



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

June 20, 2006

F/SWC1:AEH

CRUISE ANNOUNCEMENT

- VESSEL: R/V *New Horizon* (SIO) Cruise 0607-NH.
- CRUISE DATES: July 8 - 26, 2006.
- PROJECT: CalCOFI Survey, Fisheries Resources Division.
- ITINERARY: Depart San Diego, California at 0800 on July 8, 2006. Proceed to first CalCOFI station 93.3/26.7 (position 32° 57.4'N/117° 18.3'W) and begin a standard CalCOFI pattern (see attached cruise track). The vessel will return to San Diego, California on July 26, 2006.
- OBJECTIVES:
1. To continue an ongoing assessment of pelagic fish stocks between Morro Bay and La Jolla, 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 measure optical profiles within the California bight. The optical profile measurements will include pigment concentration and particle absorption.
- PROCEDURES:
1. Each standard CalCOFI station will include the following:
    - a. A CTD/Rosette consisting of 24 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, chlorophylls 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, ascent rate of 20 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.
    - c. A Manta net (surface) tow, using a 505  $\mu$ m mesh net on a frame with a mouth area of 0.1333 m<sup>2</sup>.
    - 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  $\mu$ 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° during the ascent will be repeated.

f. 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 to be measured as C<sup>14</sup> 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.

#### EQUIPMENT:

1. Supplied by scientific party:
  - 37% Formalin (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  $\mu$ m mesh nets (SWFSC)
  - CalCOFI 150  $\mu$ m calvet nets and codends (SWFSC)
  - CalCOFI pairovet frames (SWFSC)
  - 333  $\mu$ m mesh codends (SWFSC)
  - Inclinometer for bongo tows (SWFSC)
  - Digital flowmeters (SWFSC)
  - 75 lb Bongo weights (SWFSC)
  - 100 lb hydro weights (SWFSC)
  - CalCOFI Manta net frames (SWFSC)
  - 60 cm CalCOFI 505  $\mu$ m mesh nets (SWFSC)
  - Standard CalCOFI tool boxes (SWFSC)
  - Bucket thermometers and holders (SIO)
  - Hand held inclinometer (SIO)
  - Oxygen titration rig with reagents (SIO)
  - Oxygen flasks (SIO)
  - Guildline 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 LOPC unit for bongo frame (SIO)
  - 10 liter hydrographic bottles (SIO)
  - Isotope van (SIO)
  - LTER van (SIO)
2. Supplied by R/V *New Horizon*:
  - Hydro winch with ¼" cable for standard Bongo, Pairovet and Manta

tows  
Oceanographic winch w/.322" conductive cable  
J-frame w/blocks to accommodate .322" conductive cable and ¼"  
mechanical cable  
Constant temperature in main lab set at 22°C ±1°C (71.5°F ±2°F)  
Winch monitoring system  
12 kHz Knudsen precision depth recorder with spare  
recording paper  
Acoustic Doppler Current Profiler

MISCELLANEOUS:

1. At the completion of the cruise an inspection will be made of scientific working and berthing spaces by the Master or his designated representative. The scientific party is responsible for the condition and cleanliness of spaces assigned to the scientific party.
2. The Cruise Leader will hold a pre-cruise meeting aboard the vessel before departure.
3. All dates and times recorded will be in Pacific Standard Time.

SWFSC PERSONNEL:

Amy Hays . . . . . SWFSC  
Dimitry Abramenkoff . . . . . SWFSC

NMFS personnel authorized per diem at the rate of \$3.00 per day to be paid via the Imprest Fund at the termination of the cruise.

WATCH HOURS: 0000-1159 . . . . OVERTIME: . . . . 120 hours  
1200-2359 . . . . NIGHT DIFF.: . . 108 hours

Date: \_\_\_\_\_

Prepared by: \_\_\_\_\_  
Amy Hays

Approved by: \_\_\_\_\_  
William F. Fox Ph.D.  
Science & Research Director  
Southwest Region

