



# NORTH PACIFIC UNIVERSITIES MARINE MAMMAL RESEARCH CONSORTIUM



## ***Northern Fur Seals: Developing a Comprehensive Research Plan***

*Northern fur seals have declined in number / population over 70%. While fishing practices in the North Pacific are alleged to have played a major role, the cause of the decline remains unknown.*

There has been little recent research conducted on the Northern fur seals despite a population decline of >70%. A coordinated comprehensive research plan for fur seals is being developed by Consortium researchers in collaboration with NMFS to combine the skills and research abilities of agency and university based researchers. This will lay the foundation for joint proposals to be put forward in coming years for Consortium and other sources of funding.

### **What Researchers hope to learn:**

A long-term research plan will be developed for undertaking captive, field and laboratory based studies that will shed light on why northern fur seals are declining.

\* A collaborative research study between a consortium researcher and NMFS researchers will also be completed.

### **Project Outline:**

Two coordination meetings will be held between NMFS fur seal researchers and interested Consortium researchers to discuss preparation of a general research plan and specific research proposals that can be submitted for outside funding. Dr. Trites will oversee the Consortium's participation, and will assist a graduate student from St. Paul Island in developing a research study in collaboration with NMFS that will help to resolve why fur seals have declined. General areas of study that will be evaluated include captive studies, field studies and laboratory based studies as follows:

### **Captive Studies**

Since its inception, the Consortium's captive Steller sea lion program has conducted valuable studies that could not be carried out in the wild. We propose to expand this expertise to the study of northern fur seals by establishing a parallel captive research program with these animals.

### **Field Studies**

There is concern that commercial fisheries may be competing with northern fur seals in the Bering Sea for food during the summer and fall. One means of assessing the potential competition between the two is by tracking animals at sea and recording their feeding behavior. This can be compared with commercial fishing activity (i.e., location, depths fished and types and amounts of fish caught).

### **Laboratory & Data Analyses Studies**

A central goal of our Steller sea lion captive studies was to construct a simulation model that predicted the energy requirements for Steller sea lions at the individual and population levels. This led to the development of a bioenergetics model that predicted daily and annual energy requirements (Winship et al. 2002, Winship and Trites 2003). The models can be easily adapted to Northern fur seals.

**Collaborations** will be sought with fur seal researchers at NMFS and with the Tribal Government on St. Paul Island. Assistance from the Stewardship Program will also be sought.

### **Principal Investigators:**

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