Proposed cruise plans of Japanese research vessels for salmon and marine mammals in the North Pacific Ocean, 1988

March, 1988

Fisheries Agency of Japan
## Proposed Cruise Plan of Japanese Research Vessels for Salmon and Marine Mammals in the North Pacific Ocean in 1988

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U.S. port call: Oshoro Maru : Dutch Harbor June 23 and July 2-5, Ketchikan July 22-27
Figure 1. Cruises of HOKUSHIN MARU, IWAKI MARU, and KAIUN MARU

Line D: HOKUSHIN MARU 6.1 (Kushiro) ~ 7.4 (Kushiro)
Line E: IWAKI MARU 6.1 (Onahama) ~ 7.15 (Kushiro)
Line F: KAIUN MARU 6.2 (Hachinohe) ~ 7.20 (Kushiro)

- Stations of gillnet operation
- Stations of gillnet duplicate operation (2 days)
Figure 2. Cruises of SHIN-RIASU MARU and HOKUHO MARU

Line G: SHIN-RIASU MARU 6.1 (Miyako) ~ 7.22 (Kushiro)
Line H: HOKUHO MARU 8.6 (Hakodate) ~ 8.4 (Kushiro)

- Stations of gillnet duplicate operation (2days)
- Stations of longline operation at sunrise and sunset
- Stations of longline duplicate operation at sunrise and sunset (2days)
Figure 3. Cruises of \textit{KANKI MARU NO. 58} and \textit{ETSUZAN MARU}

Line I: \textit{KANKI MARU NO. 58} 6.3 (Yamada) ~ 7.7 (Kushiro)
Line J: \textit{ETSUZAN MARU} 6.1 (Misaki) ~ 7.22 (Kushiro)

- Stations of longline operation at sunrise and sunset
- Stations of longline duplicate operation at sunrise and sunset (2 days)
Figure 4. Cruise of HOKKO MARU 6.25 (Kushiro) ~ 7.19 (Kushiro)

- Stations gillnet operation
- Stations of gillnet duplicate operation (2days)
Figure 5. Cruise of WAKATAKE MARU 6.7 (Hakodate) - 7.28 (Hakodate)

- Stations of right angle gillnet operation (C net) and longline operation at sunrise
- Stations of repeated gillnet operation during 24 hrs. (A net) and usual C net operation
- Stations of gillnet operation at particular time of day and longline operation
- Stations of circular shaped gillnet operation (A and C net) and longline operation
Figure 6. Cruise of OSHO MARU 6.6 (Hakodate) - 8.18 (Hakodate)

- : Oceanographical observation
○: Oceanographical observation and gillnet research
△: Gillnet and longline research
▼: Setting of sediment trap
▲: Recovery of current meter
Figure 7. 1st, 2nd and 3rd cruise of HOKUSEI MARU

1st cruise  6.1 (Hakodate) ~ 6.15 (Hakodate)
2nd cruise  6.20 (Hakodate) ~ 7.4 (Hakodate)
3rd cruise  7.11 (Hakodate) ~ 8.11 (Hakodate)

○ Stations of oceanographical observation
● Stations of gillnet operation and oceanographical observation
Figure 8. Cruise of HOYO MARU NO. 12

8. 3 (Kesennuma) ~ 9.28 (Kesennuma)