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Technical Report-Note (not peer reviewed)

Satellite-monitored tracking of Antarctic minke and fin whales under the first JASS-A survey in the 2019/2020 austral summer season

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The Japanese Abundance and Stock structure Surveys in the Antarctic (JASS-A) commenced in the 2019/20 austral summer season. The main research objectives of JASS-A are 1) the study of the abundance and abundance trends of large whale species, and 2) the study of the distribution, movement and stock structure of large whale species (GOJ, 2019; Isoda *et al.*, this issue). One of the techniques proposed for the research on main objective 2) was satellite tagging.

Implantable satellite-monitored tags (SPOT6-type; Wildlife Computers, Redmond, Washington, USA) were used for tracking Antarctic minke and fin whales during the first JASS-A survey in the 2019/20 austral summer season on board of the research vessel *Yushin Maru* No.2 (YS2) (see Isoda *et al.*, this issue). When possible, skin biopsy samples for genetic analyses were obtained from the same satellite-tagged whales. The details of the platform and equipment for satellite-monitored tagging were described in Konishi and Isoda (2019) and Konishi *et al.* (2020).

During the first JASS-A survey, the tag deployments were conducted from the end of January to early February 2020 in the western part of the International Whaling Commission (IWC) Management Area III, in the longitudinal sector between 000°E and 015°E. The tags were successfully deployed on eight Antarctic minke and ten fin whales (Table 1). Tracking information was received from five Antarctic minke (Figure 1) and nine fin (Figure 2) whales. In the case of Antarctic minke whale PTT ID 181817, which was tagged on 2 February 2020, track-

Table 1
Summary of the satellite-monitored tagging for Antarctic minke and fin whales in the 2019/20 JASS-A survey.

No.	Date of deployment	Species	School size	Latitude (°S)	Longitude (°E)	Estimated body length (m)*	PTT ID	Biopsy samples
1	2020/1/21	Fin	1	67.3	11.0	23.1	66629	Y
2	2020/1/24	Fin	2	61.6	7.6	20.1	66641	N
3	2020/1/24	Fin	1	61.2	7.3	19.7	66628	Y
4	2020/1/26	Fin	4	61.5	5.9	19.4	181812	Y
5	2020/1/26	Fin	3	61.9	5.7	20.5	181818	Y
6	2020/1/27	Fin	5	64.4	4.2	19.5	181816	N
7	2020/1/30	Ant. Minke	2	68.8	12.8	7.6	181813	Y
8	2020/2/1	Ant. Minke	1	68.7	13.7	7.5	181811	Y
9	2020/2/1	Ant. Minke	1	68.5	14.1	7.9	181821	Y
10	2020/2/1	Fin	2	68.4	14.3	19.6	181819	N
11	2020/2/1	Fin	6	68.4	14.5	20.1	181824	Y
12	2020/2/1	Fin	6	68.4	14.5	20.3	181820	Y
13	2020/2/2	Ant. Minke	2	68.5	14.6	7.6	181817	Y
14	2020/2/2	Ant. Minke	1	68.6	15.0	7.0	181815	Y
15	2020/2/2	Ant. Minke	1	68.5	14.5	6.2	181810	Y
16	2020/2/3	Ant. Minke	1	68.4	13.5	6.4	66627	Y
17	2020/2/4	Ant. Minke	1	65.8	13.4	5.7	181822	Y
18	2020/2/6	Fin	3	63.0	15.1	18.8	181814	Y

*Body lengths of whales were estimated by the researcher on board.
Tagging experiments in No. 11 and 12 were from the same school.

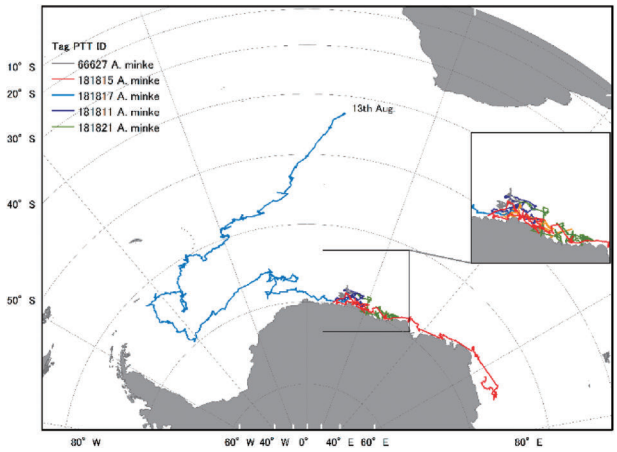

Figure 1. Tracking lines of five Antarctic minke whales tagged during the first JASS-A survey, as of 13th August 2020. The lines are plotted using all ARGOS Location Classes.

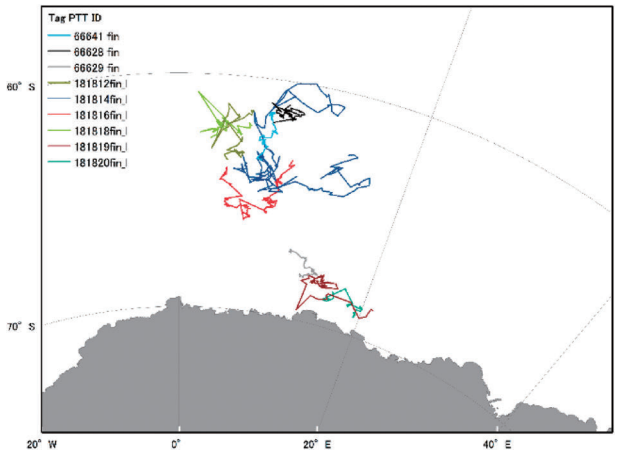

Figure 2. Tracking lines of nine fin whales tagged during the first JASS-A survey. The lines are plotted using all ARGOS Location Classes.

ing was still ongoing as of mid-August 2020. This whale showed a long longitudinal movement before starting migration to the north (Figure 1).

These tracking data will be analyzed in conjunction with previous data obtained under NEWREP-A to investigate distribution, movement and stock structures of these whales under main objective 2) of JASS-A.

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