

FOREWORD

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The trawl fishery for pelagic armorhead, *Pseudopentaceros wheeleri* (formerly referred to as *Pentaceros richardsoni*), and alfonsoin, *Beryx splendens*, over the central North Pacific seamounts has a relatively short history. Before 1967, fishery scientists were generally unaware of the resources on seamounts; however, the discovery of commercial concentrations of pelagic armorhead on seamounts in the southern Emperor Seamounts by a Russian commercial trawler in November 1967 led to almost immediate exploitation of the species by the Soviets. Unconfirmed reports indicated that the schools of pelagic armorhead on the seamounts averaged 30 m thick and catches averaged from 3 to 50 metric tons on 10-20 min hauls (Sakiura 1972).

Japanese trawlers entered the fishery in 1969. To assist in the development of this fishery, Japanese research vessels conducted extensive surveys in 1972 on the distribution and potential for development of the pelagic armorhead and alfonsoin resources. The results of their surveys to the central North Pacific and mid-Pacific seamounts showed that many had summits that were too deep for trawling. Those found suitable were concentrated in the southern Emperor-northern Hawaiian Ridge.

When the U.S. Magnuson Fishery Conservation and Management Act was implemented on March 1, 1977, the U.S. Government assumed exclusive management authority over all fishery resources within 200 mi of its territories except for highly migratory species (tunas). The resources on Hancock Seamounts, which are within the U.S. fishery conservation zone, in some years contributed significantly to the central North Pacific pelagic armorhead catch by the Japanese.

Despite the discovery of the pelagic armorhead resource over the central North Pacific seamounts some 17 years ago, not much is known about the life history, stock structure and identity, and population dynamics of the species. For example, in attempting an assessment of the pelagic armorhead stock, Wetherall (1978) noted a glaring lack of essential data and information on which to base his study.

Because of the inadequacy of information needed to understand the dynamics of the seamount population, the Honolulu Laboratory included seamounts in the massive Northwestern Hawaiian Islands investigation which began in October 1976. Because research on spiny lobster and bottom fish was given higher priority than seamount surveys, however, baseline data on seamount species remained inadequate for a meaningful evaluation and assessment of the stock. In 1982, the Honolulu Laboratory produced a planning document which proposed to upgrade the seamount project

into a major seamount-groundfish initiative. This document reiterated the problem of inadequate data and proposed ways to obtain data essential for characterizing standing crop, productivity, trophic interactions, and population dynamics of the resource.

As the initiative developed, the Honolulu Laboratory found that there was a vital need to review the history of the fishery, to assess its present status, and to determine the direction of future research. Since it appeared that the greater part of the exploitation of the seamount groundfish involved Japanese trawling, the Honolulu Laboratory proposed in early 1983 to the Far Seas Fisheries Research Laboratory, Japan Fisheries Agency, in Shimizu, Japan, to convene a joint seamount workshop, which later expanded to include the Japanese Society of Fishery Oceanography of Tokyo, Japan, as a cosponsor. The objectives of the workshop were to review (1) what is known of the oceanography in the vicinity of seamounts, (2) the various fisheries associated with seamounts, and (3) the population characteristics and biology of seamount species (including a preliminary assessment of the stocks), and to develop hypotheses and models to guide the direction of future research.

The workshop was held on March 21-23, 1984 at the Ordo Community Center, located near the Far Seas Fisheries Research Laboratory, and at the Government Port Building in Shimizu. This report includes the papers presented as well as summaries of each session prepared by the workshop cochairmen. Appendix lists the participants.

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CITATIONS

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