Reef Check California

REEF CHECK

Research • Education • Conservation

Julia Pfeiffer Burns State Park, Big Sur

2006-2007

Executive Summary

INTRODUCTION

Reef Check California educates, trains and engages diverse ocean users to collect valid scientific data describing California's nearshore rocky reef ecosystems to improve marine management. By emphasizing public education and outreach, Reef Check California creates an informed constituency supportive of science-based management.

Reef Check California uses the same citizen-scientist philosophy of the Reef Check Foundation's successful global coral reef monitoring program. Established in 1996, the Reef Check Foundation provides local communities in over 85 countries worldwide with the tools to scientifically monitor and sustainably manage their local coral reefs.

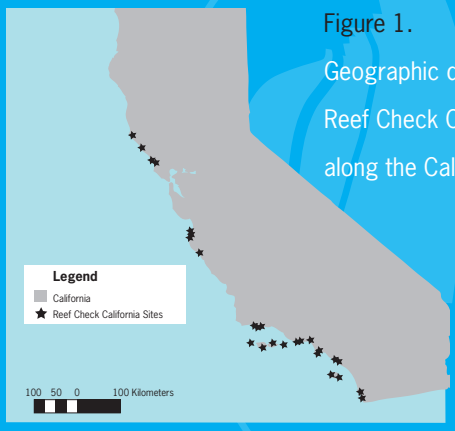

Figure 1.
Geographic distribution of Reef Check California sites along the California Coast.

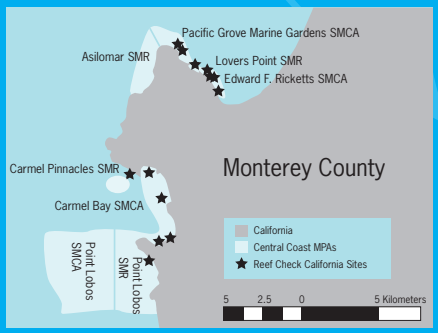

Figure 2.
Monterey regional Marine Protected Areas established September 21, 2007.

RESULTS

Reef Check California has trained and certified over 250 volunteers comprised of a diverse group of ocean users including recreational divers, commercial urchin fishermen, lifeguards and students. These dedicated volunteers have surveyed 48 sites along California's coast (Figure 1) and counted over 80,000 individual organisms including:

- 27,546 fishes
- 36,783 invertebrates
- 16,070 seaweeds
- 69,528 kelp stipes

The Reef Check California Program is still relatively new, but the data are already being used to help understand critical management issues.

SAMPLE CASE STUDIES

1. Reef Check California and the Marine Life Protection Act (MLPA)

The ability of Reef Check California divers to collect scientific data has been especially timely on the central coast where a new network of Marine Protected Areas (MPAs) went into effect on September 21, 2007 (Figure 2). Many of the new MPAs in the central coast MLPA region were surveyed by Reef Check California teams in both 2006 and 2007 and will continue to be monitored in the future. These data, along with data collected at Reef Check California sites around the state, will be crucial for evaluating the effectiveness of MPAs and informing the on-going siting of MPAs in California.

2. Catalina Island – A Tale of Two Sites

Kelp bass is one of the most important recreationally fished species in southern California and California sheephead is important to both the recreational and commercial fisheries. The density and size of these species were assessed by Reef Check volunteers at two popular reefs on the front side of Catalina Island: Isthmus Reef and Casino Point. While the density of these species was similar at both sites, the size structure was very different. Both species had a higher percentage of individuals in the large size class at Casino Point than at Isthmus Reef (Figures 3 & 4).

Although the sites are in close proximity to each other and have similar habitats, Casino Point is more sheltered than Isthmus Reef and lies within a community-enforced MPA where fishing is banned. The level of fishing effort and site exposure may help explain the different trends in fish size.

Reef Check California surveys scientifically describe the biological profile of a site, as well as the habitat. These detailed assessments allow comparisons among sites and can be used to unravel the causes of observed trends.

PARTNERSHIPS

The Reef Check Foundation collaborates with numerous groups to benefit from the synergy achieved by working with established partners. The Science Advisory Team helps maintain the scientific validity of the program and a Memorandum of Understanding has been signed with the California Department of Fish and Game to help guide data collection and outreach activities.

The Buddy Breathing Program has been developed to engage the dive industry to help support Reef Check California volunteer divers. Currently supported by 14 popular dive shops across the state, this program rewards Reef Check certified divers at select shops with free air fills and other discount incentives.

ACKNOWLEDGEMENTS

The success of Reef Check California is a direct result of the dedication of volunteer divers, partners and supporters. Reef Check California was made possible by funding support from:

- California Coastal and Marine Initiative of the David and Lucile Packard Foundation
- California Ocean Protection Council /State Coastal Conservancy
- Richard and Rhoda Goldman Fund
- Quiksilver Foundation
- Santa Monica Bay Restoration Commission
- Surf Industry Manufacturers Association
- UCSB Coastal Fund
- CODE BLUE
- Patagonia
- Body Glove

www.reefcheck.org

SIZE FREQUENCY OF KELP BASS

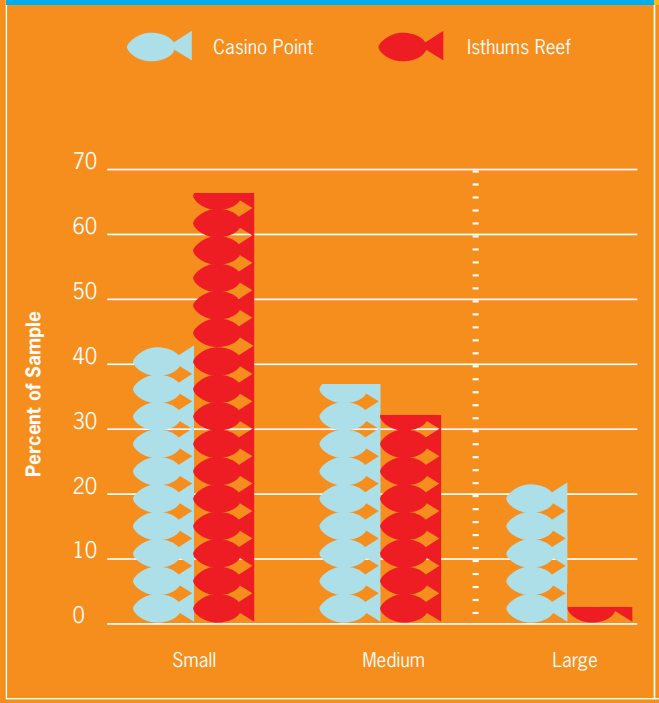

Figure 3. Percentage of kelp bass in three size classes at Casino Point and Isthmus Reef. The legal size limit for recreational fishing is indicated by the dashed line.

SIZE FREQUENCY OF MALE SHEEPHEAD

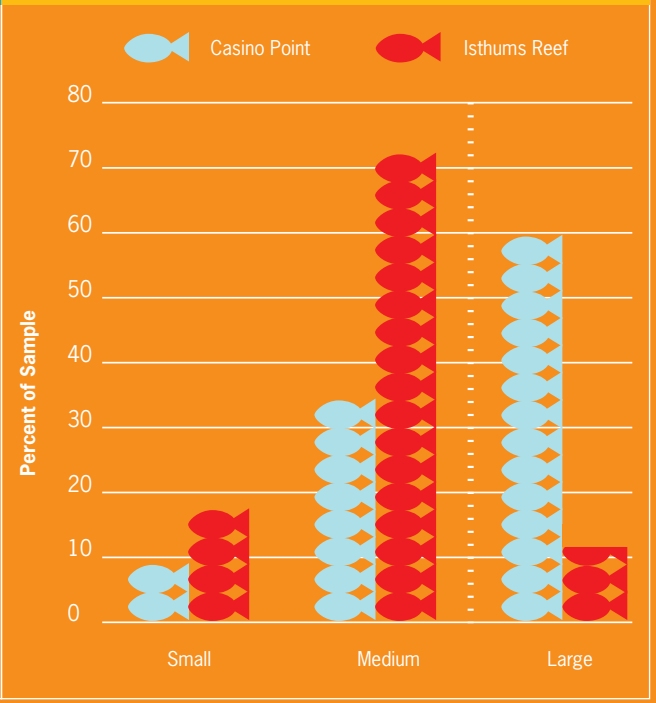

Figure 4. Percentage of male sheephead in three size classes at Casino Point and Isthmus Reef. The legal size limit for recreational fishing is indicated by the dashed line.

Size categories: small = < 15 cm med = 15 – 30 cm large = >30cm

"Being a volunteer research diver for Reef Check California gives me an unparalleled opportunity to make a difference. I am honored to be part of this program and look forward to many more years of rigorous data collection and monitoring."

– Barbara Lloyd, Sr. Software Systems Administrator -- San Diego

"We support Reef Check California in a proactive and collaborative effort to document California's nearshore habitat. The Santa Barbara Sea Urchin divers are excited to revisit the sites established at the Northern Channel Islands last year, making them an invaluable asset in the sustainable fisheries tool box."

– Jeff Maassen, Vice President. C.F.S.B. -- Commercial Fishermen of Santa Barbara, Inc.

"Reef Check makes me feel hopeful. It is a great program that allows the networking of science professionals and people like myself who want to do something to help."

– Bill Field, Avrey & Reese Builders -- Sebastopol

Full text of the Reef Check California 2006-2007 Report is available online at :

http://www.reefcheck.org/rcca/2yr.php

Buddy Breathing Partners:

CONTACT INFORMATION:

Reef Check Foundation
P.O. Box 1057
17575 Pacific Coast Highway
Pacific Palisades, CA 90272-1057

Tel: 310-230-2371
Fax: 310-230-2376

California@ReefCheck.org

REEF CHECK

www.reefcheck.org

Reef Check California

PHOTO CREDITS:

M. Shargel, Livingseaimages.com
P. Colla, Oceanlight.com
C. Shuman
C. Borowski
Howard Hall Productions
K. Kopp, Divematrix.com

FSC Mixed Sources
Printed With Green Ink