



**MEDIA RELEASE**

7 November 2005

## **JARPA II\* Research Fleet Departs for the Antarctic**

(\*The Second Phase of the Whale Research Program under Special Permit in the Antarctic)

### **1. JARPAII Outline**

#### **(1) Background**

The Antarctic Ocean is the most productive ocean in the world, and hence the largest source of marine living resources including cetaceans. Commercial whaling started in 1904, but over-hunting by several countries including the UK, Norway, Netherlands, USSR and Japan eventually led to depletion of the main cetacean resources such as blue whale and other larger species. In 1982, the International Whaling Commission (IWC) adopted the moratorium on commercial whaling. But, even during that time, the Antarctic minke whale resource showed a consistent high level of abundance. In addition, in recent years, scientific evidence has ascertained that the resources of other whale species such as fin and humpback whales have made appreciable recoveries.

When the moratorium was first introduced, not even the scientific knowledge on Antarctic minke whale resources was sufficient, and that was one of the reasons for its adoption. In order to resolve these scientific uncertainties surrounding Antarctic whale resources, the Government of Japan resolved then to engage in the systematic collection of scientific data on Antarctic minke whale, and decided to launch the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA), with the purpose of paving the way to achieve sustainable use of whale resources. With the authorization and support of the Government, the Institute of Cetacean Research (ICR) started JARPA on 1987/88 and executed the long-term program with duration of 18 years including a two-year feasibility study. JARPA ended in the spring of 2005 with great success.

The results of JARPA for 17 years were discussed and examined in depth together with international experts and a representative from the IWC Scientific Committee during a review meeting hosted by Japan in January 2005.

The JARPA research program has contributed greatly to the advancement of scientific knowledge of whale resources in the Antarctic. JARPA made clear that Antarctic minke whale and common minke whale are two separate species. JARPA provided a wide variety of information on biological parameters such as the natural mortality coefficient and changes over time in the age at maturity as well as narrowing down the parameters of relevance for stock management.

The research program also elucidated that there are two Antarctic minke whale stocks in the research area but that the geographical boundaries between these stocks are different from those used by IWC to manage baleen whale species in the Antarctic. Further, JARPA found that pollutant concentration in whale tissues, such as heavy metals and PCBs, was extremely low, confirming the view that the Antarctic Ocean environment is one of the cleanest in the world. JARPA has thus successfully obtained data related to the initially proposed objectives. It is expected that the results will greatly contribute to the rational management of the Antarctic minke whale stocks.

Many baleen whales consume a sole key species, Antarctic krill, in the Antarctic ecosystem and results from JARPA are consistent with the behavior to be expected of baleen whale species competing for this dominant single food source. In view of the above, there is a need to monitor and

gather information on stock structures of the main whale species comprising the Antarctic marine ecosystem as well as interactions among them for a better interpretation of the abundance estimates and trends, for estimation of biological parameters, in order to elucidate their role in the Antarctic ecosystem.

Based on these considerations, the Government of Japan decided to launch a new comprehensive study under the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II), combining lethal and non-lethal methods. From 2005/06, the Institute of Cetacean Research will continue conducting the research under the authorization and support of the Government of Japan.

JARPA II will focus on Antarctic minke whale and the larger species, humpback and fin whales. During the two years of feasibility study (2005/06 and 2006/07), only Antarctic minke and fin whales will be sampled (i.e. humpback whale will not be sampled during the feasibility study). Practicability and suitability of sighting method for the expanded research area and sampling method for increased sample number and species will be examined in the feasibility studies, after which they will be improved and changed as necessary.

JARPA II incorporates an additional dedicated sighting vessel in order to fully perform the sighting survey component within the expanded research area.

## (2) Objectives

The main objectives of JARPA II are 1) Monitoring of the Antarctic ecosystem, 2) Modeling competition among whale species and future management objectives, 3) Elucidation of temporal and spatial changes in stock structure and 4) Improving the management procedure for the Antarctic minke whale stocks.

## 2. 2005/06 Cruise Outline

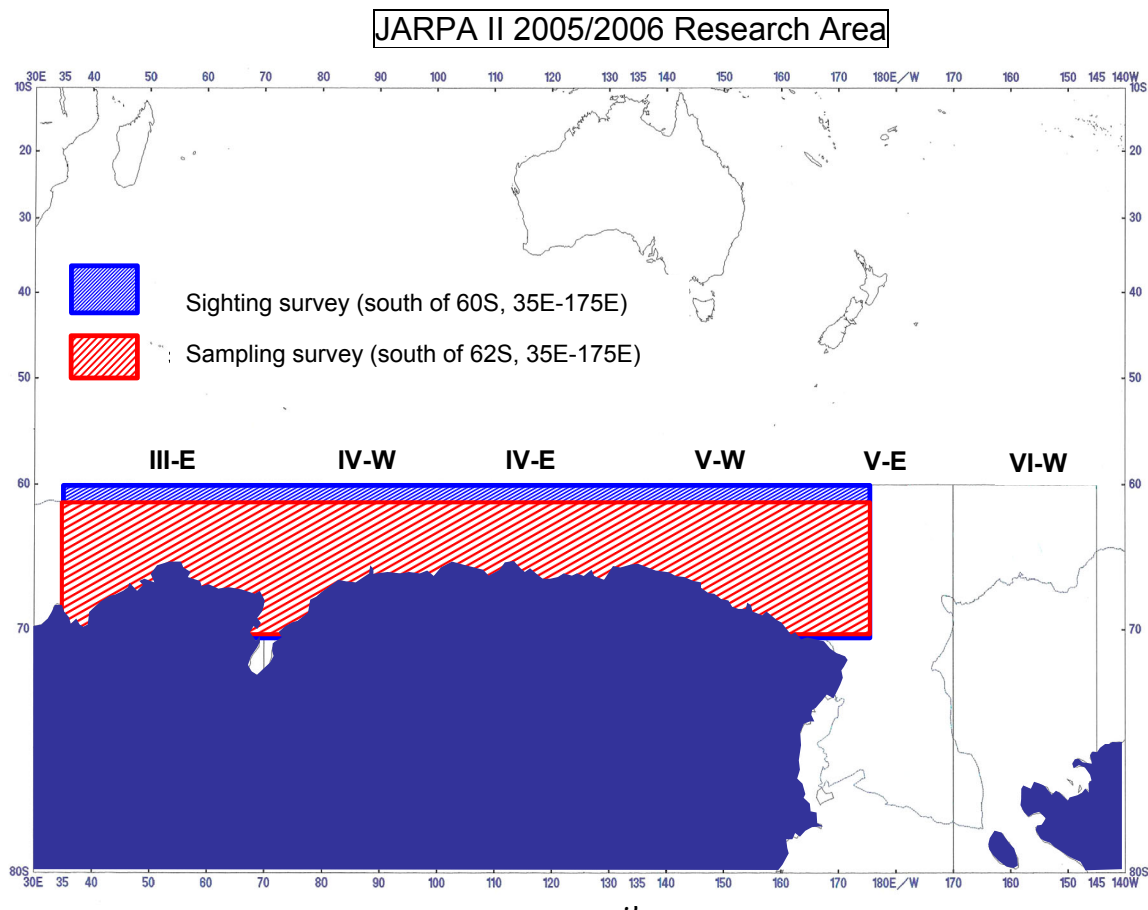
- (1) Research period: 8 November 2005 to mid-April 2006
- (2) Research area: Eastern part of Area III, Area IV, western part and a part of eastern part of Area V (South of 60°S, 35°E – 175°E)
- (3) Research crew: Research leader: Shigetoshi Nishiwaki (Director, Survey Division, ICR), with 15 scientists from the Institute of Cetacean Research
- (4) Research fleet and crew (Including an inspector from the Government and researchers):
- |                           |                    |               |                               |
|---------------------------|--------------------|---------------|-------------------------------|
| Research mother ship      | Nisshin Maru       | (8,030 tons   | Capt. D. Toyama; crew: 149)   |
| Sighting/sampling vessel  | Yushin Maru No. 2  | (747 tons,    | Capt. K. Matsuzaka; crew: 19) |
| “                         | Yushin Maru        | (720 tons,    | Capt. T. Miura; crew: 19)     |
| “                         | Kyo Maru No. 1     | (812.08 tons, | Capt. K. Hirose; crew: 22)    |
| Dedicated sighting vessel | Kyoshin Maru No. 2 | (372 tons,    | Capt. K. Takeshita; crew: 21) |
| “                         | Kaiko Maru         | (860.25 tons, | Capt. K. Minami; crew: 22)    |
|                           |                    |               | Total crew: 252               |
- (5) Sample size: Antarctic minke whale 850±10%  
Fin whale 10

## 3. Research items

Main purpose of JARPA II is to monitor the Antarctic ecosystem, and therefore its continuity with JARPA research is an important and critical factor. Because of this, the research methods for JARPA II are basically the same as the previous JARPA. The program involves both lethal and

non-lethal research techniques including the following:

- (1) Cetacean sighting record of large whale species including Antarctic minke whale  
Sighting position, species, number of individuals and schools, water temperature, sighting effort record.
- (2) Biological data and tissue samplings (Antarctic minke whale and fin whale)  
Collection of samples for analysis and determination of stock, age, maturity, reproductive status, nutritional status and components, pollutants, sexual hormones, parasites, etc.
- (3) Meteorological, oceanographic and environmental observations  
Monitoring of weather conditions, ice, water temperature (including vertical profile of water temperature and salinity with XCTD, XBT and CTD; monitoring of the epipelagic environment with EPCS) and other oceanographic and meteorological factors; marine debris survey and scientific ecosounder survey for distribution and abundance of food organisms.
- (4) Biopsy sampling  
Main target species: Blue whale, Southern right whale, pigmy right whale, fin whale, sei whale, Antarctic minke whale, humpback whale, sperm whale.
- (5) Photo identification by natural marks  
Target species: Blue whale, southern right whale and humpback whale.
- (6) Satellite tagging experiment  
Target species: Antarctic minke whale, blue whale, fin whale, humpback whale and Southern right whale.



Research Vessels participating in JARPA II 2005/2006 cruise



The research mother ship Nisshin Maru.



The sampling/sighting vessel Yushin Maru No. 2.



The sampling/sighting vessel Yushin Maru.



The sampling/sighting vessel Kyo Maru No. 1.



The dedicated sighting vessel Kyoshin Maru No. 2.

The dedicated sighting vessel Kaiko Maru will also participate in JARPA II.

(Reference)

International Convention for the Regulation of Whaling – Article VIII  
(Extract)

1. Notwithstanding anything contained in this Convention, any Contracting Government may grant to any of its nationals a special permit authorizing that national to kill, take, and treat whales for purposes of scientific research subject to such restrictions as to number and subject to such other conditions as the Contracting Government thinks fit, and the killing, taking and treating of whales in accordance with the provisions of this Article shall be exempt from the operation of this Convention.
2. Any whales taken under these special permits shall so far as practicable be processed and the proceeds shall be dealt with in accordance with the directions issued by the Government by which the permit was granted.