

Japan's Scientific Progress Report on Large Cetaceans in the fiscal year 2023 (April 2023 to March 2024), with statistical data for the calendar year 2023

Government of Japan

ABSTRACT

This document summarizes the data and samples of large cetaceans, which were collected by the Institute of Cetacean Research (ICR), Fisheries Resources Institute (FRI) and Fisheries Agency of Japan (FAJ) in the fiscal year 2023 (April 2023 to March 2024), and statistical data for the calendar year 2023. Sighting data for abundance estimates of large cetaceans were collected in the North Pacific, Okhotsk Sea and the Antarctic during systematic sighting surveys. During the surveys, photo-ID, biopsy and satellite tracking experiments on large cetaceans were also conducted. A large number of biological data and samples were collected during the surveys for whales taken under the commercial whaling. Species and figures of bycatch and stranding of large cetaceans are based on the reports of prefecture governments to the FAJ, which compile information from individual fishermen, fishermen cooperatives and general public. Data and samples collected are being analyzed for contributing to the management of large cetaceans in the North Pacific and the Antarctic.

1. SIGHTINGS DATA

	Large Area	Species	Year	Local Area	No. of Sightings
JASS-A Dedicated sighting vessel (including middle and low latitudinal sighting survey) (Yushin-Marun No.2, Yushin-Marun No.3) (2023/2024)	Southern Ocean	Blue whale	2023/2024	Area IVW	19
		Fin whale			472
		Sei whale			24
		Antarctic minke whale			183
		Humpback whale			1,768
		Southern right whale			5
		Sperm whale			69
		Southern bottlenose whale			24
	Pacific Ocean - North	Bryde's whale	2023/2024	Western North Pacific	2
		Sperm whale			31
North Pacific Dedicated Sighting vessel survey in summer (Yushin-Marun, Kaiyo-Marun No.7) (2023)	Pacific Ocean - North	Fin whale	2023	Western North Pacific	7
		Bryde's whale			37
		Common minke whale			3
		Humpback whale			4
		Sperm whale			97
IWC-POWER Dedicated Sighting vessel (Yushin-Marun No.2) (2023)	Pacific Ocean - North	N.P. right whale	2023	Eastern North Pacific	4
		Blue whale			9
		Fin whale			116
		Sei whale			66
		Common minke whale			2
		Humpback whale			1
		Sperm whale			25
		N.P. right whale			1
North Pacific Dedicated Sighting vessel in spring and autumn (Yushin-Marun, Yushin-Marun No.2 and Kaiyo-Marun No.7) (2023)	Pacific Ocean - North	Blue whale	2023	Western North Pacific	34
		Fin whale			450
		Sei whale			243
		Bryde's whale			52
		Common minke whale			83
		Humpback whale			77
		Sperm whale			118
		N.P. right whale			1
Dedicated Sighting vessel on small cetacean sighting survey (Kaiyo-Marun No.7) (2023)	Pacific Ocean - North	Fin whale	2023	Western North Pacific	13
		Bryde's whale			4
		Common minke whale			3
		Humpback whale			4
		Sperm whale			47

2. MARKING DATA

2.1 Natural marking data

	Large Area	Species	Year	Local Area	Feature	No. of whales photo identified
JASS-A Dedicated sighting vessel (Yushin-Marun No.2 , Yushin-Marun No.3) (2023/2024)	Southern Ocean	Blue whale	2023/2024	Area IVW	Head, Dorsal fin, Lateral marking	16
		Humpback whale			Head, Dorsal fin, Fluke, Lateral marking	94
		Southern right whale			Head, Fluke	5
IWC-POWER Dedicated Sighting vessel (Yushin-Marun No.2) (2023)	Pacific Ocean - North	N.P. right whale	2023	Eastern North Pacific	Head	2
		Blue whale			Lateral marking	7
		Fin whale			Dorsal fin	30
		Sei whale			Dorsal fin	9
North Pacific Dedicated Sighting vessel in summer (Yushin-Marun , Kaiyo-Marun No.7) (2023)	Pacific Ocean - North	Humpback whale	2023	Western North Pacific	Fluke, Dorsal fin	4
North Pacific Dedicated Sighting vessel in spring and autumn (Yushin-Marun, Yushin-Marun No.2 and Kaiyo-Marun No.7) (2023)	Pacific Ocean - North	N.P. right whale	2023	Western North Pacific	Head	1
		Blue whale			Head, Dorsal fin, Lateral marking	29
		Humpback whale			Fluke, Dorsal fin	17

2.2 Telemetry data

	Large Area	Species	Year	Local Area	Tag Type	No. of Deployments
JASS-A Dedicated sighting vessel (<i>Yushin-Mar</i> No.2 , <i>Yushin-Mar</i> No.3) (2023/2024)	Southern Ocean	Fin whale	2024	Area IVW	Satellite	6
		Antarctic minke whale			Satellite	2
		Humpback whale			Satellite	3
IWC-POWER Dedicated Sighting vessel (<i>Yushin-Mar</i> No.2) (2023)	Pacific Ocean - North	Blue whale	2023	Eastern North Pacific	Satellite	4
		Fin whale				5
		Sei whale				5
Western North Pacific Dedicated Sighting vessel in spring and autumn (<i>Yushin-Mar</i> , <i>Yushin-Mar</i> No.2 and <i>Kaiyo-Mar</i> No.7) (2023)	Pacific Ocean - North	Fin whale	2023	Western North Pacific	Satellite	44
		Sei whale			Satellite	20
Abashiri coastal tagging and biopsy survey (<i>Chipashiri</i>)(2023)	Sea of Okhotsk	Fin whale	2023	Off Abashiri	Satellite	9

3. Biopsy samples

	Large Area	Species	Year	Local Area	Number Collected
JASS-A Dedicated sighting vessel (<i>Yushin-Mar</i> No.2 , <i>Yushin-Mar</i> No.3) (2023/2024)	Southern Ocean	Blue whale	2024	Area IVW	8
		Fin whale			9
		Sei whale			3
		Antarctic minke whale			3
		Humpback whale			24
		Southern right whale			4
IWC-POWER Dedicated Sighting vessel (<i>Yushin-Mar</i> No.2) (2023)	Pacific Ocean - North	Blue whale	2023	Eastern North Pacific	4
		Fin whale			8
		Sei whale			7
North Pacific Dedicated Sighting vessel in spring and autumn (<i>Yushin-Mar</i> , <i>Yushin-Mar</i> No.2 and <i>Kaiyo-Mar</i> No.7) (2023)	Pacific Ocean - North	N.P. right whale	2023	Western North Pacific	1
		Blue whale			4
		Fin whale			27
		Sei whale			47
		Common minke whale			1
Abashiri coastal tagging and biopsy survey (<i>Chipashiri</i>)(2023)	Sea of Okhotsk	Fin whale	2023	Off Abashiri	1

4. Direct catches of cetaceans

	Large Area	Species	Year	Local Area	Total Landed	No. of animals examined	No. of research items	Type of Catch
Factory ship type whaling (2023)	Pacific Ocean - North	Sei whale	2023	Western North Pacific	24	24	26	Commercial whaling
		Bryde's whale			187	187	26	
Coastal base type whaling (Ayukawa landstation) (2023)	Pacific Ocean - North	Common minke whale	2023	Off Japanese coast	4	4	27	Commercial whaling
Coastal base type whaling (Hachinohe landstation) (2023)	Pacific Ocean - North	Common minke whale	2023	Off Japanese coast	32	32	27	Commercial whaling
Coastal base type whaling (Abashiri landstation) (2023)	Pacific Ocean - North	Common minke whale	2023	Off Japanese coast	16	16	27	Commercial whaling
Coastal base type whaling (Kushiro landstation) (2023)	Pacific Ocean - North	Common minke whale	2023	Off Japanese coast	31	31	27	Commercial whaling

5. Fisheries bycatches of cetaceans

Species	No. of animals	Location ¹⁾	Fate ²⁾	Gear ³⁾	Target fish species ⁴⁾	Source or contact
Common minke whale	3	Hokkaido	K	FPN	NA	FAJ
	3	Aomori	K	FPN		
	6	Iwate	K	FPN		
	3	Miyagi	K	FPN		
	1	Niigata	K	FPN		
	5	Toyama	K	FPN		
	6	Ishikawa	K	FPN		
	2	Kyoto	K	FPN		
	2	Mie	K	FPN		
	3	Wakayama	K	FPN		
	1	Shimane	K	FPN		
	1	Yamaguchi	K	FPN		
	1	Oita	K	FPN		
	3	Nagasaki	K	FPN		
	4	Miyazaki	K	FPN		
	1	Kagoshima	K	FPN		
Fin whale	1	Miyagi	K	FPN		
	1	Ishikawa	K	FPN		
Sei whale	1	Wakayama	R	FPN		
Bryde's whale	1	Kochi	K	FPN		
N.P. right whale	1	Chiba	R	FPN		
Humpback whale	1	Wakayama	R	FPN		

1) Recorded at the place of fishing gears.

2) Fate of whale: D = discarded dead or seriously injured, K = kept for sale or specimen, R = released alive

3) Described using "FAO FISHING DESCRIPTION AND CODES", that is, stationary uncovered pound nets (FPN), set gillnets (GNS) and miscellaneous gear (MIS).

4) Target fish species: NA = not available

6. Stranding of cetaceans

Species	No. strandings	Prefecture	Source or contact
Common minke whale	2	Hokkaido	FAJ
	1	Aomori	
	1	Chiba	
Fin whale	1	Miyagi	
	1	Tokyo	
Sei whale	1	Nagasaki	
Bryde's whale	1	Chiba	
Humpback whale	1	Hokkaido	
	4	Chiba	
	1	Kochi	
	1	Okinawa	
Sperm whale	1	Aomori	
	1	Miyagi	
	1	Fukushima	
	1	Ibaraki	
	1	Osaka	
	2	Okinawa	
Unidentified large whale	1	Yamaguchi	

7. Publications

- Best, P.B., Ohsumi, S., Kato, H. and Donovan, G.P. 2024. The SOWER programme in the Antarctic: Background, aims and objectives. *J. Cetacean Res. Manage.* (special issue) 4: 1–11.
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- Katsumata, T. and Yoshida, T. 2023. Development progress of a long-range vertical takeoff and landing UAV for the improvement of ship-based cetacean sighting surveys. *Cetacean Population Studies* 4: 45–47.
- Murase, H., Matsuoka, K. and Watanabe, K. 2023. Effect of sea surface temperature on the distribution of common minke whales off southeastern Hokkaido, Japan, between 2002 and 2006, with notes on the formation of Pacific saury fishing grounds. *Cetacean Population Studies* 4: 7–18.
- Nakamura, G., Al-Zaidan, A., Behbehani, M. and Kato, H. 2023. Preliminary report on the cranial

- measurements of a Bryde's whale stranded in Failaka Island, Kuwait in 2014. *Cetacean Population Studies* 4: 21–26.
- Pastene, L.A. 2024. A review of biopsy sampling experiments and studies of stock structure, phylogeny and taxonomy of large whales based on samples obtained on SOWER cruises. *J. Cetacean Res. Manage.* (special issue) 4: 43–62.
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- Sekine, A., Yasunaga, G., Kumamoto, S., Fujibayashi, S., Munirah, I., Bai, L., Tani, T., Sugano, E., Tomita, H., Ozaki, T., Kiyono, T., Inoue-Murayama, M. and Fukuda, T. 2023. Characterization of common minke whale (*Balaenoptera acutorostrata*) cell lines immortalized with the expression of cell cycle regulators. *Advanced Biology*: e2300227.
- Taguchi, M., Goto, M., Matsuoka, K., Tiedemann, R. and Pastene, L.A. 2023. Population genetic structure of Bryde's whales (*Balaenoptera brydei*) on the central and western North Pacific feeding grounds. *Can. J. Fish. Aquat. Sci* 80: 142–155.
- Yasunaga, G., Inoue, S., Bando, T., Hakamada, T. and Fujise, Y. 2023. Aspartic acid enantiomer quantification using ultraperformance liquid chromatography–tandem mass spectroscopy combined with deuterium-chloride hydrolysis to improve age estimation in Antarctic minke whale *Balaenoptera bonaerensis*. *Marine Mammal Science* 39 (2): 368–386.
- Yasunaga, G., Inoue, S., Bando, T., Hakamada, T. and Fujise, Y. 2023. Yasunaga *et al.* (2022) meets the ethics code of Marine Mammal Science, and the journal's decision to publish the paper is correct. *Marine Mammal Science* 39 (2): 709–711.