

Farallon Island Wildlife Status Update for 2014-2015

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ABSTRACT

Beginning during the summer of 2014, the central California Current region was affected by the unusual combination of a persistent warm water mass known as “the blob” and El Niño conditions. This led to record high sea surface temperatures (SST) throughout much of the region during 2014 and 2015. We summarize the impact this event has had on seabirds and marine mammals breeding at the Farallon National Wildlife Refuge.

2014 and 2015 were two of the top four warmest years on record, joining 1992 and 1998 as the only years in which the seasonal average exceeded 13°C and setting record highs for the months of February, July, August, September and October of 2015. Warm water conditions, such as those observed during the past year, typically lead to unproductive conditions, very low breeding success and even breeding failure. However, biological responses to this warming event have been varied and often not as dramatic as those observed during previous warm water events such as the 1983 or 1992 El Niños.

During the latter part of 2014, we observed reductions in the abundance of krill and juvenile rockfishes in the diet coupled with late season breeding failure for many seabirds and complete abandonment of second clutches for Cassin’s auklets (*Ptychoramphus aleuticus*). During 2015, the number of birds attempting to breed and their breeding success were both reduced. Chicks generally took longer to grow and fledged at lower weights than in past seasons. Cassin’s auklets failed to attempt any second broods for the first time since 2008 and common murrelets (*Uria aalga*) fledged chicks at a rate well below average. Seabird diet composition was also significantly different during 2015 than the previous year with juvenile rockfish (*Sebastes* spp.) comprising a much smaller proportion of the diet and northern anchovies (*Engraulis mordax*) becoming a significant portion of the diet for the first time since 2008. Although breeding success was reduced overall, most species were able to fledge chicks at a rate on par with or slightly above the long-term average productivity for this population.

Marine mammals exhibited a similar mixed response. Very high numbers of California sea lions have been hauling out at the island this season and have spread into areas where they are impacting seabird nesting habitat and human infrastructure. There were also record numbers of aborted sea lion fetuses observed during the past two winters as well as record numbers of pups born at the Farallones during the summers of 2014 and 2015. Unseasonably warm weather during the winter of 2014-2015 also led to increased pup mortality for Northern

Elephant Seals as pups were prematurely pushed into the water or crushed by adults seeking to get to the water for relief from the heat.

Finally, unusual numbers of warm water associated species were observed at the Farallones during the last two years. These have included first island records for wedge-rumped storm-petrel (*Oceanodroma tethys*) and kelp gull (*Larus dominicanus*), first records of adult blue-footed boobies (*Sula nebouxii*) present during the summer breeding season, record high numbers of brown boobies year-round (*Sula leucogaster*), and the presence common dolphins (*Delphinus delphis*) near the island.