

INPFC FILE COPY  
— ANCHORAGE —

INPFC DOCUMENT
Ser. No. <u>2614</u>
Rev. No. _____
_____

PROPOSED RESEARCH PLAN  
FOR U.S. RESEARCH  
ON DALL'S PORPOISE IN 1983

Submitted by

National Marine Mammal Laboratory

February 1983

National Marine Mammal Laboratory  
Northwest and Alaska Fisheries Center  
National Marine Fisheries Service, NOAA  
7600 Sand Point Way N.E., Bldg. 32  
Seattle, Washington 98115

Under the Memorandum of Understanding (MOU) signed by the Governments of Japan and of the United States in 1981, scientists are to consult annually to develop the most effective research program for determining the status and trends of populations of marine mammals, particularly Dall's porpoise, affected by the Japanese salmon gillnet fisheries. The research proposed for the U.S. for 1983 is described below.

The basic elements of the program are described in the MOU and Incidental Take Permit issued under the Marine Mammal Protection Act (MMPA) and were implemented during the 1981 season. These elements of field work in which U.S. scientists will participate in 1983 are to (1) monitor the incidental take of marine mammals and verify the incidental take data; (2) collect sighting data for estimating abundance; (3) collect specimen material for biological studies; and (4) studies on the behavioral response of Dall's porpoise to survey vessels.

#### I. Monitoring of the Incidental Take

The monitoring program established in 1981 under the MMPA permit and MOU between the Governments of Japan and the United States will be continued. Japanese marine mammal observers employed by the Japan Fisheries Agency and U.S. marine mammal observers will board catcherboats in each mothership fleet operating inside the U.S. Fishery Conservation Zone (FCZ) to monitor the incidental take of marine mammals and other organisms in the salmon gillnets. The Japanese observers will monitor the incidental take aboard catcherboats outside the U.S. FCZ as well. The observers will collect data on the distribution, numbers

and species of marine mammals in the gillnets, environmental conditions, presence and behavior of marine mammals near the vessel and gillnets, and gear characteristics for each gillnet operation. During transit of the vessels, U.S. observers will conduct marine mammal sightings surveys. Sightings data collected during net operations will provide information on the relationship between entanglement, and distribution and density of animals.

The marine mammal observers and each catcherboat, including scoutboats, will transmit daily reports of the incidental take to the U.S. marine mammal biologist onboard each mothership. The report will include for each marine mammal species the number taken dead and returned to the mothership, number taken alive and released, and number taken but lost during retrieval. Information will also be recorded on the condition of released animals and cause of loss of animals. Biologists on the motherships will then transmit these reports of the observers and the catcherboat captains to the National Marine Mammal Laboratory (NMML) and the National Marine Fisheries Service Alaska Regional office daily for analysis to project the date of reaching the quota and closure of the fishery within the U.S. FCZ.

The catcherboats with observers onboard will operate in different locations within the fleet to ensure that there is no effect of position on the observer data. The Fleet Commander will determine with consideration for as random a selection as possible which vessels will be boarded by observers and their location in the fleet. Ultimately, all catcherboats in the fleet should be monitored by an observer, if possible.

## II. Population Estimation

U.S. biologists will board Japanese salmon research vessels and U.S. Platforms of Opportunity Program vessels to conduct sighting surveys for estimating abundance of Dall's porpoise. Cruises will be in previously surveyed areas for comparison of annual distributional patterns of Dall's porpoise as well as in other areas and times of year. Five cruises of up to two-months duration each are planned for 1983 and early 1984.

## III. Biological Studies

One U.S. biologist will be aboard each Japanese salmon mothership to collect biological samples and information from Dall's porpoise returned to the mothership. All animals will be measured, sexed and recorded by specimen number. Biological samples will be collected from up to approximately 20 animals per day per mothership. Samples collected will include teeth, reproductive organs, and some stomachs. The animals will be examined for parasites, presence of a fetus, and lactation. Heads will be collected from some adult animals for the morphometric study of stock differences. Tissue samples will also be collected for electrophoretic studies of stock differences.

South of the U.S. FCZ, up to 10 Dall's porpoise per mothership will be frozen on the motherships for dissection by U.S. observers after boarding on 10 June. North of the U.S. FCZ, a Japanese national will continue sampling as per inside the U.S. FCZ.

#### IV. Study of Response of Dall's Porpoise to Vessels

Dall's porpoise are known to be attracted to vessels. This behavior affects estimates of abundance since analytical methods assume the animals are encountered randomly in the survey area. Two projects are planned in 1983 to study the behavior of the Dall's porpoise with respect to survey vessels. The results will be used to develop an improved method of analysis for estimating abundance.

##### A. Chartered vessel with helicopter

In 1982 a preliminary project to examine the feasibility of using a chartered vessel with the helicopter to study the response of Dall's porpoise to the survey vessel was conducted in Prince William Sound, Alaska. Although limited by weather conditions, this method appears to be a valuable approach. We propose to conduct a more extensive project of two weeks duration in 1983, in the same area. This would increase the data base on porpoise behavior as related to vessels and provide information on whether there are seasonal differences in the response of animals.

##### B. NOAA vessel Surveyor with helicopter

If space and aircraft time are available during the scheduled transit of the NOAA vessel Surveyor from Seattle to Dutch Harbor, Alaska, in mid July and/or the return transit in mid-August, we plan to conduct a second study of the Dall's porpoise response to a survey vessel. This experiment would address the question of whether porpoise in offshore areas respond to the vessel differently than porpoise

in more coastal areas such as Prince William Sound. This experiment would be conducted under conditions more similar to those which occur in the North Pacific salmon fishery area.

Each transit will take approximately seven days. This work is dependent on the availability of the vessel and helicopter for this project.

#### V. Other Studies

##### A. Seabird Entanglements.

In 1983, the U.S. observers onboard the catcherboats will continue to collect data on the entanglement of seabirds and biological specimens for analysis by U.S. Fish and Wildlife Service personnel. One or two observers will conduct seabird as well as marine mammal censusing surveys as the vessels are in transit.