North	541323	4222000
BJSN06	Black John Slough North	540956	4222220
BJSN07	Black John Slough North	540635	4222475
BJSN08	Black John Slough North	540349	4222758
BOMA01	Bothin Marsh/Tam High	541700	4194162
BOMA02	Bothin Marsh/Tam High	541730	4193948
BOMA10	Bothin Marsh/Tam High	542024	4192899
BOMA11	Bothin Marsh/Tam High	542019	4193285
CCM01	China Camp	543836	4207483
CCM07	China Camp	544324	4207404
CCM17	China Camp	544636	4207098
CCM18	China Camp	544857	4207129
CCM21	China Camp	544801	4206919
CCM24	China Camp	545042	4206887
CCM59	China Camp	545664	4206587
CEF01	Heerdt Marsh	543102	4199205
CEF03	Heerdt Marsh	543330	4199066
CEF05	Heerdt Marsh	543015	4198956
CEF13	Heerdt Marsh	543351	4199248
CEF16	Heerdt Marsh	542823	4199275
CEF20	Heerdt Marsh	543437	4199425
CHSL01	Charleston Slough	580426	4145106
CHSL04	Charleston Slough	580414	4144826
FABE03	Faber Marsh	577339	4146797
FABE04	Faber Marsh	577298	4146978
FABE06	Faber Marsh	577432	4147225
FABE12	Faber Marsh	577391	4146599
FABE14	Faber Marsh	577769	4146659
FABE15	Faber Marsh	577902	4146814

Station	Site Name	X_COORD	Y_COORD
FABE16	Faber Marsh	577898	4147016
FASL01	False Slough, Petaluma Marsh	537886	4227957
FASL02	False Slough, Petaluma Marsh	538238	4227680
FASL03	False Slough, Petaluma Marsh	538790	4227816
GRFI01	Gray's Field	536303	4230247
GRFI02	Gray's Field	535350	4230500
GRFI03	Gray's Field	535850	4230155
LAUM06	Laumeister Marsh	577432	4147225
LAUM07	Laumeister Marsh	577682	4147166
LAUM08	Laumeister Marsh	577172	4147349
LAUM09	Laumeister Marsh	577126	4147543
LAUM10	Laumeister Marsh	577170	4147738
LAUM11	Laumeister Marsh	577260	4147918
MIM01	McInnis Marsh	543550	4209100
MIM15	McInnis Marsh	543573	4208899
MIM16	McInnis Marsh	543616	4208499
MIM17	McInnis Marsh	543640	4208299
MIM18	McInnis Marsh	543670	4208099
MIM19	McInnis Marsh	543707	4207901
MIM20	McInnis Marsh	543592	4208697
MUZZ02	Muzzi Marsh	543270	4198714
MUZZ04	Muzzi Marsh	543198	4198296
MUZZ06	Muzzi Marsh	543162	4198086
MUZZ08	Muzzi Marsh	543187	4197605
MUZZ10	Muzzi Marsh	543569	4197718
MUZZ12	San Clemente Creek	543657	4197566
PAB07	Palo Alto Baylands	578542	4146295
PAB14	Palo Alto Baylands	578746	4146217
PAB16	Palo Alto Baylands	579129	4146185
PAB17	Palo Alto Baylands	579308	4146093
PAB18	Palo Alto Baylands	579124	4146384
PAB19	Palo Alto Baylands	578494	4146491
PAB20	Palo Alto Baylands	578214	4146646
PAHA01	Palo Alto Harbor/ Hooks Island	579302	4145979

Station	Site Name	X_COORD	Y_COORD
PAHA02	Palo Alto Harbor/ Hooks Island	578898	4145912
PAHA03	Palo Alto Harbor/ Hooks Island	578873	4145418
PAHA04	Palo Alto Harbor/ Hooks Island	579282	4145587
PAHA05	Palo Alto Harbor/ Hooks Island	579627	4145741
PAHA06	Palo Alto Harbor/ Hooks Island	579993	4145586
PDF12	Petaluma Dog Park Marsh	534648	4230802
PDF13	Petaluma Dog Park Marsh	533995	4231302
PDF14	Petaluma Dog Park Marsh	534340	4231301
PIF03	Piper Park	541478	4199615
PIPE01	Piper Park	541484	4199149
PIPE02	Piper Park	541459	4199364
PIPE03	Piper Park	541404	4199588
PIPE04	Piper Park	541308	4199419
PIPE05	Piper Park	541136	4199313
RIF03	San Pablo Ck./Richmond Fragment	555123	4202989
RIF09	San Pablo Ck./Richmond Fragment	554287	4203087
RIF10	San Pablo Ck./Richmond Fragment	554704	4203067
RIF11	San Pablo Ck./Richmond Fragment	555284	4203315
SCHU01	Shultz Slough, Petaluma Marsh	537792	4228389
SCHU02	Shultz Slough, Petaluma Marsh	537440	4228606
SCHU03	Shultz Slough, Petaluma Marsh	537049	4228759
SCHU04	Shultz Slough, Petaluma Marsh	536612	4228593
SCHU05	Shultz Slough, Petaluma Marsh	536663	4228054
STVE01	Santa Venetia	542982	4207524
STVE02	Santa Venetia	542988	4207722
STVE03	Santa Venetia	542858	4207875
STVE04	Santa Venetia	542742	4208041
STVE05	Santa Venetia	542547	4207999
THF11	Tam High School	542280	4192937
THF14	Tam High School	541822	4193435
THF15	Tam High School	541764	4193696
WIMA02	Wildcat Creek Marsh	553708	4201035
WIMA03	Wildcat Creek Marsh	553655	4201231
WIMA04	Wildcat Creek Marsh	553598	4201446

Station	Site Name	X_COORD	Y_COORD
WIMA05	Wildcat Creek Marsh	553731	4201639
WIMA06	Wildcat Creek Marsh	553891	4201784
WIMA07	Wildcat Creek Marsh	554041	4201921
WIMA08	Wildcat Creek Marsh	554207	4202077
WIMA09	Wildcat Creek Marsh	553759	4200843

Appendix A. Pdf file attached (CLRA trends_ Wood etal_2013 10 29.pdf)