Sighting and biopsy sampling survey plan for common minke whales in the Okhotsk Sea in 2010

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ABSTRACT

Using one research vessel, *Shonan-maru No.2*, the sighting and biopsy skin sampling survey for common minke whales will be conducted in the Okhotsk Sea including the Russian EEZ in 2010 summer season when the Russian permission is issued. Main objective is to estimate the mixing rate of the J and O stocks of common minke whales in the Okhotsk Sea. Biopsy skin samples will be collected and genetic analyses for stock identification using the samples will be completed on board within the Russian waters (i.e. without bringing the samples out of the Russian waters) to avoid confliction with Russian domestic laws and regulations related to CITES. The period of survey is from 13 July to 26 August in 2010. Observation of the cookie-cutter sharks' scars on body surface of common minke whales will be conducted. Photo-identification of large cetaceans such as North Pacific right whales will be also conducted.

BACKGROUND

In 2009, Japanese biopsy sampling survey for common minke whales was conducted in the Okhotsk Sea including the Russian EEZ, in summer season from 18 July to 31 August (Yoshida, et al., 2009). During this cruise, valuable data and samples including five biopsy skin samples and data on the body surface scars by the cookie-cutter sharks were collected for examine the mixing rate of J and O stocks of common minke whales (Miyashita, et al., 2009), but unfortunately, all the biopsy samples taken could not be brought out from the Russian waters because of discrepancies in domestic legal status of common minke whale related to CITES as well as in domestic legal systems regarding international trade, between Russia and Japan (Yoshida, et al., 2009).

The mixing rate of the J and O stocks of common minke whales in the Okhotsk Sea (especially in sub-area 12) is one of the most important information required in considering the migration route and stock structures of the North Pacific common minke whales (IWC, 2009). Thus, we are trying again to get permission from the Russian Federation to enter these waters and conduct sighting and biopsy sampling survey in 2010 summer. When the permission is issued, we will conduct the following plan of the survey in this area.

RSEARCH PLAN

Research vessel

The research vessel is *Shonan-maru No.2* (712GT, 4,045KW) (SM2) which has been used for the last year survey (Yoshida, et al., 2009). Vessel is equipped with a top barrel and IO platform. Number of crew on vessel is 18. The vessel is chartered by the Fisheries Research Agency.

Scientists on board

Shigeru Noji and another scientist (not determined on 30 April)

Schedule

13 July	leave Shiogama, Miyagi Prefecture, for the first half of the cruise
3 August	arrive Abashiri, Hokkaido, for refueling
5 August	leave Abashiri for the last half of the cruise
26 August	arrive Shiogama, Miyagi Prefecture

Research area and track line

Research area will be set in the Okhotsk Sea including the Russian EEZ, though some part of the area will be excluded following the Russian permission (e.g., the Russian territorial waters).The pre-determined track line was tentatively determined as shown in Figs. 1. A total research distance will be 2,110 n.miles.

Sighting activity

The restricted closing mode survey will be carried out, in which closing will be made only for the targeted cetacean species including common minke whales and North Pacific right whales. Two observers on the top barrel of the vessel conduct searching by naked eyes. Species identification will be conducted using binocular. Two observers on the upper-bridge also search for cetaceans and record sighting information. The survey is to be conducted from 6:00 a.m. to 6:00 p.m. basically when the weather conditions are suitable for observations: visibility better than 1.5 n.miles and the wind speed less than 7.5m/s. The vessel speed is planed to be 11.5 knots with slight adjustment to avoid vibration of vessel.

Experiments

Vessel will try skin sampling from all common minke whales sighted during the survey, using Larsen gun if the Russian permission will be issued. Observation of cookie-cutter shark scars on common minke whales will be also conducted, using digital photographs. When large cetaceans such as gray or North Pacific right whales are found, the photographs are also to be taken for the photo-identification.

Data analysis

Genetic analysis for stock identification using the collected skin samples will be completed on board within the Russian waters. The RFLP analysis of the mitochondrial DNA control region will be tried. After the analysis, the skin samples will not be retained on board until the research vessel leave the Russian waters so that the samples will not be brought out of there, to avoid confliction with Russian domestic laws and regulations related to CITES.

REFERENCES

International whaling commission, 2009. Repot of the scientific committee. J. Cetacean Res. Manage. 11(SUPPL.), 2009:1-74.

Miyashita, T., Goto, M., Yoshida, H. and Kanaji, Y. 2010. Estimation of mixing proportion of 0/J common minke whales in sub-area 12 using cookiecutter shark scar as ecological marker. Document SC/62/NPM11 submitted to the present IWC Scientific Committee, 5pp.

Yoshida, H., Kanaji, Y., Miyashita, T., Uoya, T., and Furukawa, H. 2010. Cruise report of the common minke whale biopsy sampling survey in the Okhotsk sea, summer 2009. Document SC/62/NPM22 submitted to the present IWC Scientific Committee, 9pp.

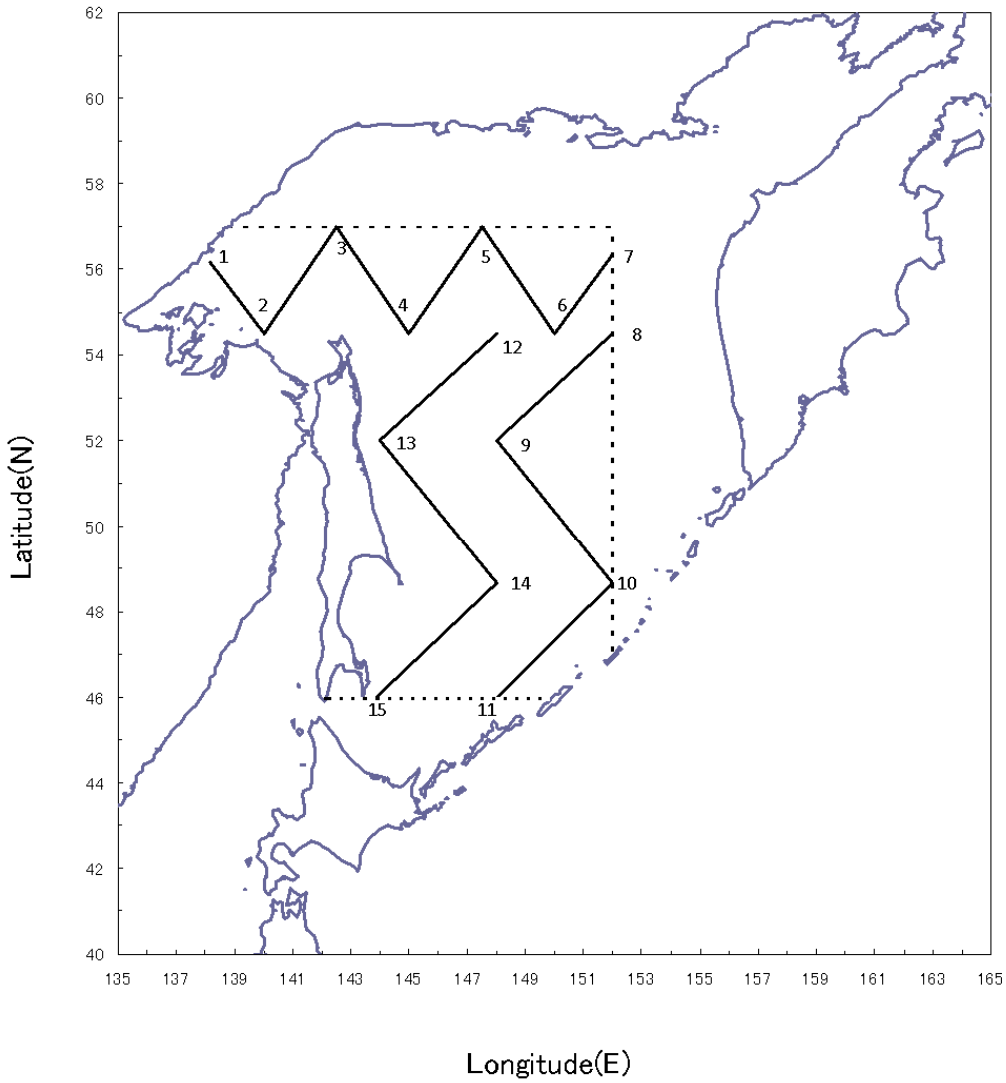

Fig. 1.Research area (dotted line) and pre-determined track line for *Shonan-maru No.2*.