

State of California - The Resources Agency  
Department of Fish and Game  
Marine Resources Region  
Long Beach, California

CRUISE REPORT 72-S-6 SHELLFISH INVESTIGATIONS

Prepared by N. E. Nelson

Vessel: N. B. SCOFIELD

Dates: July 25 - August 24, 1972

Locality: Coastal waters from Trinidad, California to Cape Sebastian, Oregon.

- Purpose:
1. To randomly sample concentrations of ocean shrimp, *Pandalus jordani*, in Area A and southern Oregon for estimates of population size and age and sex composition.
  2. To examine stomachs of Pacific hake, *Merluccius productus*, for relative abundance studies of ocean shrimp.
  3. To save juvenile flatfish for the Bottomfish Project.

Procedure: Shrimp trawls were made with a 41-foot headrope Gulf shrimp trawl, with a 1/2 inch nylon mesh liner laced into the cod end. The trawls were as close as possible to 1/2 mile in length.

Results: A total of 133 randomly selected tows was made: 102 in Area A and 31 from the Oregon border north to Cape Sebastian. Depths ranged from 39 to 127 fathoms in California and 51 to 90 fathoms in Oregon.

At least 50 pounds per hour were caught on 63 tows. Average catch per hour for these tows was 281 pounds; average catch per hour for all tows containing shrimp was 209 pounds.

Population estimates for Oregon and California based on the results of the cruise are not yet available.

Age composition (percent by number) was: 0 - none; I - 25; II - 70; III - 5.

The small number of juvenile shrimp found in the samples is surprising when compared with numbers found on previous cruises made at the same time of year:

<u>Year</u>	<u>Percent by number</u> <u>0-age shrimp</u>
1965	11.6
1966	63.0
1967	3.8
1968	68.0
1972	0.0

The contents of 265 Pacific hake stomachs, examined during the cruise for relative abundance of 0-age shrimp, yielded only one individual of the 1972 year class. These data, taken together with the comparison made above, seem to indicate a relatively weak 1972 year class.

Personnel: A. Pascal, Vessel Captain - August 2-24  
D. Carvalho, Vessel Captain - July 31 - August 1  
N. Nelson, Biologist-in-charge  
R. Warner, Biologist  
W. Dahlstrom, Biologist - August 4  
B. Bott, Seasonal Aid - August 18

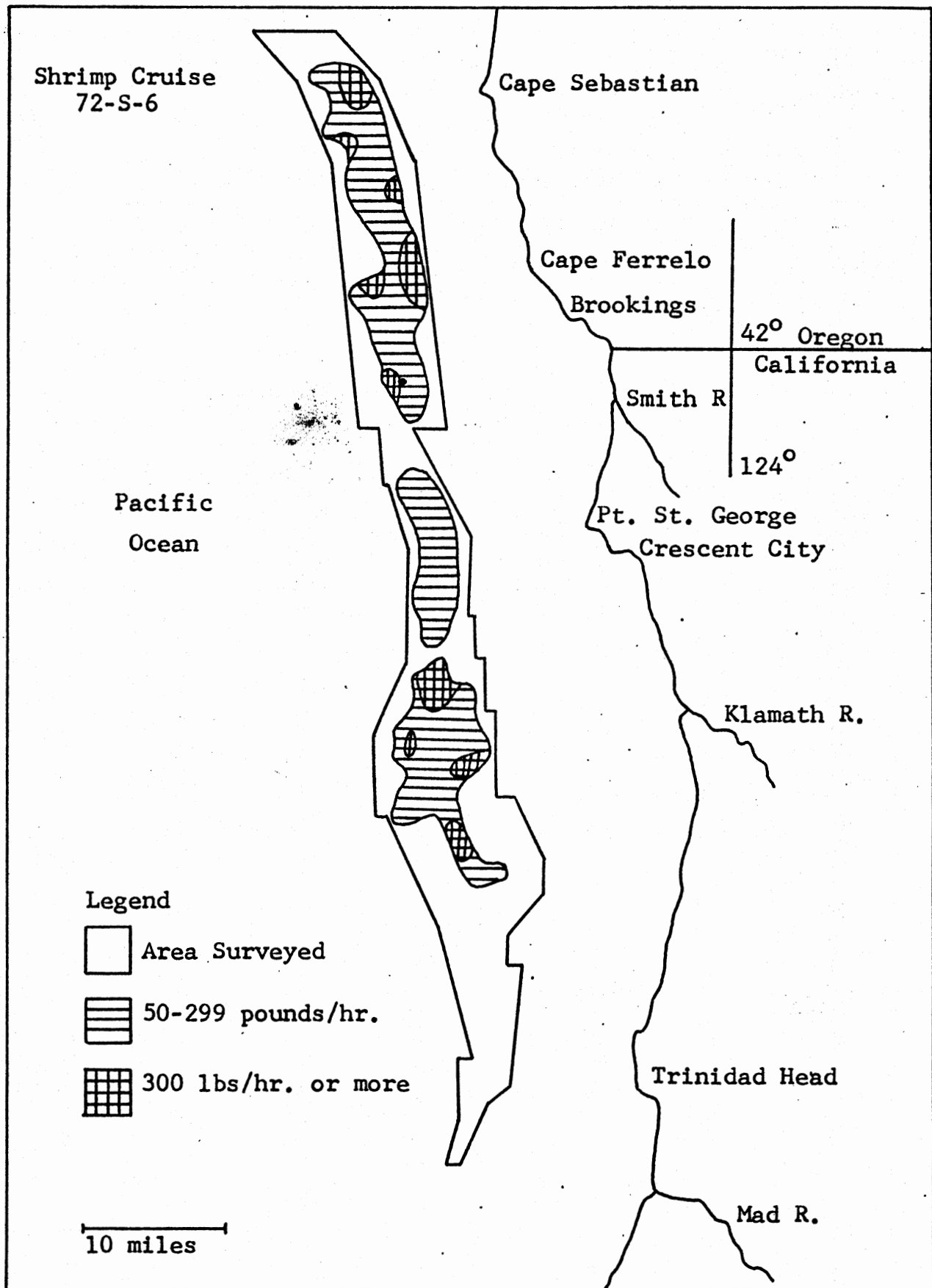


Figure 1