

Annex O

Status of DNA Registers

ANNEX O1

STATUS OF THE ICELANDIC WHALE DNA REGISTER

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Practical arrangements regarding the establishment of the Icelandic DNA register were concluded in 2007. The Marine and Freshwater Research Institute, Reykjavik, is responsible for the establishment and maintenance of the registry that is of the same format as the Norwegian DNA registry. An ORACLE database has now been created and contains all genotyped individual's information as well as tissue collected ID of individuals collected but not genotyped. In parallel, a DNA tissue bank has been achieved and is now fully functional.

Table 1 gives the present status of the registry. Samples from all the common minke whales landed as a part of the Icelandic research program (2003-07) and recent commercial catches (2008-21), as well as from commercial North Atlantic fin whale catches have been genotyped and information stored in the database.

Footnote no.	1	2	3	4	5	6	7	8	9	10	11	12
Species/Year	Type	No. whales	No. duplicate	No. missing	No. lab problem	No. mtDNA	% mtDNA	No. msat	% msat	Sex analysed	% sexed	Note
North Atlantic minke whale												
2003-07	SP	196	0	0	0	195	99	196	100	196	100	
2008-20	C	442	0	0	0	400	90	402	91	396	89	
2021	C	1	0	0	0	0	0	0	0	0	0	
North Atlantic fin whale												
2006-18	C	834	0	0	0	834	100	834	98	834	100	

- Key to sample types: SP=special permit catch, C=commercial catch, BC=bycatch, ST=stranding.
- Number of whales that potentially entered by the previous years and enters (new year) the markets.
- Number of occurrences (tissues) sample switching on board the vessels as detected by comparison of genetic profiles.
- Number of individuals for which tissue samples are missing for reasons other than sample switching.
- Genetic laboratory not able to obtain microsatellite profiles mtDNA haplotypes from tissue samples.
- Number of samples analysed for mitochondrial control region.
- % of total samples analysed for mitochondrial control region.
- Number of samples analysed for microsatellites.
- % of total samples analysed for microsatellites.
- Number of samples analysed for sex.
- % of samples analysed for sex.
- Other problems or information.

ANNEX O2

AN UPDATE OF THE JAPANESE REGISTER FOR LARGE WHALES

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INTRODUCTION

The technical specifications and the status of the Japanese DNA register for large whales was presented and discussed during the 2005 International Whaling Commission (IWC SC) meeting (IWC, 2006). Since then, the number of genetic samples and the number of individuals analyzed and registered have been reported to the IWC SC annual meetings. The annual reports have included information of whales taken by former special scientific permits in the North Pacific (JARPN/JARPNII and NEWREP-NP) and Antarctic (JARPA/JARPAII and NEWREP-A), the commercial whaling in the North Pacific, and bycatches.

It should be noted that the special scientific permit takes under NEWREP-A and NEWREP-NP programs were terminated in June 2019 as an effect of the withdrawal of Japan from the International Convention for the Regulation of Whaling (ICRW) on 30 June 2019. From 1 July 2019, commercial whaling within Japan's Exclusive Economic Zone (EEZ) was started, and samples taken have been registered in the Japanese DNA register. The Japanese regulation on bycatches of large whales (established from 1 July 2001) requires that all animals should be registered with a DNA profile before any products derived from a bycaught animal are sold in the market.

The most recent full description of the protocol used by the Institute of Cetacean Research for the genetic analyses in the context of the IWC guidelines was presented by Kanda *et al.* (2014).

The update of the Japanese DNA register for large whales till 2021 is shown in Table 1.

REFERENCES

- International Whaling Commission. 2006. Report of the Working Group on DNA testing. *J. Cetacean Res. Manage. (Suppl.)* 8: 252-258.
- Kanda, N., Goto, M., Oikawa, H. and Pastene, L.A. 2014. Update of note on sampling and laboratory procedure protocols of the genetic work at the Institute of Cetacean Research (SC/65b/J27Rev). Paper SC/65b/DNA01 presented to the IWC Scientific Committee, May 2014 (unpublished). 6pp.

[Table 1 on next page]

Table 1
The update of the Japanese DNA register for large whales till 2021.

Footnote no.	1	2	3	4	5	6	7	8	9	10	11	12
Species/Year	Type	No. whales	No. duplicate	No. missing	No. lab problem	No. mtDNA	% mtDNA	No. msat	% msat	Sex analysed	% sexed	Note
North Pacific minke whale												
1994-2019	SP	3,057	0	0	8	3,049	99.7	3,049	99.7	3,057	100	
2019-20	CW	139	0	0	0	139	100	139	100	139	100	
2021	CW	91	0	0	0	91	100	91	100	91	100	
2001-20	BC	2,434	0	26	2	2,434	100	2,406	98.8	2,404	98.8	
2021	BC	80	0	0	0	80	100	80	100	80	100	
North Pacific sei whale												
2002-18	SP	1,622	0	0	4	1,618	99.8	1,622	100	1,622	100	
2019-20	CW	50	0	0	0	50	100	50	100	50	100	
2021	CW	25	0	0	0	25	100	25	100	25	100	
2001-20	BC	1	0	0	0	1	100	1	100	1	100	
2021	BC	1	0	0	0	1	100	1	100	1	100	
North Pacific Bryde's whale												
2000-17	SP	730	0	0	3	727	99.6	730	100	730	100	
2019-20	CW	374	0	0	0	374	100	374	100	374	100	
2021	CW	187	0	0	0	187	100	187	100	187	100	
2001-20	BC	5	0	0	0	5	100	4	80	4	80	Include three Omura's whale and one from the East China Sea stock
2021	BC	0	0	0	0	0	0	0	0	0	0	No BC
North Pacific humpback whale												
2001-20	BC	72	0	0	0	72	100	72	100	72	100	
2021	BC	0	0	0	0	0	0	0	0	0	0	No BC
North Pacific right whale												
2001-20	BC	4	0	1	0	4	100	3	75	3	75	One is missing by the 2011 tsunami, no microsats
2021	BC	0	0	0	0	0	0	0	0	0	0	No BC
North Pacific fin whale												
2001-20	BC	12	0	0	0	12	100	12	100	12	100	
2021	BC	2	0	0	0	2	100	2	100	2	100	
North Pacific sperm whale												
2000-17	SP	56	0	0	0	56	100	56	100	56	100	
2001-20	BC	2	0	0	0	2	100	2	100	2	100	
2021	BC	0	0	0	0	0	0	0	0	0	0	No BC
Antarctic minke whale												
1987/88-2004/05	SP	6,794	0	10	0	1,118	16.5	6,271	92.3	6,794	100	Incl. dwarf; 87/88-88/89. no microsats
2005/06-2018/19	SP	5,216	0	549	162	3,977	76.2	4,505	86.4	5,216	100	Some missing by the 3/11 tsunami in 2011
Antarctic fin whale												
2005/06-2011/12	SP	18	0	0	0	18	100	18	100	18	100	

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