

State of California - The Resources Agency  
Department of Fish and Game  
Marine Resources Region  
California State Fisheries Laboratory  
Terminal Island, California

CRUISE REPORT 69-S-6

BOTTOMFISH PROGRAM

Prepared by P. A. Gregory

**Vessel:** N. B. SCOFIELD

**Dates:** Departed San Pedro August 25, 1969.  
Returned San Pedro September 30, 1969.

**Locality:** Northern California from Cape Mendocino to Crescent City.

**Objectives:** To obtain population parameter estimates of Dover sole, *Microstomus pacificus*, in the Eureka area by:

- Tagging, following a systematic random sampling scheme, to obtain fishing mortality estimates.
- Collecting age composition data from pre-fishery recruits to obtain estimates of natural mortality.
- Collecting age-length and age-weight data for von Bertalanffy growth estimates.

**Operations:** Trawling stations were selected along six transects (Figure 1) at 20-minute latitude lines between Cape Mendocino and Cape Sebastian. The first station on each transect was randomly selected between 5 and 25 fathoms with the remaining stations spaced at 3 mile intervals to 1,000 fathoms. In all, 68 stations were established.

Dover sole, fully vulnerable (356 mm tl and greater) to the commercial fishery, were tagged with spaghetti tags. Every fifth fish of the first 1,200 fish was double tagged with a Petersen disc tag; thereafter every tenth fish was double tagged.

All Dover sole less than 356 mm tl along with a representative sample of fish over 356 mm tl were retained for age-length and age-weight studies.

**Results:** Thirty-two 10- to 30-minute tows were completed along the first four transects (Figure 1); a few stations were deleted due to unsuitable bottom. A total of 2,185 Dover sole was tagged from depths of 28 to 465 fathoms; the majority was taken between 300-390 fathoms. Jellied Dover sole were encountered in depths over 300 fathoms, and the incidence of jellied fish increased in deeper stations.

Samples were obtained for studies of age-weight and age-length. All fish less than 356mm tl were retained to obtain estimates of natural mortality.

**Personnel:** R. B. Mitchell, Vessel Captain                      L. Quirollo, Biologist  
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MRR-TI/135 - 10-20-69/cg                      J. Crane, Visiting Scientist, U. C., Davis, 8-31 - 10-1

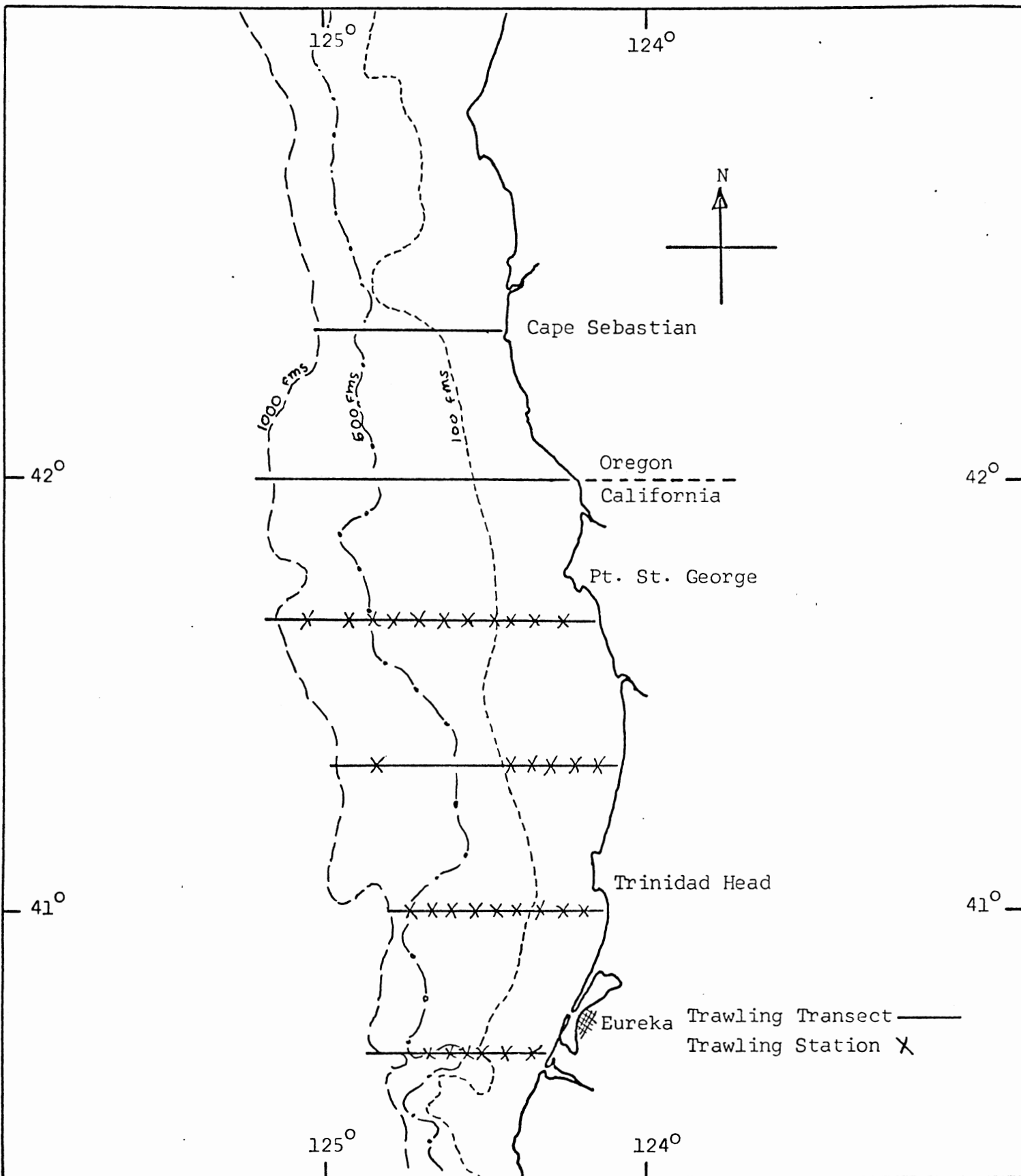


Figure 1