

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

CRUISE REPORT 70-S-5 BIG GAME FISH

Prepared by Robson A. Collins

Vessel: N. B. SCOFIELD

Dates: August 29 - September 9, 1970.

Locality: The waters of southern California and its offshore islands.

- Purpose:
1. To capture, tag, and release bonito, *Sarda chiliensis*, albacore, *Thunnus alalunga*, white seabass, *Cynoscion nobilis*, and barracuda, *Sphyræna argentea*.
 2. To collect larva and young of bonito, white seabass, barracuda, and yellowtail, *Seriola dorsalis*.
 3. To make incidental collections of fishes and invertebrates.

Results: A total of 604 bonito was tagged with Floy Anchor tags and released in several areas between Pt. Conception and the U. S.-Mexican border. Thirty-five albacore were tagged with dart tags and released 60 miles due west of Ensenada, B. C., and Mexico. No adult barracuda, yellowtail, or white seabass were captured.

1. Tagging - Bonito:

During the first half of the cruise (Aug. 29 through Sept. 2) 52 bonito were tagged and released along the coast of Santa Barbara and Ventura counties, and near Santa Cruz and Anacapa Islands (Table 1, Fig. 1). They ranged in length from 58 to 76 cm (22 to 30 in.) and weighed between 5 and 14 pounds. Bonito schools were plentiful in the area, but most fish were taken on a trolled jig since fishing with live bait produced only a few scattered catches. Examination of the stomach contents of captured bonito revealed they were feeding on squid, *Loligo opalescens*.

September 3rd and 4th, 427 bonito were caught, tagged and released off the east-end light, Santa Catalina Island. Forty-five tagged bonito were released off the southern California coast between Dana Point and Pt. Loma on September 5th and 6th, and 79 bonito were tagged and released off San Onofre on September 9th (Fig. 1, Table 1). These fish were smaller than those caught earlier, ranging between 29 cm and 57 cm (11.5 to 22.5 in.). A majority of the bonito tagged on the second half of the cruise (Sept. 3-9) were taken by sport fishing gear and live bait.

Tagging - Albacore:

Thirty-five albacore were tagged and released on September 7 and 8 at 31° 40'N, 117° 45'W and 31° 44'N, 117° 46'W; 60-65 miles due west of Ensenada, B. C., Mexico (Table 1, Fig. 1).

2. Larva and Young

One juvenile yellowtail, *Seriola dorsalis*, and one juvenile barracuda, *Sphyraena argentea*, were captured on September 5 off San Onofre.

3. Miscellaneous

Large numbers of blue shark, *Prionace glauca*, were observed at the surface of the water near Anacapa and Santa Cruz Islands.

A night light displayed at anchorages attracted only a few squid and juvenile Pacific saury, *Cololabis saira*.

Sea surface temperatures recorded during this cruise ranged from 15.5°C (59.9°F) in the San Pedro Channel to 21.2°C (70.2°F) at Pt. Loma, and averaged 18.5°C (65.3°F) in the area where albacore were caught. Excellent weather prevailed throughout the cruise.

A change of biological personnel was made on the evening of September 2 at San Pedro.

Personnel: Anthony Black, Vessel Captain
Robson Collins, Biologist-in-charge (Aug. 29 - Sept. 2)
James Phelan, Biologist-in-charge (Sept. 3-9)
Rodney Brashear, Seasonal Aid (Aug. 29 - Sept. 2)
Gary Brewer, Seasonal Aid (Sept. 3-9)

TABLE - 1

Summary of Tagged Fish Released
During Cruise 70-S-5

<u>Release Number</u>	<u>Date</u>	<u>Area</u>	<u>Number</u>	<u>Species</u>	<u>Size Range (cm)</u>
1	Aug. 30	½ mile S. of Goleta	1	bonito	66
2	Aug. 31	½ mile S. of Rincon	1	bonito	59
3	Aug. 31	½ mile S. of San Stone Pt. Santa Cruz Island	7	bonito	60-75
4	Sep. 1&2	¼ mile S. of Anacapa Is.	43	bonito	58-76
5	Sep. 3&4	200 yds. E. of east end light Santa Catalina Is.	427	bonito	29-57
6	Sep. 5	½ mile off City of San Clemente	7	bonito	34-60
7	Sep. 5	6 miles S. of San Onofre	28	bonito	31-60
8	Sep. 5	Oceanside Pier	3	bonito	36-57
9	Sep. 6	½ mile off Pt. La Jolla	4	bonito	32-36
10	Sep. 6	½ mile off Pt. Loma	3	bonito	31-34
11	Sep. 7&8	31° 40'N, 117° 45'W & 31° 45'N, 117° 46'W	35	albacore	75-85
12	Sep. 9	6 miles S. of San Onofre	79	bonito	31-52

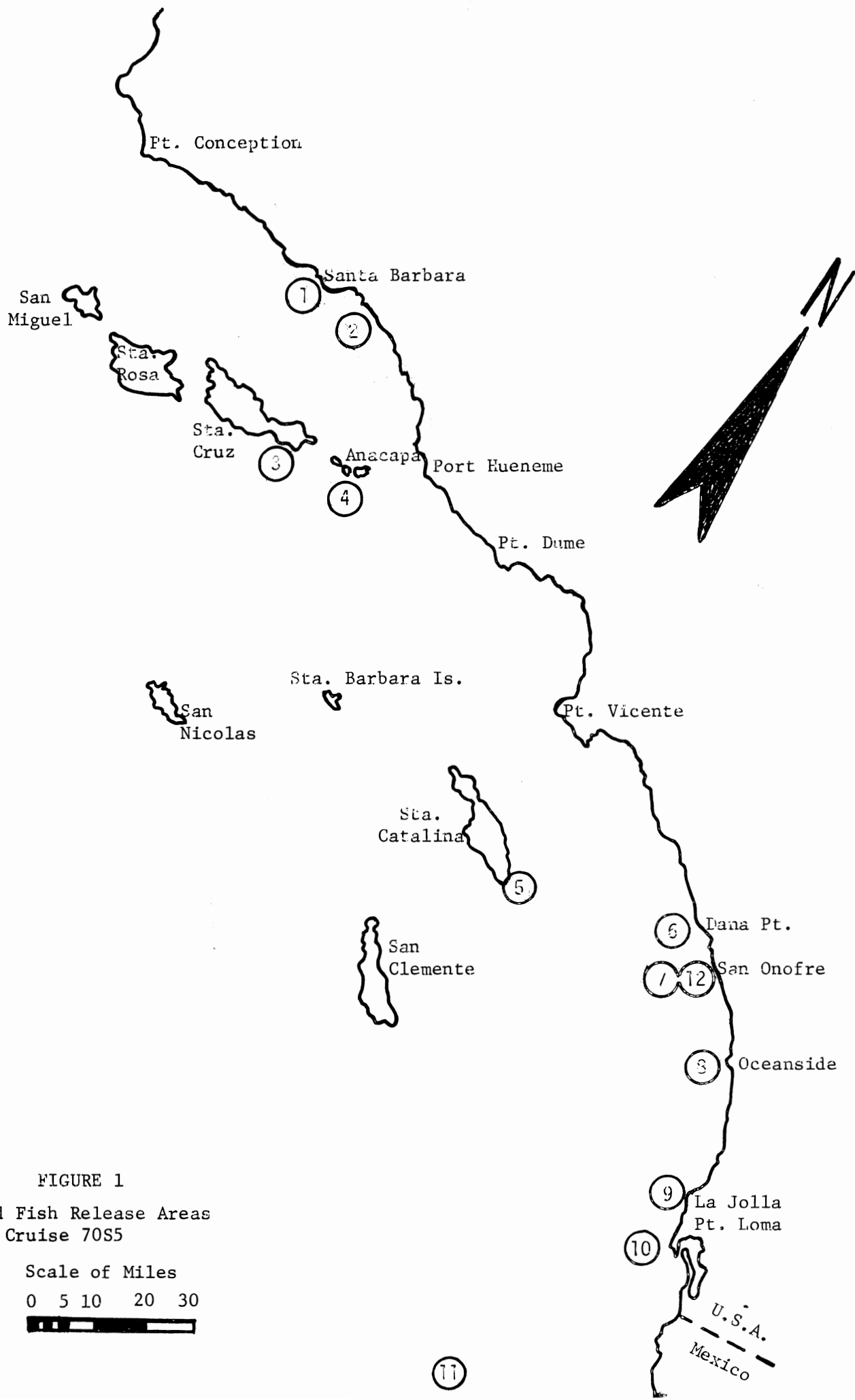


FIGURE 1
 Tagged Fish Release Areas
 Cruise 70S5

Scale of Miles
 0 5 10 20 30