

PHOTOGRAPHIC IDENTIFICATION RESEARCH ON SEASONAL RESIDENT WHALES IN WASHINGTON STATE

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Calambokidis, J., and J. Quan. 1999. Photographic identification research on seasonal resident whales in Washington State. Unpubl. doc. submitted to the Workshop to Review the Status of the Eastern North Pacific Stock of Gray Whales, 16-17 March 1999, Seattle, WA.

Photographic identification of gray whales in Washington State has been conducted by Cascadia Research since 1984. This has been part of an ongoing research effort to study the abundance, movements, residence times, and return rate of seasonal resident gray whales that spend the spring, summer, and fall feeding in these areas. Starting in 1992, surveys were more frequent and encompassed a broader region. Since 1996, this effort has also included identifications from the National Marine Mammal Laboratory from systematic surveys along the northern Washington Coast and western Strait of Juan de Fuca.

Through 1997, more than 600 identifications of whales have been made, representing 168 unique individuals. In 1996 and 1997, 47 and 37 different gray whales were identified primarily on the northern coast of Washington State and near the western entrance to the Strait of Juan de Fuca (both the Washington and Vancouver Island sides). Movements among these three regions were very common and most animals were seen multiple times (up to 11) over periods of up to 163 days. Of whales identified in northwest Washington in 1996 and 1997, 64%-83% had been identified in a previous year. Gray whales identified near Grays Harbor in the spring were less likely to have been seen multiple times (52%) or a previous year (26%). Comparison of photographic catalogs with researchers working in British Columbia revealed that many of the whales that feed along the Washington coast through the summer range along the British Columbia coast to areas north of Vancouver Island. Gray whale occurrence in Puget Sound has been more variable from year to year.

Analysis is currently underway of the 1998 sample which is the largest and most comprehensive to date. Effort by Cascadia Research included surveys and identifications off California, Oregon, several regions of Washington State (including Puget Sound), southern British Columbia, and southeast Alaska. Photographs of animals in specific regions within this range were also obtained by collaborating researchers with NMML, West Coast Whale Research Foundation, Humboldt State University, University of Victoria, University of British Columbia, Department of Fisheries and Oceans, Vancouver Aquarium, Juan de Fuca Express, and Coastal Ecosystems Research Foundation. These

represent close to 500 records of over 150 different individuals. Preliminary results of this analysis has provided new information on the status and movements of these seasonal resident whales.

Overall conclusions include:

1. Seasonal resident gray whales utilize coastal areas from northern California to southeast Alaska from spring to fall with some interchange of animals among most of these areas.
2. Gray whales show some localized site fidelity to certain areas but also move widely within and between years. Gray whales seen in northern Puget Sound show a strong site fidelity to this area but only for part of the season and then move to other unknown areas (not currently sampled).
3. Utilization of some areas, such as southern Puget Sound, are highly variable year to year and whales seen in this area have a high mortality rate and are rarely seen in more than one year.
4. The total number of seasonal resident animals is not known (in the hundreds), nor is how they are recruited to this group, or the degree to which they need to be managed as a separate unit.