

Japan. Progress report on small cetacean research, April 2013 to March 2014, with statistical data for the calendar year 2013

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This report summarizes small cetacean fisheries in 2013 as well as researches conducted during the period from April 2013 to March 2014 by the National Research Institute of Far Seas Fisheries (hereafter NRIFSF) of the Fisheries Research Agency of Japan (hereafter FRA) and the Fisheries Agency of the Ministry of Agriculture, Forestry and Fisheries, the Government of Japan (hereafter FAJ) with the cooperation of other related organizations. This report covers information on small cetaceans which is not included in the “Japan. Progress report on cetacean research, April 2013 to March 2014, with statistical data for the calendar year 2013” (submitted to the 65b IWC/SC meeting). FAJ considers management of small cetaceans is outside the framework of the International Convention for the Regulation of Whaling.

1. SPECIES AND STOCKS STUDIED

Common name	Scientific name	Area/stock(s)	Items referred to
Dall's porpoise	<i>Phocoenoides dalli</i>	Off Pacific coast, and Sea of Japan	2.1.1, 4.2, 5.1, 5.3, 8.1, 8.2
Finless porpoise	<i>Neophocaena phocaenoides</i>	Coastal waters of Japan	2.1.1, 2.2, 5.2.2, 5.3, 8.1, 8.2
Pacific white-sided dolphin	<i>Lagenorhynchus obliquidens</i>	Off Pacific coast, and Sea of Japan	2.1.1, 2.1.2, 3.1.3, 4.1, 4.2, 4.4, 5.1, 5.2.2, 5.3, 8.2
Striped dolphin	<i>Stenella coeruleoalba</i>	Western North Pacific	2.1.2, 4.2, 4.4, 5.1, 5.3
Pantropical spotted dolphin	<i>Stenella attenuata</i>	Off Pacific coast	2.1.2, 4.2, 5.1, 5.2.2, 5.3
Bottlenose dolphin	<i>Tursiops truncatus</i>	Off Pacific coast, and East China Sea	4.2, 4.4, 5.1, 5.3
Risso's dolphin	<i>Grampus griseus</i>	Western North Pacific	2.1.1, 2.1.2, 4.2, 4.4, 5.1, 5.3
Short-finned pilot whale	<i>Globicephala macrorhynchus</i>	Western North Pacific, and East China Sea	2.1.2, 4.2, 4.4, 5.1, 5.3
False killer whale	<i>Pseudorca crassidens</i>	Off Pacific coast and East China Sea	2.1.2, 4.4, 5.1
Killer whale	<i>Orcinus orca</i>	Coastal waters of Japan	2.1.1, 2.1.2, 8.1
Baird's beaked whale	<i>Berardius bairdii</i>	Off Pacific coast, Sea of Japan and Okhotsk Sea	2.1.1, 2.1.2, 4.2, 4.4, 5.1, 5.3, 8.1
Additional species	-	Around Japan	5.2, 5.3

2. SIGHTINGS DATA

2.1 Field work

2.1.1 Systematic

The NRIFSF and FAJ conducted a total of three dedicated shipboard sighting surveys using research vessels in the North Pacific. All of the vessels are equipped with a top barrel. During these cruises, the following provisional numbers of sightings of small cetaceans were observed. The sightings of large cetaceans were listed in SC/65b/Japan /Progress report submitted to the 65b IWC/SC meeting.

Table 1. Sightings of small cetaceans by dedicated shipboard surveys during the period from April 2013 to March 2014.

Species	Date	Area	No. of sightings	Contact institute
<i>dalli</i> -type Dall's porpoise	16/05/13-24/06/13	Sea of Japan, western North Pacific	54	NRIFSF
	17/09/13-16/10/13	Western North Pacific (off Hokkaido)	15	
<i>truei</i> -type Dall's porpoise	16/05/13-24/06/13	Sea of Japan, western North Pacific	1	
Pacific white-sided dolphin	16/05/13-24/06/13	Sea of Japan, western North Pacific	97	
	17/09/13-16/10/13	Western North Pacific (off Hokkaido)	14	
	20/01/14-28/02/14	Sea of Japan	8	
Killer whale	17/09/13-16/10/13	Western North Pacific (off Hokkaido)	2	
Baird's beaked whale	16/05/13-24/06/13	Sea of Japan, western North Pacific	8	
	17/09/13-16/10/13	Western North Pacific (off Hokkaido)	7	
Risso's dolphin	16/05/13-24/06/13	Sea of Japan, western North Pacific	2	

No. of sightings indicates number of schools sighted. All sightings were made by the following three shipboard surveys.

- 1) Sighting and tagging survey for Pacific white-sided dolphins in spring season, using the research vessel *Kaiyo-maru No.8*. Research period was from 16 May to 24 June 2013.
- 2) Sighting and satellite tagging survey for common minke whales, using the research vessel *Shonan-maru No.2*. Research period was from 17 September to 16 October 2013.
- 3) Sighting and tagging survey for Pacific white-sided dolphins in winter season, using the research vessel *Kaiyo-maru No.8*. Research period was from 20 January to 28 February 2014.

In cooperation with the Whale Watching Association in Tosa Bay (WATB), the NRIFSF conducted a sighting survey for Bryde's whales in the coastal waters off Kochi in July 2013, using a total of 12 whale watching boats belong to the WATB. The boats (5 -10t) were without top barrels and excluded from the above table, but employed as sighting survey vessels in local coastal waters. The survey lasted 6 days in July, and Toshiya Kishiro (NRIFSF), five research assistants and 12 fishermen members of WATB acted as the researchers on board. Besides Bryde's whale sightings, a total of eight schools (104 animals) of Risso's dolphins, one school (100 animals) of bottlenose dolphins, and four schools (165 animals) of long-beaked common dolphins were sighted.

Aerial sighting surveys for cetaceans migrating to Japanese coastal waters were conducted to obtain information on their distribution, using a small airplane (with twin engine and bubble window). Sendai Bay and coastal waters of Japan Sea were surveyed on 14 and 15 May 2013, respectively. Tomio Miyashita (NRIFSF), Kishiro, and Hideyoshi Yoshida (NRIFSF) searched the sea surface for cetaceans, from the plane flying at 120 knots and 700-1000 feet in altitude. They surveyed 413.0 nautical miles and encountered 2 schools (6 individuals) of Dall's porpoises and a school (2) of finless porpoises in Sendai Bay and fled 290 nautical miles and found a school (15 animals) of unidentified dolphin (probably Pacific white-sided dolphin) in coastal waters of Japan Sea.

A whale sighting and environmental survey was conducted in the western North Pacific from 24 July to 22 August 2014. The research vessel, *Shunyo Maru* (887 GT), was engaged in the survey. Seven researchers including Hiroto Murase (NRIFSF) participated in the survey. Sightings of small cetaceans were recorded during the survey although the main purpose was observation of underwater behaviour of large whales. Eight identified species of small cetaceans were sighted during the survey: 1 school (5 individuals) of Dall's porpoises (Dalli

type), 5 schools (23 individuals) of Dall's porpoises (unidentified type), 2 schools (55 individuals) of common dolphins, 2 schools (35 individuals) of short finned pilot whales (southern form), 6 schools (138 individuals) of Risso's dolphins, 5 schools (535 individuals) of Pacific white sided dolphins, 4 schools (440 individuals) of northern right whale dolphins and 1 school (2 individuals) of Cuvier's beaked whales. Oceanographic observations using a CTD, biological sampling using a trawl and plankton nets, data recording by a quantitative echosounder and seabird sighting survey were also carried out in the survey.

2.1.2 Opportunistic, platforms of opportunity

Opportunistic sighting data have been collected during small-type whaling and dolphin fishery operations. They mainly consist of sightings of target species within the fishing grounds (e.g. Baird's beaked whales, southern form short-finned pilot and false killer whales, Risso's, bottlenose, striped, spotted and pacific white-sided dolphins).

During the JARPN II coastal component off Kushiro, northeast Japan conducted from September to October 2013, sightings of 7 schools (18 animals) of Baird's beaked whales and of 29 schools (135 animals) of killer whales were obtained by the small-type whaling vessels.

2.2 Analyses/development of techniques

Yu Kanaji (NRIFSF) forwarded analyses on spatial distribution of small odontocetes using long-term sighting data.

Yoshida and N. Ogawa (Tokyo University of Marine Science and Technology, hereafter TUMST) conducted analyses on abundance of finless porpoises in Japanese coastal waters, using sighting data from past aerial surveys.

3. MARKING DATA

3.1 Field work

3.1.1 Natural marking data

Natural marking was not applied.

3.1.2 Artificial marking data

Artificial marking was not applied.

3.1.3 Telemetry data

Shingo Minamikawa (NRIFSF) deployed pop-up archival transmitting (PAT) tags (MK10-PAT, Wildlife Computers) on a total of 7 free-swimming Pacific white-sided dolphins in the eastern part of the sea of Japan and western North Pacific in May and June. Six tags popped up and the one which was moved from the sea of Japan to Pacific was retrieved. The lengths of tagging period were from 2 to 28 days. Fine-scaled time-series data of depth, temperature and light level were obtained. Furthermore, PAT tags (Mini PAT, Wildlife Computers) were deployed on two Pacific white-sided dolphins in the western part of the sea of Japan in January, 2014. The lengths of tagging period of both tags were 29 days.

Minamikawa also attached ARGOS Platform Transmitting Tag (AM-S281A, Wildlife Computers) to the dorsal fin of a Pacific white-sided dolphin which had been driven in Taiji, Wakayama prefecture. The dolphin could be tracked for 29 days after release.

Table 2.1. PAT data of small cetaceans collected during the period from April 2013 to March 2014.

Species	Tag type	No. deployed	No. popped up	No. retrieved	Contact institute
Pacific white-sided dolphin	MK10-PAT	7	6	1	NRIFSF
	Mini-PAT	2	2	0	NRIFSF

Table 2.2. Telemetry data of small cetaceans collected during the period from April 2013 to March 2014.

Species	Tag type	No. deployed	Maximum time transmitting	Contact institute;
Pacific white-sided dolphin	Satellite (AM-S281A)	1	29 days	NRIFSF

3.2 Analyses/development of techniques

In order to comprehend the migration route of Pacific white-sided dolphins distributing around Japan, Minamikawa forwarded the analysis of the PAT tag data obtained from 8 dolphins in this year.

4. TISSUE/BIOLOGICAL SAMPLES COLLECTED

4.1 Biopsy samples

During the two shipboard surveys (Biopsy and satellite tracking cruises for Pacific white-sided dolphins in spring and winter periods), all the 21 biopsy samples were collected from the dolphins.

Table 3. Biopsy samples of small cetaceans collected during the period from April 2013 to March 2014.

Species	Area/stock	no. collected	Archived (Y/N)	No. analyzed	Total holdings	Contact institute
Pacific white-sided dolphin	Western North Pacific	7	Y	7	7	NRIFSF
	Sea of Japan	14	Y	14	14	

4.2 Samples from directed catches or bycatches

Samples of small cetaceans from direct catches collected during the period from April 2013 to March 2014 are shown in Table 4.

The national quota of Baird's beaked whales was 66 animals for small-type whaling. Fishing season was from 25 May to 26 June for land station in Hakodate on the Sea of Japan coast, 20 June to 28 August, and 5 to 25 November for land station in Wadoura on the Pacific coast, 20 June to 22 August for land station in Ayukawa on the Pacific coast, 24 August to 2 September, and 1 to 4 November for land station in Abashiri on the Okhotsk coast. A total of 62 whales (ten off Hakodate, four off Abashiri, 48 off the Pacific coast) were taken by five catcher boats (*Seiwa-maru*, *Kohei-maru* #8, *Taisho-maru* #28, *Katsu-maru* #7 and *Sumitomo-maru* #51). Kishiro organized the field data collection from the small-type whaling operations, and all the catches were examined and biological samples were taken by five researchers.

The national quota of northern form short-finned pilot whales for small-type whaling was 36 animals. Fishing season was set for two boats (*Kohei-maru* #8 and *Taisho-maru* #28) in the same periods of the operations for Baird's beaked whales, but no whales were taken.

The national quota of southern form short-finned pilot whales for small-type whaling was 36 animals with a fishing season from 1 May to 31 August. Two catcher boats (*Seiwa-maru*, and *Katsu-maru* #7) operated on land station in Taiji, and a total of 10 animals were taken. One researcher collected samples from all animals caught. The FAJ also set a national quota of twenty false killer whales for small-type whaling in Taiji in the same periods of the operations for southern form short-finned pilot whales, and one animal was taken by *Seiwa-maru*. In Taiji during 1 to 24 May, one researcher collected samples from the hand harpoon catches when they had the opportunity, including 44 bottlenose, 16 striped, two Pantropical spotted, and five Risso's dolphins.

Four researchers collected samples for life history and genetic studies from catches of drive fisheries in Taiji during operations through 11 November to 24 December 2013, and 6 January to 28 February 2014. Kishiro organized the field data collection from those fisheries. They examined a total of 883 animals composed of 14 southern form short-finned pilot whales, 439 striped, 154 bottlenose, 165 Risso's, 110 Pantropical spotted, and one Pacific white-sided dolphins.

Under contract with FRA and supervised by NRIFSF, sample collection for genetic studies of Dall's porpoises taken by hand harpoon fisheries in Iwate prefecture and landed on Yamada fish market was conduct by

the Iwate Fisheries Technology Center. Researchers recorded color type, sex and body length of 479 *truei*-type and 11 *dalli*-type Dall's porpoises, and collected DNA samples from 11 *dalli*-types in April 2013 and during December 2013 to February 2014.

Under contract with FRA and supervised by NRIFSF, the Tokai University collected stomach contents of 10 Baird's beaked whales taken by small-type whaling off Wadoura, and four southern form short-finned pilot whales, four Risso's, 24 bottlenose, and seven striped dolphins taken by hand harpoon fisheries and small-type whaling off Taiji, for feeding habit studies.

Okinawa Prefectural Government collected teeth and skin samples as a part of supervision of the fishery, for southern form short-finned pilot whales, and bottlenose dolphins which were taken by hand harpoon fishery (crossbow fishery) in Okinawa in 2013 season. Those samples will be sent to NRIFSF for age determination and genetic examinations.

Sample collection of small cetaceans from bycatches by the NRIFSF was not conducted during the period from April 2013 to March 2014.

Table 4. Samples of small cetaceans from direct catches collected during the period from April 2013 to March 2014.

Species	Area	Tissue type(s)	No. collected	Archived (Y/N)	Contact Institute
<i>dalli</i> -type Dall's porpoise	Western North Pacific	Sk and Mu	11	Y	NIIFSF
Baird's beaked whale	Western North Pacific	To, Ma, O, U, Te, E, V, Sk, and St	48	Y	NRIFSF
	Okhotsk Sea	To, Ma, O, U, Te, E, V, Sk	4	Y	NRIFSF
	Sea of Japan	To, Ma, O, U, Te, E, V, Sk	10	Y	NRIFSF
Southern form short-finned pilot whale	Western North Pacific	To, Ma, O, U, Te, E, V, Sk, and St	24	Y	NRIFSF
Risso's dolphin	Western North Pacific	To, Ma, O, U, Te, E, V, Sk, and St	170	Y	NRIFSF
Bottlenose dolphin	Western North Pacific	To, Ma, O, U, Te, E, V, Sk, and (St)	198	Y	NRIFSF
Striped dolphin	Western North Pacific	To, Ma, O, U, Te, E, V, Sk, and St	456	Y	NRIFSF
Pantropical spotted dolphin	Western North Pacific	To, Ma, O, U, Te, Sk, and St	112	Y	NRIFSF
Pacific white-sided dolphin	Western North Pacific	To, Ma, O, U, and Sk	1	Y	NRIFSF

E: epididymis, Ma: mammary gland, Mu: muscle, O: ovaries, Sk: skin, St: stomach content, Te: testis, To: tooth, U: uterine horn, V: vertebral epiphysis.

4.3 Samples from stranded animals

Sample collection from stranded small cetaceans by the NRIFSF was not conducted during the period from April 2013 to March 2014.

4.4 Analyses/development of techniques

Kishiro and Kozue Ishida (TUMST) examined teeth of 31 Baird's beaked whales taken by small-type whaling in the Pacific coast, and continued to develop the techniques applying the frozen microtome method for age determination of Baird's beaked whales.

Osamu Hoson (NRIFSF) examined histological samples of testis of a total of 197 animals (southern form short-finned pilot whales, Risso's, striped, and bottlenose dolphins) taken by drive fishery in Taiji for determination of the sexual maturity. Hoson also prepared sections for age determination using teeth of a total of 168 animals taken by drive fishery in Taiji.

Hikari Maeda (NRIFSF) prepared sections for age determination using teeth of a total of 93 animals (southern form short-finned pilot whales, false killer whales and bottlenose dolphins) taken by hand harpoon fishery in Okinawa.

Yoshida carried forward the mtDNA sequence analysis in order to accumulate information on southern form short-finned pilot whale stock structure around Japan, using tissue samples from 83 animals. Yoshida also conducted stock structure study of Pacific white-sided dolphins, using mtDNA sequences obtained from 156 biopsy samples.

Kanaji analysed carbon and nitrogen isotope ratio ($^{13}\text{C}/^{12}\text{C}$ and $^{15}\text{N}/^{14}\text{N}$) of 50 individuals of striped dolphin using skin biopsy samples collected from ship-based surveys.

Hiroshi Ohizumi (Tokai University) finished developing a simple method for monitoring of stomach contents of Baird's beaked whale caught in Wadoura coastal whaling station. Survey performance of monitoring method was tested by comparing descriptions from *in situ* observation at whaling station and results of collected stomach contents analysis for a total of 34 Baird's beaked whales caught from 2011 to 2013. Ohizumi also continued to survey of feeding habits of smaller toothed whales caught in Taiji by small-type whaling and hand harpoon fishery. Stomach contents collected in May 2013 were analysed for four southern form short-finned pilot whales, four Risso's dolphins, seven striped dolphins, and 24 bottlenose dolphin. Numbers of collecting those samples were also referred in Item 4.2.

5. STATISTICS FOR SMALL CETACEANS

5.1 For the calendar year 2013

For small-type whaling, the target species, fishing season, quota, catcher boats and actual catches are the same as shown in section 4.2.

For dolphin fisheries, management season has been started on 1 August and closed on 31 July for Dall's porpoise fisheries, and from 1 October to 30 September for other species, since 1996. The management season for fisheries in Wakayama Prefecture has been started on 1 September to 31 August, since 2006. As has been the case in previous years, the statistics, following the guideline for IWC national progress report, cover catches from 1 January to 31 December 2013, while FAJ manages dolphin fisheries by their own yearly season aforementioned. Thus, in some cases, the calendar yearly catch may exceed the seasonal (yearly) catch in appearance, but the actual seasonal catch is well below the allocated catch quota. Direct small cetacean catches are given in Table 5 in this section by prefecture and type of fisheries. The data have been collected by the International Division of the FAJ based on reports from the prefectural governments.

Catch quota for dolphin fisheries for the 2013/2014 season was revised from the last season, that is, 6,837 *dalli*-type Dall's porpoise, 6,656 *truei*-type Dall's porpoises, 487 Risso's dolphins, 673 bottlenose dolphins, 606 spotted dolphins, 595 striped dolphins, and 196 southern form short-finned pilot whales. Catch quota for false killer whales (100 animals) and Pacific white-sided dolphins (360 animals) remained constant since 2007/2008 season.

Corresponding operational months by prefecture in 2013 were as follows: hand harpoon fishery for porpoises and dolphins was permitted for nine months (1 January to 31 August and 1-31 December) in Okinawa prefecture; eight months (1 January to 31 August) in Wakayama; six months (1 January to 30 April and 1 November to 31 December) in Aomori, Miyagi, Iwate and Chiba; and 4.5 months (1 May to 15 June and 1 August to 31 October) in Hokkaido. Although the hand harpoon fisheries in Aomori, Miyagi, Iwate, and Hokkaido were extensively damaged by the great earthquake disaster occurred in March 2011, the fisheries could be gradually resumed since March 2012. Drive fishery was permitted for nine months in Wakayama (1 January to 31 May and 1 September to 31 December) and for seven months in Shizuoka (1 January to 31 March and 1 September to 31 December).

Table 5. Direct catch of small cetacean in 2013.

Species	Type of fishery	Prefecture ¹⁾	Total landed ²⁾
Baird's beaked whale	Small-type whaling	Hokkaido	14
		Miyagi	26
		Chiba	22
<i>dalli</i> -type Dall's porpoise	Hand harpoon	Iwate ³⁾	77
<i>truei</i> -type Dall's porpoise		Miyagi	18
		Iwate	1198
Pacific white-sided dolphin	Driving	Wakayama	39(29)
Striped dolphin	Hand harpoon	Wakayama	67
	Driving		498(1)
Pantropical spotted dolphin	Hand harpoon	Wakayama	4
	Driving		126(45)
Bottlenose dolphin	Hand harpoon	Wakayama	68
	Driving		190(84)
	Hand harpoon	Okinawa	3
Risso's dolphin	Hand harpoon	Wakayama	38
	Driving		298(12)
Southern form short-finned pilot whale	Small-type whaling	Wakayama	10
	Driving		88(1)
	Hand harpoon	Okinawa	47
False killer whale	Small-type whaling	Wakayama	1

1) Catches by small-type whaling and drive fishery were recorded at the place of landing of products. Catches by hand harpoon fishery were recorded at the place of registration of vessels.

2) Statistics of small-type whaling are based on reports of biologists and gunners. Those of other fisheries are based on reports of prefectural governments to the Fisheries Agency. They are a compilation of landing slips (hand harpoon fisheries in Iwate and Hokkaido) or reports from individual fishermen or fishery cooperative unions (other prefectures). In parentheses are numbers of live captured animals which are included into total catch.

3) Small portions of catches by hand harpoon fishery off Hokkaido were reported as meat by fishermen and thus have been converted into the number of *dalli*-type Dall's porpoises at 50kg/porpoise (c.f. Ishikawa et al. 1990) by respective prefectural governments.

5.2 Non-natural mortality for the calendar year 2013

5.2.1 Observed or reported ship strikes

We have no data collecting system for ship strike incidence of small cetaceans.

5.2.2 Fishery bycatch

Provisional figures for incidental mortality of small cetaceans (bycatch) by Japanese fisheries, by Prefecture in January-December 2013, are shown in Table 6. Species and figures are based on the reports of prefecture governments to the FAJ, which are reports from individual fishermen or fishery cooperative unions.

Table 6. Fishery bycatch of small cetaceans in 2013.

Species	No. of animals	Location ¹⁾	Fate ²⁾	Gear ³⁾	Target fish species ⁴⁾	Source or contact
Harbour porpoise	2	Hokkaido	R	FPN	NA	FAJ
	6		K			
	2		K	GNS		
Finless porpoise	5	Mie	D	GNS		
	1	Hiroshima	K			
	1	Yamaguchi	Unknown			
	1	Kagawa	Unknown			
	1	Nagasaki	K			
	1	Fukuoka	D or K			
	1		D or K	FPN		
	1	Kagoshima	K			
Pacific white-sided Dolphin	3	Aomori	R	FPN		
	2		K(alive)			
	2	Ishikawa	K(alive)			
	1	Kyoto	K(alive)			
	7	Nagasaki	R			
	1		K(alive)			
Pantropical spotted dolphin	1	Kagawa	R	GNS		

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

5.3 Strandings of small cetaceans

Provisional figures for strandings of small cetaceans in Japan, for the period January-December 2013, are shown in Table 7. Species and figures are based on reports of prefecture governments to the FAJ, which are reports from individual fishermen, fishery cooperative associations or the general public. No. of post mortems in Table 7 indicated the number of dead animals when they stranded.

Table 7. Strandings of small cetaceans in 2013

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)
<i>dalli</i> -type Dall's porpoise	5	5	FAJ
Harbor porpoise	6	6	
Finless porpoise	115	114	
Pacific white-sided dolphin	14	13	
Northern right whale dolphin	1	1	
Striped dolphin	48	46	
Pantropical spotted dolphin	1	1	
Bottlenose dolphin	4	4	

Indo-Pacific bottlenose dolphin	2	2	FAJ
Long-beaked common dolphin	1	1	
Rough-toothed dolphin	4	4	
Risso's dolphin	8	8	
Melon-headed whale	47	37	
Northern form short-finned pilot whale	1	1	
Southern form short-finned pilot whale	1	1	
Baird's beaked whale	1	1	
Cuvier's beaked whale	1	1	
Blainville's beaked whale	1	1	
Stejneger's beaked whale	3	3	
Pygmy sperm whale	7	6	
Dwarf sperm whale	6	5	
Unidentified cetaceans	32	32	

In addition, the Institute of Cetacean Research (4-5 Toyomi, Chuo-ku, Tokyo 104-0055, Japan), and the National Science Museum (4-1-1, Amakubo, tsukuba, Ibaragi 305-0005, Japan) voluntarily collected relevant information on strandings.

5.4 Earlier years' statistics

There are no changes in earlier years' statistics.

6. OTHER STUDIES AND ANALYSES

No other studies or analyses on small cetaceans were conducted during the period from April 2013 to March 2014.

7. LITERATURE CITED

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8. PUBLICATION ON SMALL CETACEANS

8.1 Published or In Press' papers only

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8.2 Unpublished literature

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