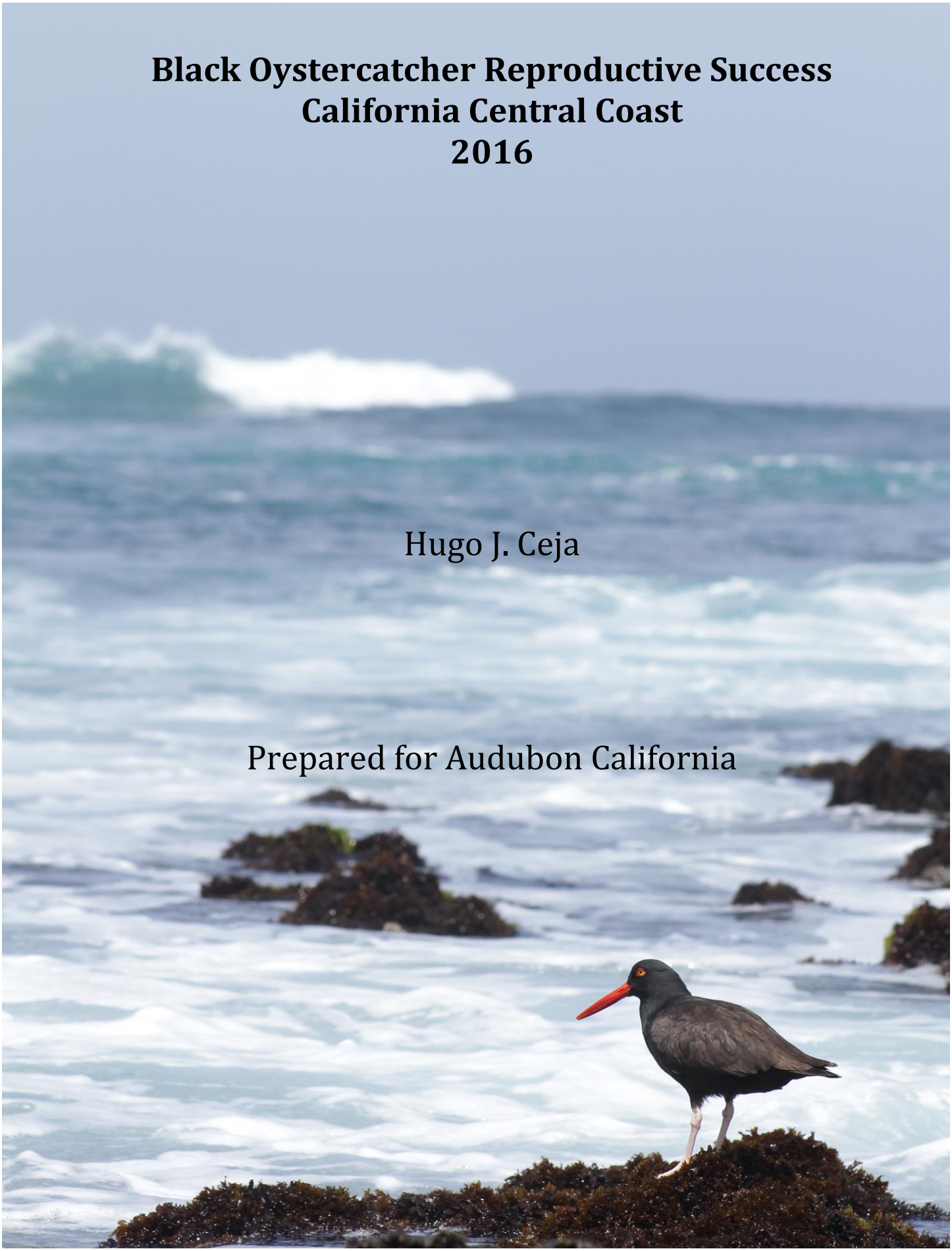
Black Oystercatcher Reproductive Success
California Central Coast
2016

Hugo J. Ceja

Prepared for Audubon California



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Monterey to Point Lobos State Natural Reserve
Santa Cruz County to San Mateo County

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BREEDING DENSITY

In 2016, a total of 41 territories were monitored for nesting Black Oystercatchers (BLOY) in the central coast from Monterey to Point Lobos State Natural Reserve (Monterey Bay South Coast). The Monterey Bay South Coast is composed of at least 34 nesting pairs (82.9% of known territorial pairs) that at some point in time during our monitoring effort have nested at least once. This year, a total of 28 nesting pairs were identified 10 on the Monterey Peninsula (MP), 9 on Pebble Beach (PB) and 9 on Point Lobos (PL). Five of the 28 nesting pair were newly discovered nests and territories - 2 on Point Lobos (PL12 and PL13), 2 on Pebble Beach (PB13 and PB14), and 1 on the Monterey Peninsula (MP13). Another new pair and territory (MP14) was identified on the Monterey Peninsula, but a nest was not established. One of the birds in this new pair is a banded female that was banded as a chick in 2011 on the Farallon Islands and was first observed in Pacific Grove in 2014. By the spring of 2016, it had found a mate and the new pair was observed exhibiting territorial behavior in an area between two existing territories. A total of 6 pairs that nested last year did not nest this year and six known territorial pairs have never been recorded nesting.

Additionally, for the first time a new stretch of coast was monitored for nesting Black Oystercatchers and is mentioned to some extent in this report. The new area includes the coastline from Natural Bridges State Beach in Santa Cruz County to Pescadero State Beach in San Mateo County and is referred to as Monterey Bay North Coast. This area includes approximately 30 miles of coastline. A total of 17 nesting pairs were identified and monitored – 1 at Natural Bridges State Beach, 5 at Wilder Ranch State Park, 3 near Davenport, 1 at Pigeon Point Lighthouse, 1 at Greyhound Rock, and 6 near Pescadero State Beach.

TIMING OF BREEDING

Nesting along the Monterey Bay South Coast started as early as the first week of May with a total of 2 pairs (MP7 and PL7). The second week of May had an additional 2 nesting pairs (PL1 and PL9). The third week of May had the second highest number with a total of 4 nesting pairs (PL2, PL6, PL12 and PL13). The fourth week of May had the highest number of nesting pairs with a total of 14 pairs (MP1, MP2, MP4, MP5, MP11, MP13, and PB1, PB2, PB3, PB7, PB8, PB11, PB13 and PL8). The first week of June brought 3 more nests (MP6, MP10 and PB14) and lastly the third week of June had the last nest (MP8). Egg laying dates were determined for 26 of the 28 nesting pairs. Two nesting pair were found late in the season with one fledgling each.

There was a total of 6 re-nesting attempts – 4 on the Monterey Peninsula and 2 on Point Lobos State Natural Reserve. The first 2 replacement clutches were found on the first and third week of June (PL6 and MP13 respectively). The fourth week of June had a total of 3 replacement

clutches (MP5, MP11 and PL1). The first week of July had the last replacement clutch of the season (MP6).

Overall, Black Oystercatchers at Point Lobos State Natural Reserve started egg laying before the other two sites (MP and PB). By the end of the third week of May, 7 out of 9 nesting pairs at Point Lobos were already incubating, whereas 9 out of 10 at Monterey Peninsula and 7 out of 9 at Pebble Beach started incubating after the third week of May.

Timing of breeding was not determined for Monterey Bay North Coast nesting pairs. Most nesting pairs were found for the first time on 29 May already incubating clutch.

RESULTS

In the 2016 breeding season, the Monterey Bay South Coast had a total of 28 nesting pairs - 10 nesting pairs out of 14 territorial pairs on the Monterey Peninsula, 9 nesting pairs out 14 territorial pairs on Pebble Beach, and 9 nesting pairs out of 13 territorial pairs on Point Lobos State Natural Reserve. There was a total of 34 nest attempts of which 6 were replacement clutches from Monterey Peninsula and Point Lobos. As a result, at least 82 eggs were produced, a total of 29 chicks were recorded, and only 4 fledglings were found (MP7, PB8, PB6 and PL10).

As a whole, the Monterey Bay South Coast had a reproductive success (# of fledglings / # of breeding pairs) of 0.14, a nesting success (# of clutches that produced young / # of clutches) of 50%, a hatching success (# of chicks / # of eggs) of 32.8%, and a survival to fledging (# of chicks fledged / # of chicks hatched) of 13.7% (See Table 1).

Individually, the Monterey Peninsula had a reproductive success of 0.10, Pebble Beach had a reproductive success of 0.22, and Point Lobos had a reproductive success of 0.11. Nest success was higher on Point Lobos (63.6%) and declined as you move up the coast into Pebble Beach (55.6%) and Monterey Peninsula (35.7%). Hatching success was also higher in Point Lobos (44.1%) and lower at Pebble Beach (29.2%) and Monterey Peninsula (25.7%) (See Table 1).

Table 1: 2016 Black Oystercatcher Reproductive Success in Central Coast - Monterey Bay South Coast.

Site	Breeding Pairs	# of Eggs	# of Chicks	# of Fledglings	Nest Attempts	NS	HS	Per Pair
Monterey Peninsula (MP)	10	33-37	9	1	14	35.7%	25.7%	0.10
Pebble Beach (PB)	9	22-26	7	2	9	55.6%	29.2%	0.22
Point Lobos (PL)	9	27-32	13	1	11	63.6%	44.1%	0.11
Monterey Bay South Coast	**28**	**82-95**	**29**	**4**	**34**	**50.0%**	**32.8%**	**0.14**

For the first time since the inception of the monitoring effort on the Central Coast, we identified and monitored 17 nesting pairs within the stretch of coast from Natural Bridges State Beach in Santa Cruz County to Pescadero State Beach in San Mateo County. A total of 19 nesting attempts were identified resulting in at least 51 eggs, 26 chicks, and 14 fledglings. The Monterey Bay North Coast had a reproductive Success of 0.82, a nesting success of 63.2%, hatching success of 48.6%, and a survival to fledging of 53.8% (See Table 2). Productivity along the Monterey Bay North Coast was significantly higher than the Monterey Bay South Coast.

Table 2: 2016 Black Oystercatcher Reproductive Success in Central Coast - Monterey Bay North Coast.

Site	Breeding Pairs	# of Eggs	# of Chicks	# of Fledglings	Nest Attempts	NS	HS	Per Pair
Monterey Bay North Coast	17	51-56	26	14	19	63.2%	48.6%	0.82

DISTURBANCE

Disturbance along the Monterey Bay South Coast was higher on the Monterey Peninsula and less so in Pebble Beach and Point Lobos State Natural Reserve. Disturbance for the Monterey Bay North Coast was not determined due to the limited number of observations.

The Monterey Peninsula has the most disturbances out of all the sites. The Monterey Peninsula includes the City of Monterey, the City of Pacific Grove, and the City of Asilomar all of which are popular tourist destinations. The Monterey Peninsula section of the coast has a large amount of development along the coast such as restaurants, businesses, homes, and other attractions that draw a large number of people to the coastal region. The towns of Pacific Grove and Asilomar have the most nesting pairs and the highest disturbance within this section of the coast. This area is composed of a major coastal road, a recreation trail, numerous pullouts, and an accessible coast. As a result, a common disturbance encountered were people and dogs on and off leash near and on top of nesting rocks. All nesting areas in Monterey Peninsula are prone to human disturbance at some time or another during the day, mostly during low tide. Three of the ten nesting areas are located on private property (Hopkins Marine Station) and are less likely to receive human disturbance but are still exposed to people on the facility walking off trail and aerial disturbance by small drones. There was at least one observation (personal observation) of a drone flying over an area that includes three territories at Hopkins Marine Station. Not enough information was gathered as to the response from the oystercatchers but alert calls were heard during the time the drone was in the air.

Pebble Beach is another popular destination that receives a great amount of visitors. Like the Monterey Peninsula, the coast along Pebble Beach has many pullouts and can be easily accessed in some area. The section of coast from Spanish Bay down to Cypress Point has the most human disturbance. This area covers six known territories of which four nested – one on the beach and three on offshore rocks. The remaining two territorial pairs have never been documented nesting and are also located on the section of the coast with the highest accessibility and visitor activity. Those two territories in particular host large numbers of gathering oystercatchers of all ages (up to 12 BLOYs) throughout the breeding season and very likely during the non-breeding season. From Cypress Point to Stillwater Cove, the coast changes in accessibility and composition which results in less human disturbance. A total of 8 pairs defend territory in this section, of which 5 nested on offshore rocks, steep cliffs, or mainland rocks. Due to limited access and the ruggedness of the coast very little human disturbance was observed. Nonetheless, Stillwater Cove might receive some disturbance from people on boats, kayaks, and paddleboards if they attempt landing and climbing on some of the coastal features where the oystercatchers nest.

The Point Lobos State Natural Reserve receives the least amount of disturbances of the three sites. The reserve has a number of fixed rules that prohibit visitors from bringing dogs into the reserve and going off trails. In addition to that, they have docents, park aids, and rangers that watch for violators. Approximately 75% of the reserve has a rugged coast that does not allow for intertidal exploration, therefore, further limiting nine territorial pairs from human disturbance. On the other hand, the area between Sand Hill Cove and Bird Island parking lot is of concern. This area has the most accessible section of the coast and results in high visitor use. Common activities recorded around this area include climbing on rocks, tide pooling, and a one time observation of rock throwing at an oystercatcher, which can all result in flushing oystercatchers from foraging areas and possibly discouraging nesting. At another section of the reserve, a portion of the Sea Lion Point Trail was permanently closed off to the public in 2015 and could benefit the Headland Cove (PL6) and Sea Lion Cove (PL5) pairs. Even with the trail closure,

there was one observation of two individuals off trail and flying a small drone over an area that includes two territories (personal observation). Not enough information was gathered but some alert calls were heard when the drone was up in the air.

NEST LOCATIONS

The majority (51.5%) of all nesting pairs in the Monterey Bay South Coast chose a nesting spot on an offshore rock. This includes any rock whose access is determined by the tides regardless of how far from shore it is situated. Such rocks include~~s~~ the Point Pinos Islets, Pescadero Rock in Stillwater Cove, Bird Rock, Bird Island, and other smaller rocks closer to shore throughout the coast. Second most favorable nesting spot includes mainland rocks (30.3%). This included all mainland features such as large granite rocks and outcroppings and sloped sandstone, conglomerate rocks and outcroppings whose access is not determined by the tides. Third most favorable nesting spots include the beach (9.1%) and cliffs (9.1%).

The Monterey Bay North Coast on the other hand, had a total of 9 nests (52.9%) on an offshore rock and 8 nests (47.1%) on a mainland rock.

ACKNOWLEDGEMENT

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