

MONTEREY BIRDS

OYSTERCATCHER *Haematopus bachmani* 2012 REPRODUCTIVE SUCCESS SURVEY

Don Roberson

<http://creagrus.home.montereybay.com/MTYbirdsBLOY2012.html>



The rocky coastline of Monterey County is not for the timid. Waves, swells and storms batter the outer coast. Few birds are resident here, but foremost among them is **Black Oystercatcher**, listed as BLOY in 4-letter-code banding lingo ("BLOY" became our survey shorthand for this species). To learn more about this key local bird, the Monterey Audubon Society and California Audubon sponsored Black Oystercatcher surveys along the rocky coastline of Monterey County in 2011 and 2012. [Cal Audubon also sponsored similar surveys in other northern California counties.] In **2011**, Monterey volunteers surveyed almost half of the county's rocky coastline and counted 127 birds, representing about 55 pairs, plus 18 young from perhaps 10 or so nests. This constituted about 9% of the 1346 oystercatchers found on statewide surveys in 2011. Monterey's *Breeding Bird Atlas* (Roberson & Tenney 1993) had estimated 77 pairs in the county; the survey of half the habitat suggested that the county might have as many as 100 breeding pairs.



In **2012**, the project was a more intensive **reproductive success survey**, requiring volunteers to follow specific pairs and their nesting attempts over the course of a breeding season (May-August). Some 18 volunteers signed up at the organizational meeting on 19 May 2012, and 12 of them (67%) followed through on their commitment. [Of the six that dropped out, 3 became discouraged because of the difficulty in finding pairs and/or nests within their assigned territory; another found the project too time-consuming). The dozen volunteers on the 2012 project spent substantial effort watching the breeding efforts of **21 pairs of Black Oystercatcher**. [We have some anecdotal data on another 7-8 pairs, see below.]

Our most industrious volunteer, John G.H. Cant of Fremont, provided full data on 7 pairs along the southernmost coast of Monterey County (and arranged to use Big Creek Reserve as his base for each weekend visit). Most observers followed 1 or 2 pairs for the summer, although Gail Griffin & Brian Weed would, in tandem, follow 3 pairs at Pt. Lobos.

The purposes of these surveys were to

- determine (nesting success [nests that hatched at least 1 young],
- determine fledging success [nests that fledged at least 1 young], and
- determine, if possible, reasons for nesting effort failures





Our results follow.

NESTING SUCCESS

Our 21 pairs laid eggs in 26 nests – in short, 5 of the pairs made re-nesting efforts after the loss of an initial clutch of eggs. The statistics on nesting success – with success meaning hatched at least 1 egg:

- Per pair: 57% (12 nests of 21 pairs hatched young)
- Per nest: 46% (12 nests of 26 total nests hatched young)

Of nests for which the number of eggs is known or can be unambiguously inferred: 5 nests had 3 eggs, 5 nests had 2 eggs, 1 nest had only 1 egg. Thus 2-3 eggs constituted the ‘standard’ nest.

Of those nests that hatched eggs, the number of young ranged from 1-3 chicks. Nests with more than 1 young often lost one or more young: three nests which began with 2 young lost one before fledging age, and one nest with 3 chicks lost one before fledging age. Of a total of 21 young, only 5 lived to or near fledging age (38-40 days), and one of those disappeared before fledging was confirmed.



Five pairs re-nested (24%) after loss of the initial clutch of eggs. One of the re-nesting attempts succeeded in fledging young; in 4 cases the pairs lost the

second clutch of eggs, and in one case they hatched a young but it did not long survive. Three of the 21 pairs (14%) were observed copulating within the breeding territory after the loss of either the second clutch or the loss of young. However, in none of those cases were actual nests found after the late-season mating.



FLEDGING SUCCESS

This is where the story gets grim. Of our 21 pairs, only 4 succeeded in fledging young. Three pairs fledged one young, and one pair fledged two. None of these were from a re-nesting effort. The statistics on fledging success were:

- Per pair 19%
- Per nest 15%

Of these 4 pairs that succeeded, two were at nest sites that had young in 2011, and as we assume the same adults were involved both years, were thus pairs that already were successfully established at an excellent nest site. Three of the nest sites were on inaccessible islets, and the fourth on a sea-cliff inaccessible to the public. The four fully successful nestings were:

- Islet just offshore the 'gazebo' at Rocky Shores, the northern end of Asilomar SB in Pacific Grove (Rita Carratello); one chick fledged.
- Tall islet in middle of Stillwater Cove, Pebble Beach; two chicks hatched but only one chick fledged (Don Roberson; photo of islet, right). This pair had young in 2011 (Blake Matheson).
- Islet at south end of Garrapata SP; one chick fledged (Terry Hart).
- Steep cliffside at south end of Rocky Pt. (Blake Matheson), an area that was fledged young before; two young fledged.





Carole and Larry Rose watched an oystercatcher pair at Pt. Joe on a nest on the mainland shore through incubation and a passage of time (28-30 days) in which the egg should have hatched. Only after that time did they approach the nest (above) and find that the egg was broken — with a large hole in it (below; from a gull peck?) and a dead chick inside. An adult had been incubating the damaged egg for days (photo © Larry Rose).



In addition, we have anecdotal information on 7-8 other pairs from Pebble Beach, Pt. Lobos, or Garrapata SP (let's call it 7 more pairs; because different observers were involved, we are not sure of the overlap or not at Garrapata). Of these 7 pairs, six of them were just noted as paired up and acting territorial throughout the summer, but we have almost no information on their nesting efforts. One pair was seen with nest-building initiation (moving rocks about) but later checks of the site did not disclose that a nest was even finished (this pair is shown just below, as the presumed female checks out the nest site that was never used). As to the others they may have tried to nest and failed, or they may simply have not tried to nest (perhaps they were younger birds?). However, in one case a pair at Garrapata was **seen with a fledging** on 1 August (Blake Matheson), which means it did successfully nest there, but we don't know the nest site or anything else about the effort. The confirmed breeding is excluded from our data for the detailed

analysis of this project, but it is interesting that 1 of 7 other pairs fledged one young, a fledging rate of 14% (and thus quite similar to our 15% fledging success rate determined by pairs that were followed for the season).

REASONS FOR NESTING FAILURES

We obtained very little direct information about nesting failures. The nest or young were there on one visit, and then missing on subsequent visits. Observers could often draw inferences, though, from the circumstances. Of the five re-nesting efforts, three of these were along the Pacific Grove coastline (Berwick Park, and two pairs at Pt. Pinos) with heavy use by the public. All three of these pairs lost both clutches of eggs that were laid, and in each case it was believed that disturbance of the nesting pair by the public provided an opportunity for egg predation by Western Gulls. This same scenario was true for the pair at Hopkins Marine Station and at Pt. Joe, Pebble Beach – likely human disturbance and egg predation by Western Gull – except those pairs did not re-nest. Thus five nesting failures can be directly blamed on human disturbance, leading to egg predation. In the case of the Pt. Joe pair, one egg was recovered with a hole in it and a dead chick inside – strong evidence of egg destruction by a strong peck by a gull (see right).

A further problem with the nest failures of these 5 pairs in Pacific Grove/Pebble Beach was that the nests that were lost (including the 3 re-nesting second nests) were located either on the mainland (3 pairs) or on offshore rocks accessible from the mainland at low tide (2 pairs). The locations of these nests made human disturbance possible. In contrast, the two nests that fledged young in Pacific Grove/Pebble Beach were on offshore islets that never began accessible to the mainland at low tide, and were thus fully protected from humans. The islet in Stillwater Cove is far from shore (can only be viewed via scope) and is very tall and steep, so is inaccessible even to humans in boats. At Bird Rock in Pebble Beach, two pairs failed (one of them after a re-nesting attempt). In at least one case, the egg loss was likely due to being crushed by California Sea-lions that sun and loaf on the Rock, and it seems probable that disturbance by sea-lions was the cause of all nesting failures there. Many Western Gulls nesting there would readily take an egg if the pair were disturbed by the pinnipeds. Pinniped disturbance is a documented cause of nesting failure in Black Oystercatchers (Warheit et al. 1984).

All three breeding efforts at Pt. Lobos State Reserve succeeded in hatching 2-3 eggs, but before the young could fledge, all of them disappeared. Human disturbance is not considered a factor at any site – all on inaccessible islets or sea-cliffs – so one might guess that mammalian or avian predation of the chicks was involved. Along the south coast of Monterey, all 7 pairs followed nested on offshore islets. Two of the pairs had young in 2011 surveys. Four of the islets also had Western Gulls breeding, and in one situation a fisherman's skiff near the rock could have been disturbing the pair (this also mentioned anecdotally at Garrapata SP). Two of the nests were lost at the egg stage, and five failed at the precocial young stage (including a re-nesting effort). Presumably predation was a factor in most (or all) of these failures, but we have no direct information.

Our low fledging success (only 15-19%, depending on one uses nest success or the success of a breeding pair in a season) was unexpected for most volunteers (and discouraging). Yet, our statistics are not unlike that those of other studies. Hatching success across the species' range is 34-70% (Andres & Falxa 1995) — so our local hatching success of 46-57% is right in the middle of that range. Fledging success rangewide, though, is much lower, and has been found to be only 12–39% (Andres & Falxa 1995).

However, oystercatchers are long-lived. It takes about 5 years to reach breeding age, but after that strong pair bonds are formed. Banded adults on the Farallon Islands lived 9–15 years. This means each adult may have 4–10+ years to replace themselves for the population to remain stable. Fledging success of 15–19% should maintain a stable population — as appear to be the case here in Monterey County. It is the young chicks (like the one [below], photo'd in 2012 in Santa Cruz © Michael Bolte) that are the most vulnerable.



Our 2012 surveys add a significant amount of information to that already known about Black Oystercatchers in Monterey County (e.g., Webster 1942, Legg 1954, Roberson & Tenney 1993). The young hatched during a breeding season tend to remain with their parents through the fall and early winter, but a past year's offspring is evicted from the parental territory when courtship intensifies again in January–March (Andres & Falxa 1995). Such young birds may then be encountered on their own (right — presumed young oystercatcher with still much dusky coloration on bill, photo Feb 2006 © D. Roberson) or in loose groups foraging along the rocky shore. Paired adults, though, maintain territories year-round and enforce them by vigorous chases.

In the meantime, breeding success might be improved if vulnerable nest sites in public areas on the Monterey Peninsula could be better protected. To those ends, California Coastal National Monument (which protects the offshore rocks and islets along much of the Monterey Co. coast) has installed signs at Pt. Pinos (below) in hopes that the public can be encouraged to avoid disturbing nesting oystercatchers.



Acknowledgments: First, many thanks to our **volunteer researchers** and those who provided information: Patricia Addelman, John G.H. Cant, Alan & Sheila Baldrige, Rita Carratello, Don Glasco, Gail Griffin, Rick Hanks, Terry Hart, Robert Horn, Blake Matheson, Carole & Larry Rose, Kevin Uhlinger, Diane Tan, Bob Tintle, Jennifer Updike, Brian Weed, and Jackie Weller. Second, many thanks for the support provided by **California Audubon** via project leader Anna Weinstein. Third, we appreciate the institution support provided in access and partnership with California Coastal National Monument, Pt. Lobos State Reserve, and Big Creek Reserve. Michael Bolte and Larry Rose graciously provided photos for this web page. Linda Trocki in Marin Co., Joleen Ossello in Mendocino Co., and Elise Elliot-Smith and Jeff Hollenbeck in Oregon provided useful information during our project.

Photos: All photos © **Don Roberson**, except those attributed to **Michael Bolte** and **Larry Rose**, and used with permission; all rights reserved.

Literature cited:

Andres, B.A., and G.A. Falxa 1995. Black Oystercatcher (*Haematopus bachmani*) in The Birds of North America, No. 155 (A. Poole & F. Gill, eds.). Acad. Nat. Sci., Philadelphia, and A.O.U., Washington, D.C.

Legg, K. 1954. Nesting and feeding of the Black Oyster-catcher near Monterey, California. Condor 56: 359-360.

Roberson, D., and C. Tenney, eds. 1993. Atlas of the Breeding Birds of Monterey County, California. Monterey Pen. Audubon Soc., Carmel, CA.

Warheit, K.I., D.R. Lindberg, and R.J. Boekelheide. 1984. Pinniped disturbance lowers reproductive success of Black Oystercatcher *Haematopus bachmani* (Aves). Mar. Ecol. Prog. Ser. 17: 101-104.

Webster, J.D. 1942. Notes on the growth and plumages of the Black Oyster-catcher. Condor 44: 205-213.

