

Bolinas Lagoon

Heron and Egret Summary 2012



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ACR Technical Report 67-1-6
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Picher Canyon

Great Egret:

Great egrets (*Ardea alba*) were first seen in the canyon on March 12, and pairs began incubating on April 16. The peak number of nests was 75, which occurred on May 11. The first chicks hatched on May 18, and at least 18 chicks fledged from the colony. An average of 0.2 ± 0.07 chicks (SE) fledged per nest attempt, and an average of 2.3 ± 0.37 chicks fledged per successful nest attempt. Eighty-six (86) nests, or 91% of all nest attempts, failed to fledge any chicks. Only 26% of failed nests attempted to re-nest, the majority of which failed.

Of all nest attempts, nine (10%) were lost to abandonment before eggs hatched and two pairs (2%) failed to lay eggs. Two nests (2%) laid eggs, but they failed to hatch. For the remainder of the failed nests, the reason for failure could not be positively determined. For 23 (24%) of all nest attempts, predation of chicks could be inferred based on available evidence.

A pair of Common Raven (*Corvus corax*) attempted to nest in the canyon, in the same tree where egret nests were present. They were first observed nest building on April 20, and were seen together on a regular basis in the canyon throughout the nesting season. No young were fledged and the nest appeared to fail on June 4. Ravens were seen eating egret chicks at nests, although no attacks on chicks were observed.

Nest survivorship was especially low this year. For many of the nests that failed, all the chicks disappeared at once, suggesting that they were taken by predators. Most nest failures occurred roughly between two to three weeks of hatching, when chicks are beginning to be left unguarded, and therefore the most vulnerable to predation. Most nest failures occurred in late May, prior to the apparent failure of the raven nest. Given that the ravens were nesting in such close proximity to the egrets, and were observed eating egret chicks in nests, it is likely that at least some of the failed nests could be attributed to the ravens, although how many is unknown.

The number of chicks fledged per successful nest was high for this colony. This suggests that those pairs that were able to protect their chicks from predation were also able to provision their young with sufficient food.

Adult Great Blue Herons (*Ardea herodias*) were seen on a few occasions in the canyon, but no courting or nest building behavior was observed. No Snowy Egrets (*Egretta thula*) were seen in the canyon.

Kent Island and Bolinas Mainland

On the Bolinas mainland this year, there were eight nest attempts by Great Blue Heron, five of which were successful (63%) and fledged nine chicks. There were also three nest attempts by Great Egret on the mainland, one of which was successful and fledged two chicks.

On Kent Island there were four nest attempts by Great Blue Heron. The nests were obscured from good viewing, so determination about fate could not be made. There were two nest attempts by Great Egret, both initiated on May 18, both of which failed. These egret nests initiated before any failures in Picher Canyon took place, so it seems unlikely that these birds were refugees from Picher Canyon.

Variable	Year				
	2008	2009	2010	2011	2012
PICHER CANYON					
Great Egret					
Arrival date	March 13	March 20	March 9	March 5	March 12
Peak nesting date	June 3	May 18	May 24	May 6	May 11
First egg laid	March 25	April 6	March 17	April 4	April 16
First chick hatched	April 22	May 4	April 16	May 2	May 18
First chick fledged	June 13	June 29	June 7	July 1	July 2
Peak nests	66	59	86	66	75
Nest attempts	78	63	106	106	94
Successful nests	35	46	48	27	8
% nest success	45%	73%	45%	25%	9%
Min. chicks fledged	70	100	106	48	18
Avg. chicks fledged per nest attempt	0.9 ± 0.12	1.6 ± 0.14	1.0 ± 0.12	0.5 ± 0.08	0.2 ± 0.07
Avg. chicks fledged per successful nest	2.0 ± 0.10	2.2 ± 0.08	2.2 ± 0.08	1.8 ± 0.08	2.3 ± 0.37
Final fledge date	August 11	August 6	August 15	July 29	>July 16