

E7.4-10338

CR-136849

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APPLICATION OF REMOTE SENSING  
FOR FISHERY RESOURCE  
ASSESSMENT AND MONITORING

SKYLAB EXPERIMENT NO. 240

CONTRACT NO. T-8217B

MONTHLY PROGRESS REPORT NO. 3

REPORTING PERIOD: 10 JULY - 10 AUGUST 1973

PI SIGNATURE

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DATE SUBMITTED

August 14, 1973

E74-10338) APPLICATION OF REMOTE SENSING  
FOR FISHERY RESOURCE ASSESSMENT AND  
MONITORING Monthly Progress Report, 10  
Jul. - 10 (National Marine Fisheries  
Service, Bay) 5 p HC \$4.00 CSCL 08A G3/13 Unclas 00338  
N74-18014

NATIONAL MARINE FISHERIES SERVICE,  
BAY SAINT LOUIS, MISS.

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## INTRODUCTION

This is the third of a monthly series of progress reports required by the Statement of Work for the Application of Remote Sensing for Oceanic Gamefish Assessment and Monitoring, Proposal Requisition No. 240. The contract order number is T-8217B.

The period of this report is 10 July 1973 to 10 August 1973.

## OVERALL STATUS

The second and final field mission comprising a two day period of space, air, and surface operations was completed on 5 August. The prior month was devoted to planning the mission. The Field Operating Plan, issued 27 July 1973, is attached to this report to display the scope of field operations.

### 4 - 5 AUGUST MISSION

- a. Contingency Planning. Four contingency plans (attachment) for conduct of operations were available for selection dependent on conditions in the area. On the evening of 3 August, the fishing record of the prior few days dictated use of Plan A which concentrated transects in the area of probable fishing.
- b. Weather. A weak front passed through the operating area on Saturday, 4 August with localized showers, low cloud and haze rendering conditions unsuitable through the day for aerial photography, but acceptable for surface operations. During the night the frontal system moved out and the weather gradually improved Sunday morning to about ten percent cloud cover and excellent visibility.
- c. EREP Imagery. Skylab passed over the operating area about 1140 5 August. The satellite's sensors were activated and EREP photography/imagery of the area was obtained.
- d. Aircraft Operations. The NASA/ERL E-18 operations for 4 August were cancelled due to unsatisfactory weather for photography using the pre-established flight lines at 10,000 ft. On 5 August, the NASA Earth Survey aircraft C-130B and E-18 flew transects over the fishing area. A Navy NP3A deployed aerial expendable bathy-thermographs according to a prearranged pattern.
- e. Oceanographic Research Operations. Four Government and five Government chartered vessels cruised transects in the area and collected meteorological and oceanographic data at designated sampling stations during daylight hours on 4, 5 August. One Government and one Government chartered boat returned to port on 4 August with malfunctions. The Government chartered boat was replaced and the Government boat repaired for the 5 August mission.

f. Gamefishing. Entries totaled 136 boats in the tournament coordinated through the Pensacola Big Game Fishing Club with registrations from New Orleans, Mobile, Destin, and Panama City. Gamefish logs with catch data totalled 135 over the two day period. The most abundant species in terms of catch data was white marlin with 41 raised but not hooked, 22 hooked and lost and 32 hooked and boated.

Personnel were embarked on each of 12 gamefishing boats and collected environmental data as nearly concurrent with gamefish catches as was feasible.

g. Field Operations Control. The Principal Investigator and the Technical Monitor exercised control and surveillance respectively of operations from a Field Center located in a temporary office trailer on high ground near East Pass at Destin, Fl. where the greatest number of sportsfishing boats based. The trailer was equipped with upper single side band and CB radio. The NASA research vessel ERL provided a relay station on the marine frequency to boats at sea.

Office trailers for coordinating local field activities were also located at Pensacola and Panama City.

#### MEETINGS

Morning planning meetings were held on week work days starting with 2 July and concluding 2 August after which full field deployment commenced.

A post operational debriefing was held on 10 August.

#### EXPECTED ACCOMPLISHMENTS

Transcribing, keypunching and validation of data collected during the second mission will be completed early in the next reporting period. Laboratory analysis of sea surface samples for chlorophyll and salinity content will also be completed in two weeks. Towards the end of next reporting period, tabulations of meteorological, oceanographic and fish catch data are expected to be available. At that time, it is expected that SC4020 graphic display plots of selected oceanographic parameters will also be available. Availability of aircraft and satellite data, as scheduled, will delay preliminary analysis until into the next several reporting periods.

#### RESULTS

The second of two field operations has been successfully completed as planned, closing out the mission phase of the project. The acquired data is being transcribed prior to

keypunch. A quick look tabulation of fish catch has been prepared. The field operations were successfully concluded with almost perfect acquisition by all data platforms, instruments and personnel.

#### SUMMARY OUTLOOK

At this time it appears that sufficient fish catch data has been obtained to proceed with the study to attempt biological and oceanographic correlations of gamefish availability and distribution. Correlations between remotely sensed data and the gamefish will be delayed until receipt of the aircraft and satellite data.

It also appears that there is a substantial residue of activity associated with windup of tournament business by the Pensacola Big Game Fishing Club. This business will close out about mid-September with a boat and angler award ceremony administered by the Club.

#### TRAVEL SUMMARY

There are no personnel trips currently scheduled during the upcoming reporting period.