

Helicopter Crabbing Report - Update

In late April (4/29) 1977, a staff report on the use of helicopters in Oregon's commercial crab fishery was given to the Commission. The Oregon State Police had closed down the operation on March 21 as a violation of the administrative rule (625-10-165(2)) which mandated illegal crabs must be released "immediately" and not brought to the dock. In late March (28) the Commission learned of the matter and ordered a three-week evaluation period and study of alleged problems by staff. Problems claimed by boat fishermen were that the resource was damaged by loss of small crab (falling out of pots enroute to the beach), wind blast and helicopter speed desiccation to sublegal crabs, and sublegal/female crab mortality caused by being out of water during the sorting period ashore.

Staff observed the operation in Curry County (OSP also) during the 3-week period, conducted some experiments, and concluded that the operation was not harmful to the resource. We also concluded the operation was feasible only if crabs could be brought ashore for sorting of sublegal or female crabs. Possible enforcement problems existed, but such problems did not in fact develop during 1977. We recommended, among other things, that wording of our OAR's be changed to allow the operation. The Commission did so, with the proviso that the present and future operations be by a permit issued to each helicopter crabber. The basic regulation change was that all unlawful crab be returned to the water at point of capture within 15 minutes (instead of "immediately").

The Commission requested an update on information given to it in April 1977. The following summarizes events since that time.

1. The fishery

Only one additional crabber came into the 1977 fishery after April 29. Messrs. Dave and Dan Richards fished a few 6-foot diam. pots in Curry County, mostly on an experimental pilot basis. They and Messrs. Mathews and Lewis landed less than 10,000 pounds of crab after April 29. The bulk of the helicopter catch in 1977 was made by them.

In all, then, one helicopter and about 40 traps were utilized prior to April 29; two helicopters and about 60 traps were used between then and the September 15 ocean crabbing closure. All catches were made in Curry County between the Sixes River and Pistol River. No enforcement problems were encountered.

In the current ocean crab season, which opened December 1, only one operator, Mr. Bob Mathews, has been active to date. Three others (one more than in 1976-77) have expressed interest and will probably fish. One of the four intends to fish in Clatsop County; the rest in Curry County. All have been highly cooperative. We have no estimate of the catch to date, but fishing has reportedly been fairly good. However, the active operation ceased last week when the helicopter used crashed into the ocean; the pilot, Mr. Harry Diack, is in serious condition at the Coos Bay hospital. The helicopter is probably a total loss, and had not been found by divers at last report. In pulling a crab pot, the bouy line reportedly snapped, and under tension, rebounded into the helicopter rotor, causing it to crash into the ocean near shore.

## 2. Further experiments

One potential source of crab mortality was not closely checked last spring. This was the potential effect of crabs being flown at 40-50 mph plus the effect of rotor "blast" downward on them. We did an experiment in November 1977 to better quantify this potential problem. Voluntary help from Mr. Bob Mathews (loaned us traps) and Mr. Bob Jarvis (offered use of his helicopter and also pots and pilot) made this experiment possible. A complete report will be available in the near future.

Crabs were caught in Yaquina Bay, flown at speeds of 60-80 mph (with a Hughes 5-place turbo jet powered machine) for 5-7 minutes. They were then placed in laboratory aquaria for observation. A control group were also caught in Yaquina Bay, flown immediately to the laboratory at less than 40 mph (out of water about 1 minute) and also placed in the aquarium.

Control and experimental crabs were kept in separate aquaria; softshell and hardshell crabs in each group were also kept separate. The experimental group was subjected to speeds and time out of water much higher and longer than would exist in the actual fishery. No significant statistical difference in short or long term mortality occurred between groups or between hardshell vs softshell crabs. Total mortalities were 4.6% among the control group; 10.3% in the experimental group in the <sup>29</sup>30-day test period. This was not statistically a significant difference. Although we feel the experiment should be repeated under cold-weather conditions, it appears that windblast under average late fall weather does not have a significant effect on crabs. Some of the mortalities observed could have been caused by crowding, fighting, and other artificial conditions in lab aquaria, rather than any helicopter-induced factor.

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