

A SURVEY OF THE HAWAIIAN KONA CRAB FISHERY

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## ABSTRACT

The Hawaiian Kona crab fishery is described. An attempt is made to assess the state of the Penguin Bank fishery, which produces 80% of the state's landings, and to evaluate present management procedures based on existing records and new data.

Existing records of catch by area and effort in boat trips are analyzed to investigate the apparent decline of the fishery. Lack of fishing effort is shown as the probable cause of the decline in landings. An unsuccessful attempt was made to calculate equilibrium yields at varying levels of fishing effort and population size. Data from 18 one-day trips aboard a commercial crab fishing boat, where a more relevant measure of effort was recorded, are described. An experiment was conducted on the fishing grounds to evaluate the arbitrary minimum mesh size for the fishing gear. No significant improvement in size selectivity of the gear seems possible.

Although present management procedures appear reasonably adequate for the Penguin Bank Kona crab fishery at the present low level of exploitation, two additional measures which would immediately benefit overfished nearshore populations are given attention. At higher levels of fishing effort, management along the lines of the Pacific halibut fishery appears appropriate since gear and technique for the two fisheries are similar.

Areas for additional research and improved record keeping are suggested to adequately assess the potential of the resource and to insure intelligent management in the future.