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Photo-identification Catalogue of Western Gray Whales 1994-2001

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PHOTO-IDENTIFICATION CATALOGUE OF WESTERN GRAY WHALES 1994-2001

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Individual Recognition for Population Monitoring

Individual identification is a powerful aid to studying wildlife, including whales. The ability to recognize individual whales makes it possible to estimate abundance, survivorship and aspects of reproduction such as age at sexual maturity and birth intervals. Repeated observations of known individuals can also be used to determine between-location movement patterns, site fidelity, health and body condition and, in some cases, whether and how often they have been struck by vessels, entangled in fishing gear and attacked by killer whales. The greatest value of photo-identification methods comes as a result of studies using long time series of data. As data accumulate, estimates of abundance and trends become more accurate and precise and our understanding of other features of population dynamics (e.g. birth rates) improves.

Gray whales are suited for individual recognition given their variable, mottled coloration. Pigmentation patterns are unique and stable enough to allow individuals to be followed over decades. The recognition of whales from photographs of natural markings has been in use since the 1970s. Images showing features unique to an individual can consist of various aspects of the body, including the head, back, dorsal hump and caudal ridge notches, dorsal flanks and dorsal or ventral surface of the flukes. When compiling a photo-identification catalogue, it is important that different views of the same whale not be counted as more than one individual, therefore a standard body region (e.g. the right flank) is used as the basis for initial identification.

Photo-Identification of Gray Whales off Sakhalin Island, Russia

Photo-identification of gray whales feeding off northeastern Sakhalin Island in summer and autumn has been a principal component of two long-running (1995-2021 and 2002-2021) scientific projects. The Russian Gray Whale Project (formerly called the Russia-US Research Program) was the first to initiate photo-identification studies off Sakhalin in 1995. A second photo-identification project, funded directly by offshore oil and gas companies, was initiated in 2002. These two research projects have collected photo-identification data on gray whales from small boats, large vessels, shore and more recently aerial drone systems.

Recognizing that information derived from the datasets of these two research projects is critical for population assessment, the Scientific Committee of the International Whaling Commission (IWC) has highlighted for more than a decade the importance of combining these two photo-identification (and genetic) data holdings. While those involved in western gray whale research and conservation have expected for many years that a common (joint) photo-identification catalogue and database would become available, to be controlled and managed under the auspices of the IWC, this objective has not been met. Clearly, this failure works to counter the concept of using all available science (and data) to support conservation.

As a good faith gesture and to partially offset the effects of the aforementioned failure on science and conservation, the 1994-2021 photo-identification catalogue maintained by the Russia Gray Whale Project (Dr. Alexander Burdin, PI) will be made available via the IWC Secretariat following SC68D. It is the intent of the authors to follow the guidelines set out in SC/67A/PH/05, including a data availability agreement that facilitates access to the catalogue for Scientific Committee members. As an initial step, the catalogue will be provided to the IWC Secretariat in PDF form (see catalogue template below) followed in time with more complete sighting information and related digital type-specimen images.

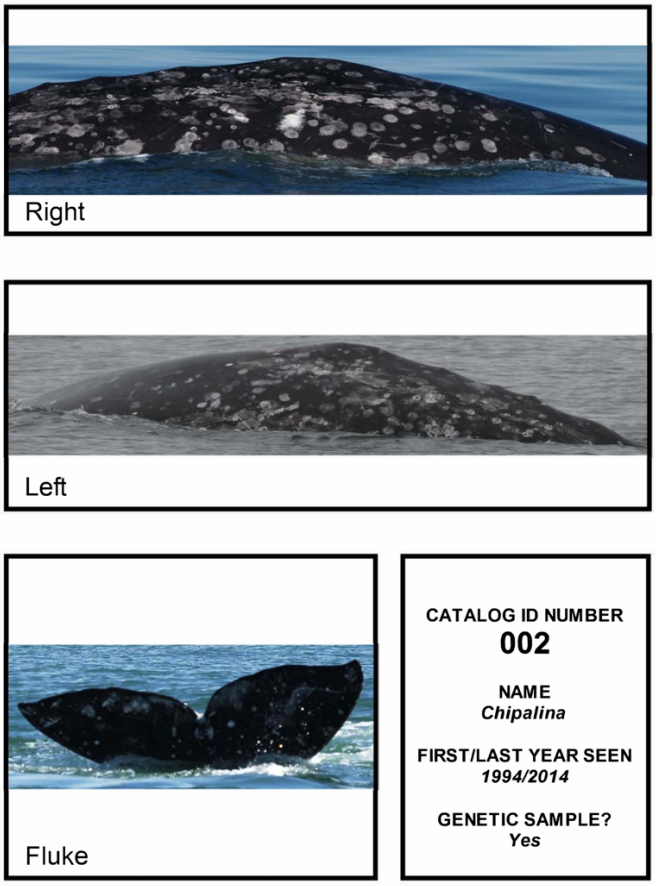

Fig 1. Template of PDF catalogue format