



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
**NATIONAL MARINE FISHERIES SERVICE**  
**SOUTHWEST FISHERIES SCIENCE CENTER**  
P.O. BOX 271  
LA JOLLA, CA 92038-0271

January 23, 2003

F/SWC1:DAG

CRUISE ANNOUNCEMENT

VESSEL: NOAA Vessel *David Starr Jordan*, 0302-JD, DS 03-01, (335).

CRUISE DATES: January 30 - February 25, 2003.

PROJECT: CalCOFI Survey, Fisheries Resources Division.

ITINERARY: Leg I: Depart San Diego, California at 0800 on January 30, 2003. Proceed to first CalCOFI station 93.3/26.7 (position 32° 57.4'N/117° 18.3'W) and begin a modified CalCOFI pattern (see attached cruise track). To complete the proposed cruise track, it will be necessary to maintain maximum speed between stations whenever possible. The vessel will stop on or about February 17 to exchange scientific personnel in Monterey, California.

Leg II: Once personnel exchanges are complete, the *Jordan* will continue to occupy stations up to San Francisco. The vessel will return to San Diego on February 25, 2003.

- OBJECTIVES: 1. To continue an ongoing assessment of pelagic fish stocks between La Jolla and San Francisco, California.
2. To monitor environmental conditions within the CalCOFI survey area.
3. To conduct continuous underway sampling of surface waters. Temperature, salinity and chlorophyll will be automatically logged by computer with the output from the GPS navigational unit.
4. To record current profiles throughout the duration of the cruise with the Acoustic Doppler Current Profiler.
5. To make continuous observations of sea birds and marine mammals.

- PROCEDURES: 1. Each standard CalCOFI station will include the following:
- a. A CTD/Rosette consisting of 20 10-liter hydrographic bottles will be lowered to 500 meters (depth permitting) to measure physical parameters and collect water at discrete depths for analysis of: oxygen concentration, salinity, nutrients, chlorophyll and phytoplankton.
- b. A CalBOBL (CalCOFI Bongo) standard oblique plankton tow with 300 meters of wire out, depth permitting, using paired 505  $\mu$ m mesh nets with 71 cm diameter openings. The technical requirements for this tow are: Descent rate of 50 meters per minute. All tows with ascending wire angles lower than 38° or higher than 51° in the final 100 meters of wire will be repeated. Additionally, a 45° wire angle should be closely maintained during the ascent and descent of the net frame. The Bongo frame will be fitted with a self contained OPC (Optical Particle Counter)



mounted inside the port side opening.

- c. A Manta net (neuston) tow, using a 505  $\mu\text{m}$  mesh net on a frame with a mouth area of 0.1333  $\text{m}^2$ .
  - d. Weather observations.
  - e. A Pairovet (vertical) plankton tow will be taken at all stations inshore of, and including station 70. The Pairovet net will be fished from 70 meters to the surface (depth permitting) using paired 25 cm diameter 150  $\mu\text{m}$  mesh nets. The technical requirements for Pairovet tows are: Descent rate of 70 meters per minute, ascent rate of 70 meters per minute. All tows with wire angles exceeding  $15^\circ$  during the ascent will be repeated.
  - f. Up to and including line 77, at about 1100 hours on each day of the cruise, a primary productivity CTD cast consisting of six 10-liter hydrographic bottles will be carried out. The cast arrangement will be determined by a Secchi disc observation. The purpose of the cast is to collect water from 6 discrete depths for daily *in situ* productivity experiments. Measurements of extracted chlorophyll and phaeophytin will be obtained with a fluorometer. Primary production will be measured as  $\text{C}^{14}$  uptake in a 6 hour *in situ* incubation. Nutrients will be measured with an auto-analyzer. All radioisotope work areas will be given a wipe test before the departure of the SIO technical staff.
  - g. A light meter will be used to measure the light intensity in the euphotic zone once a day with the primary productivity cast.
  - h. During transit between stations, a bird observer will be recording location and species of various sea birds and marine mammals.
2. The egg pump will be mounted inside the ship's hull drawing water from a depth of three meters. During the grid occupation, the pump will be run periodically for continued work associated with the REFLICS (Real-time Flow Imaging and Classification System) while the ship is underway.

EQUIPMENT: 1.

Supplied by scientific party:

- $-80^\circ\text{C}$  Freezer (SWFSC)
- 37% Formalin (SWFSC)
- Ethanol (SWFSC)
- Tris buffer (SWFSC)
- Sodium borate (SWFSC)
- 30 cc and 50 cc syringes (SWFSC)
- Canulas (SWFSC)
- Pint, quart and gallon jars (SWFSC)
- Inside and outside labels (SWFSC)
- CalCOFI net tow data sheets (SWFSC)
- 71 cm CalCOFI Bongo frames (SWFSC)
- 71 cm CalCOFI 505  $\mu\text{m}$  mesh nets (SWFSC)
- CalCOFI 150  $\mu\text{m}$  Calvet nets and codends (SWFSC)
- CalCOFI Pairovet frames (SWFSC)
- 333  $\mu\text{m}$  mesh codends (SWFSC)
- Inclinator for bongo tows (SWFSC)
- Digital flowmeters (SWFSC)
- 10 lb OPC/Bongo weight (SIO)
- 75 lb Bongo weight (SWFSC)

- 100 lb hydro weights (SWFSC)
- CalCOFI Manta net frames (SWFSC)
- 60 cm CalCOFI 505  $\mu$ m mesh Manta nets (SWFSC)
- Standard CalCOFI tool boxes (SWFSC)
- Bucket thermometers and holders (SIO)
- Hand held inclinometer (SWFSC)
- Oxygen titration rig with reagents (SIO)
- Oxygen auto-titrator (SIO)
- Oxygen flasks (SIO)
- Guideline Portasal (SIO)
- Salinity bottles (SIO)
- Standard sea water (SIO)
- Data sheets for scheduled hydrographic work (SIO)
- Weather observation sheets (SIO)
- CTD and rosette (SIO)
- Self contained OPC unit for bongo frame (SIO)
- 10 liter hydrographic bottles (SIO)
- Isotope van (SIO)
- CUFES (SWFSC)
- REFLICS (SIO)

2. Supplied by *David Starr Jordan*:

- Starboard hydro winch with  $\frac{1}{4}$ " cable for standard Bongo, Paiovet and Manta tows
- Port winch with .322" conductive cable
- Guideline Autosal
- Constant temperature room set at 22°C  $\pm$ 1°C (71.5°F  $\pm$ 2°F)
- Winch monitoring system
- Seabird thermosalinometer
- Simrad EQ-50 color sounder
- EK-500 Scientific sounder
- Raytheon 12 kHz depth recorder
- Acoustic Doppler Current Profiler w/writeable CD drive

MISCELLANEOUS:

1. The disposal of fish caught will be in accordance with NOAA Administrative order 202-735B dated January 25, 1989.
2. At the completion of the cruise an inspection will be made of scientific working and berthing spaces by the Commanding Officer or his designated representative. The Scientific party is responsible for the condition and cleanliness of spaces assigned to the scientific party.
3. The Cruise Leader will hold a pre-cruise meeting aboard the vessel before departure.
4. The Cruise Leader will hold a post-cruise meeting upon termination of the cruise.
5. NOAA Fleet Medical Policy requires that all scientific personnel embarking on NOAA vessels complete an SF-93 form, Report of Medical History.
6. All dates and times recorded will be in Pacific Standard Time.
7. It is requested that the constant temperature room be set at the required temperature prior to the installation of the Portasal unit.
8. Stops will be made at Dana Point and Monterey to exchange scientific personnel.

PERSONNEL: Ronald Dotson, Cruise Leader  
Amy Hays

SWFSC  
SWFSC



