

## Mendocino County Fish & Game Project Proposal Summary Sheet

(This must be the first page of the submitted proposal)

The deadline for receiving proposals is 5:00pm, December 22, 2017.

Project Title: Watermens Alliance Urchin Removal Project \_\_\_\_\_  
Amount Requested (\$): \$10,000-25,000 \_\_\_\_\_

Contractor: Watermens Alliance \_\_\_\_\_

Type of Contractor: 501(c)3 Charitable non-profit \_\_\_\_\_

Contact Person: Josh Russo \_\_\_\_\_

Taxpayer/Organization \_\_\_\_\_

Street Mailing Address: \_\_\_\_\_

City, State, Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Email address: \_\_\_\_\_

Website address(es): watermensalliance.com \_\_\_\_\_

Fish and Game Code Section 13103 Category: E \_\_\_\_\_

Objectives: Remove purple urchin from specific areas to allow kelp to regrow \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Specie(s) Benefited: Abalone, Lingcod, Rock fish \_\_\_\_\_

Work Schedule: As weather permits throughout 2018 and beyond. 5 hour workdays \_\_\_\_\_  
\_\_\_\_\_

Site Location (include reference to nearest city, town, and/or prominent landmark, GPS Coordinates): \_\_\_\_\_  
Noyo Harbor, Caspar \_\_\_\_\_  
\_\_\_\_\_

Please also fill out the following, if applicable:

Stream: \_\_\_\_\_

Tributary to: \_\_\_\_\_

Major Drainage System: \_\_\_\_\_

### **The deadline for receiving proposals is 5:00pm, December 22, 2017.**

- Proposals must be submitted by email as a PDF, .DOC, .DOCX, .TXT, or ZIP file to the Commission at: [mendofishgamecommission@gmail.com](mailto:mendofishgamecommission@gmail.com). Applicants without personal computers or internet access to the Commission website can request assistance from County branch libraries in Ukiah, Ft. Bragg, Willits, Coast Community (Pt. Arena), and Round Valley (Covelo) to download and print the application materials. *Note: County library personnel can also assist with scanning and emailing completed proposals.*
- Applicants must also mail or hand-deliver eight double-sided copies to the Commission c/o County Planning & Building Services, 860 North Bush Street, Ukiah, CA 95482.
- Grant applicants are encouraged to attend the Tuesday, January 9, 2017 meeting of the Commission, location to be announced, beginning 6:00pm, to make a brief (5 minute) presentation regarding their proposal.
- For additional information, please call Fish and Game Commission at (707) 234-6094, or email the Commission at [mendofishgamecommission@gmail.com](mailto:mendofishgamecommission@gmail.com).



# ABALONE AND URCHIN FISHERIES: IMPACTS OF KELP DEFORESTATION 2014-2016

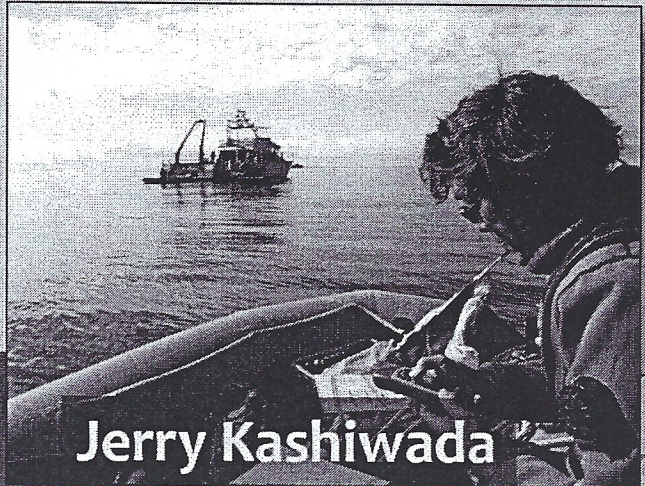


DR. CYNTHIA CATTON &  
THE CDFW INVERTEBRATE MANAGEMENT TEAM

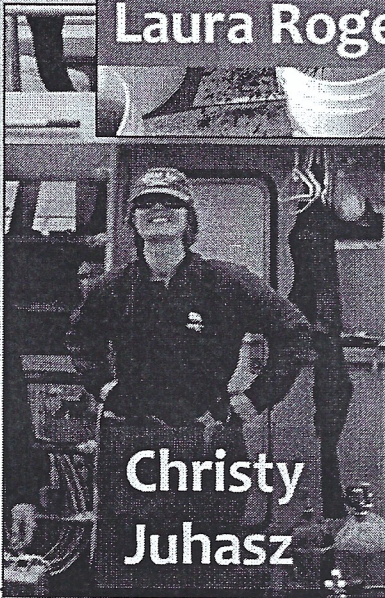




**Laura Rogers-Bennett**



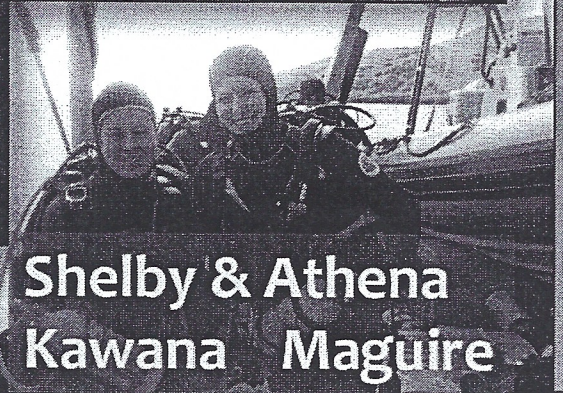
**Jerry Kashiwada**



**Christy  
Juhasz**



**Cynthia Catton**



**Shelby & Athena  
Kawana Maguire**



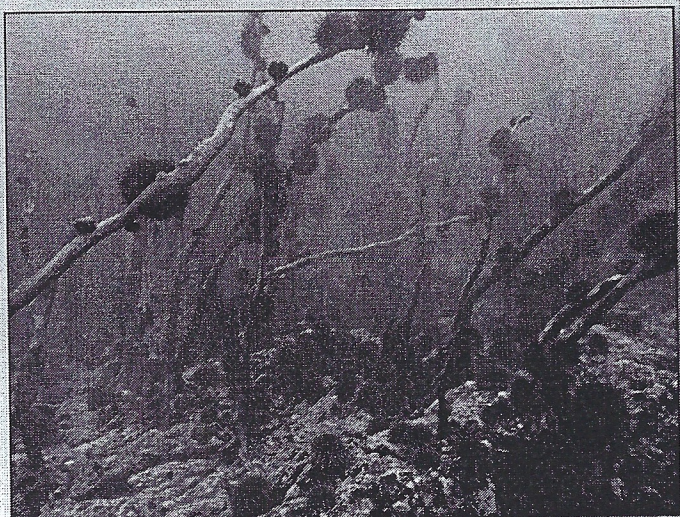
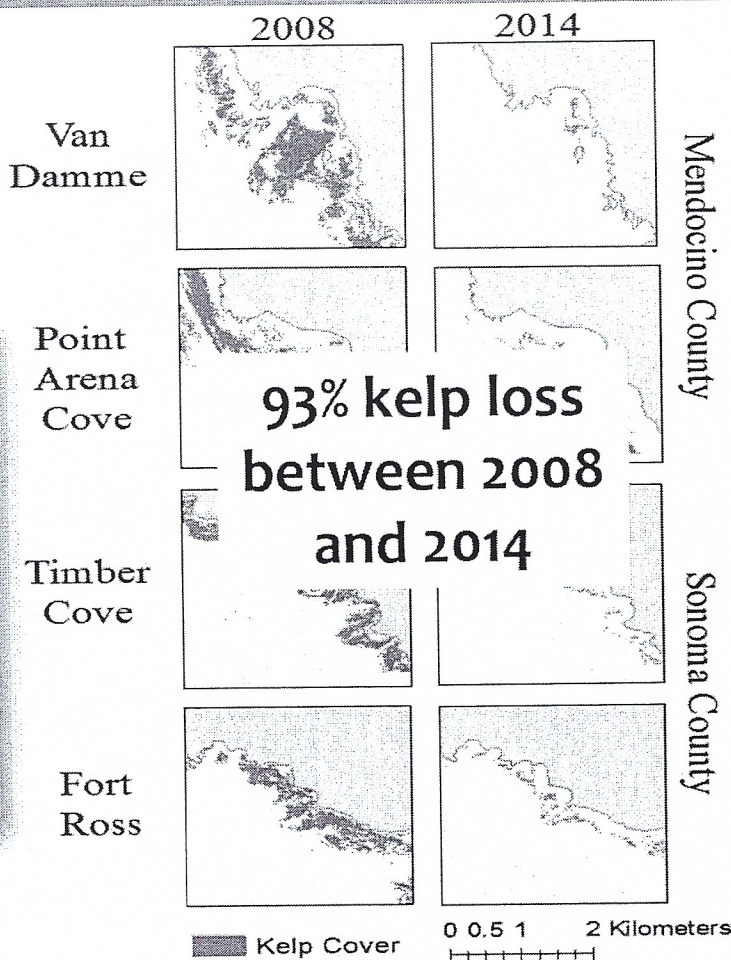
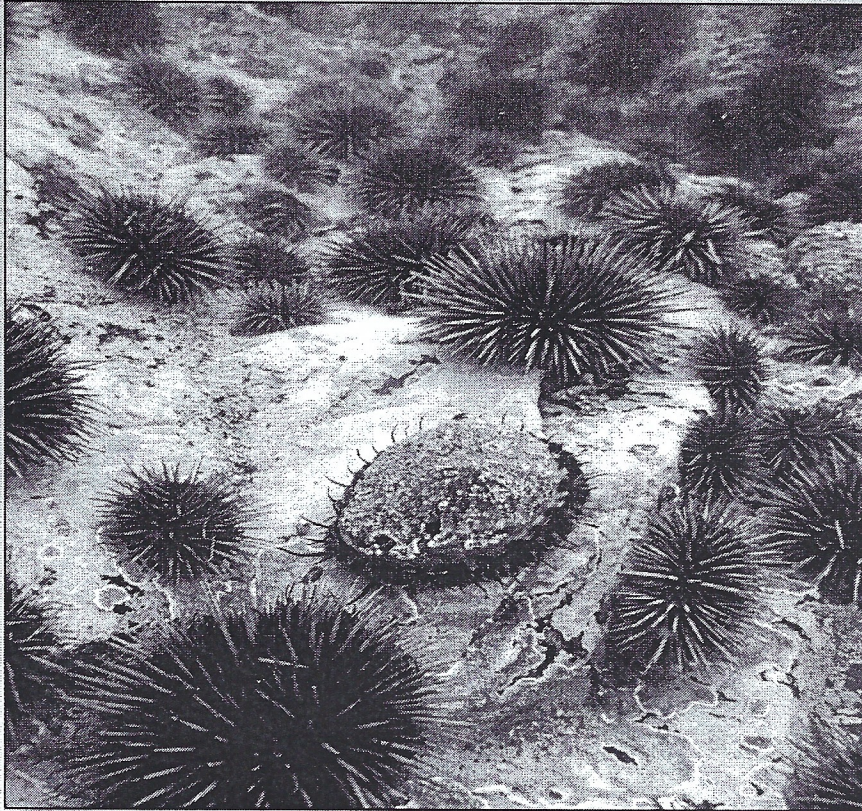


Photo by: G. Lee (Abalone Diver)  
Mendocino Headlands 2016



Data M. Fredle



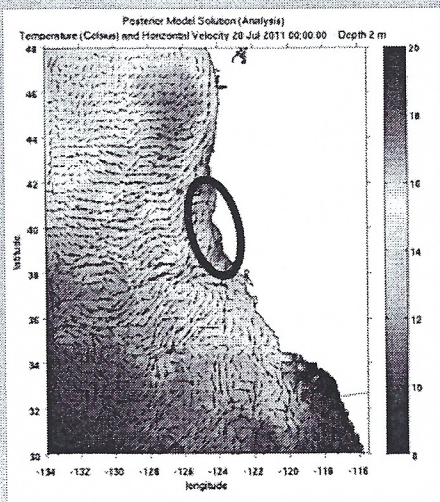


A. Maguire (CDFW)

➤ **60x historic  
densities in N.  
California**

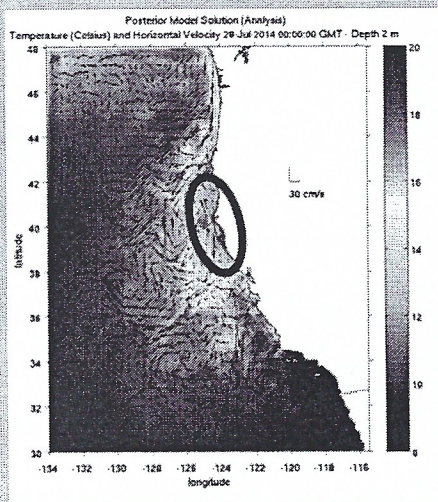
Reports of high  
urchin numbers  
from Central  
California to  
Washington State





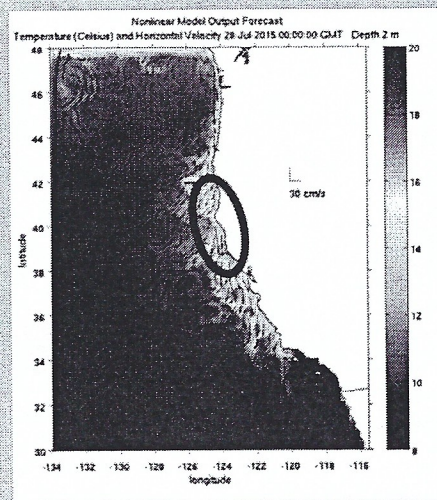
\* July 28, 2011

**Normal**



\* July 28, 2014

**“Warm Blob”**

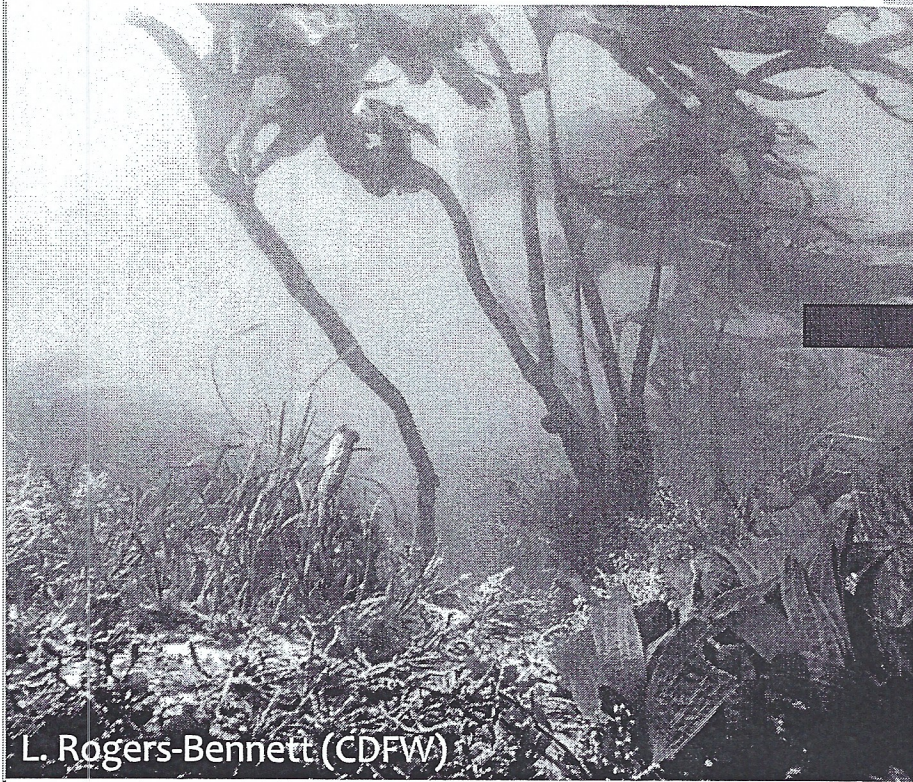


\* July 28, 2015

**“Warm Blob” +  
Strong El Niño**

[http://oceanmodeling.ucsc.edu/ccsnrt/webplots/latest/latest\\_SST.png](http://oceanmodeling.ucsc.edu/ccsnrt/webplots/latest/latest_SST.png)



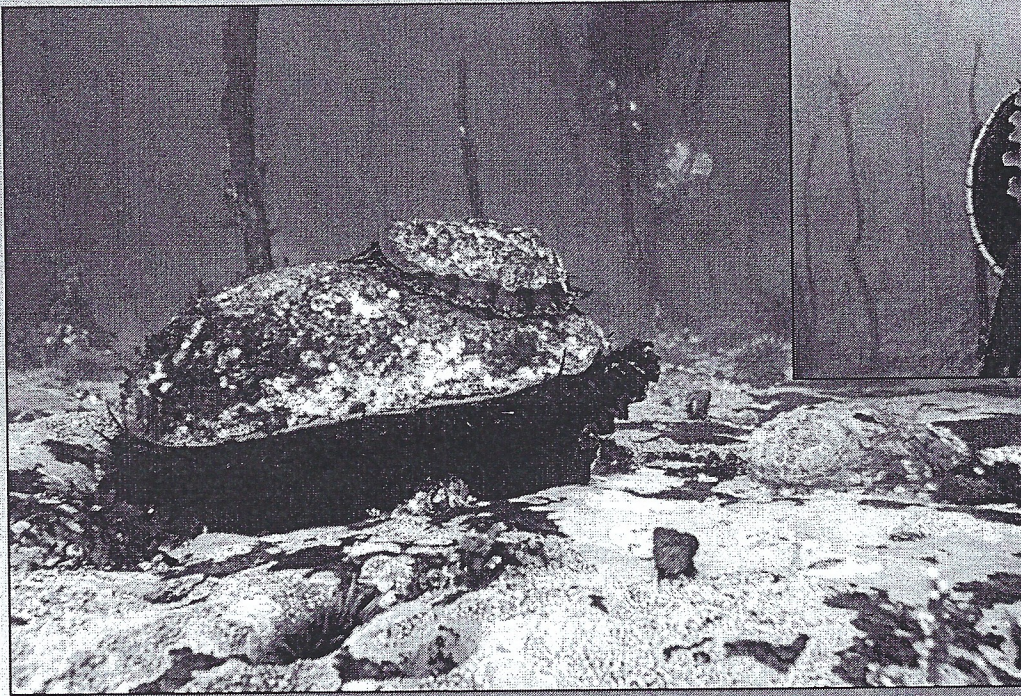


L. Rogers-Bennett (CDFW)

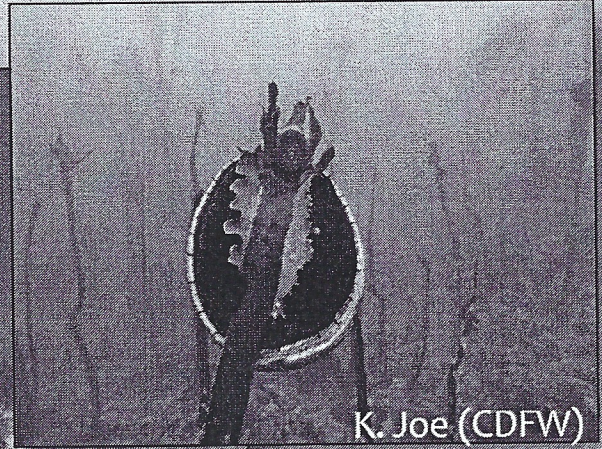


A. Weltz (CDFW)





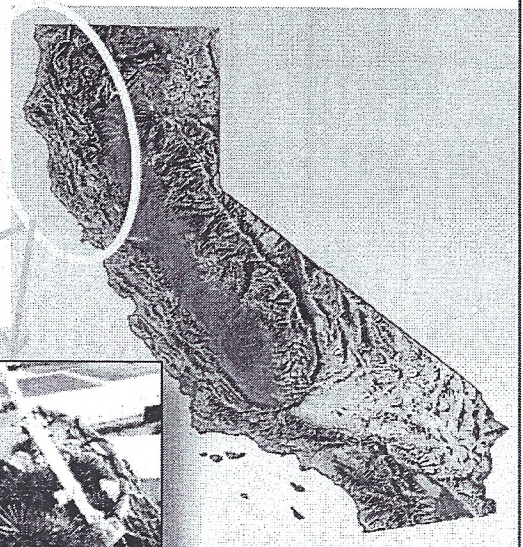
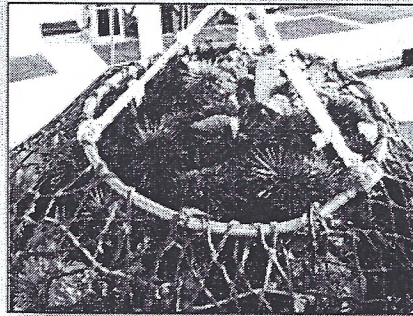
A. Maguire (CDFW)



K. Joe (CDFW)



- **Recreational Red Abalone**  
~\$44 million dollars (non-market value)
- **Commercial Red Sea Urchin**  
~\$3 million dollars (ex-vessel value)





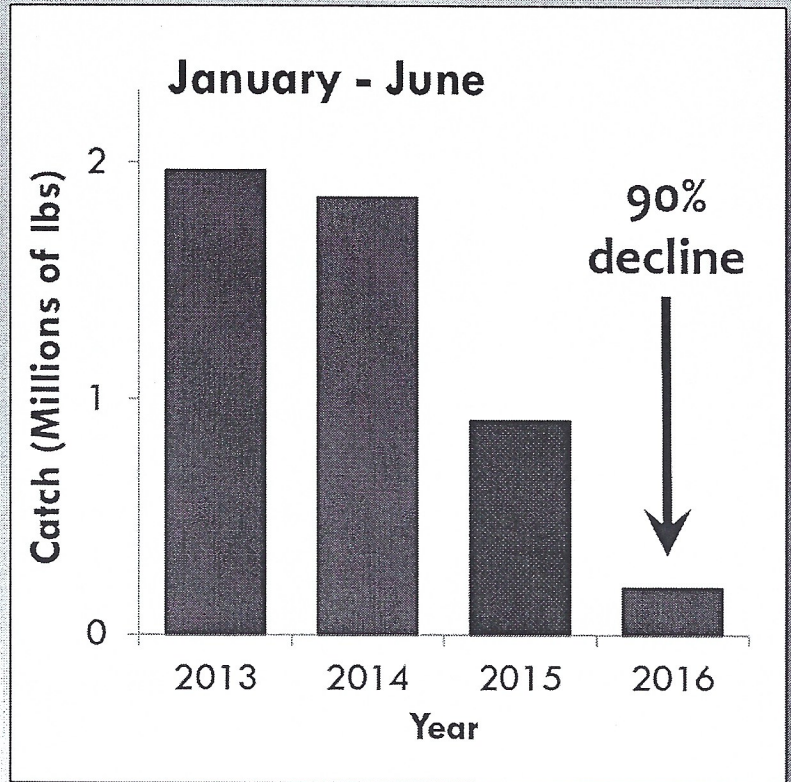
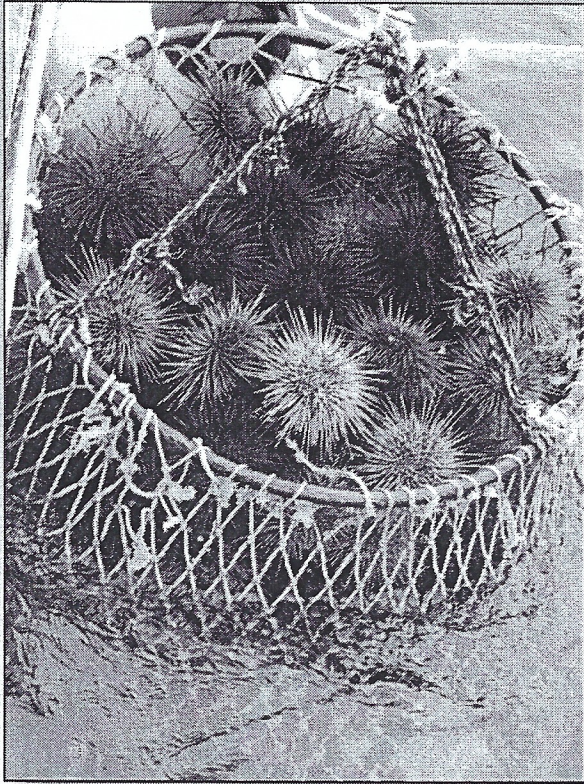


**66% drop  
in north coast urchin  
catch and fishery value  
in 2015**



Photo by: S. Holmes  
(Abalone Diver)







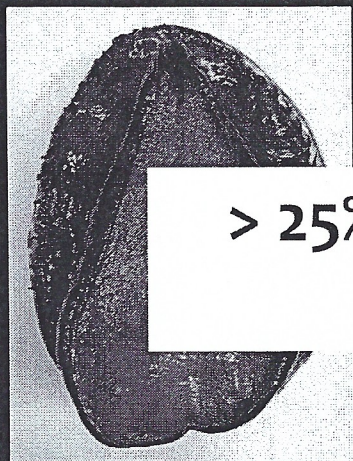
# Red Abalone Health Assessment

Creel surveys

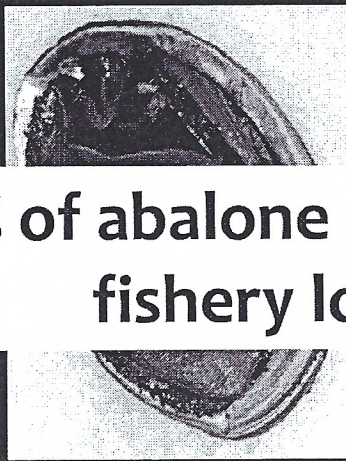
Sonoma, Mendocino, and Humboldt

Spring 2016

~6,000 abalone inspected



Body Shrinkage  
Score 0



Body Shrinkage  
Score 1



Body Shrinkage  
Score 2

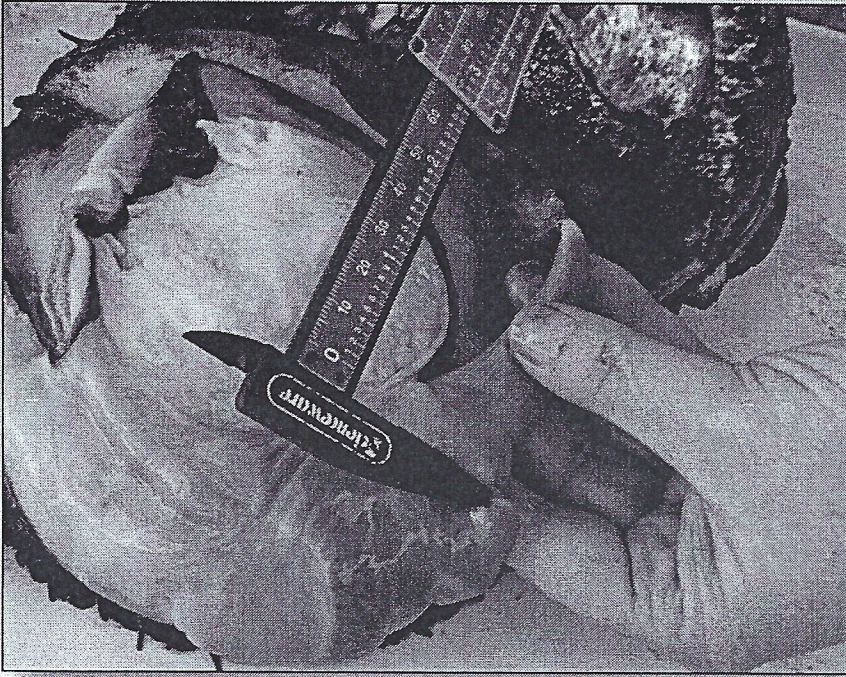


Body Shrinkage  
Score 3

**> 25% of abalone shrunk at key  
fishery locations**

J. Moore (CDFW)





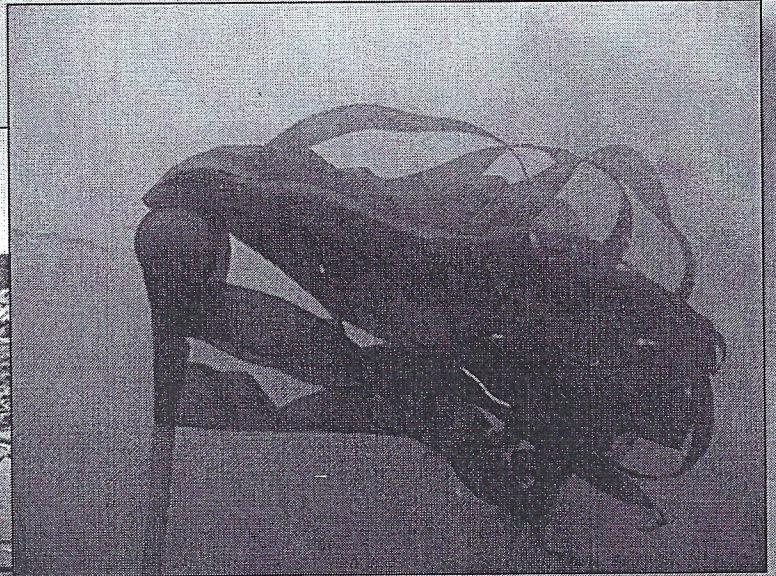
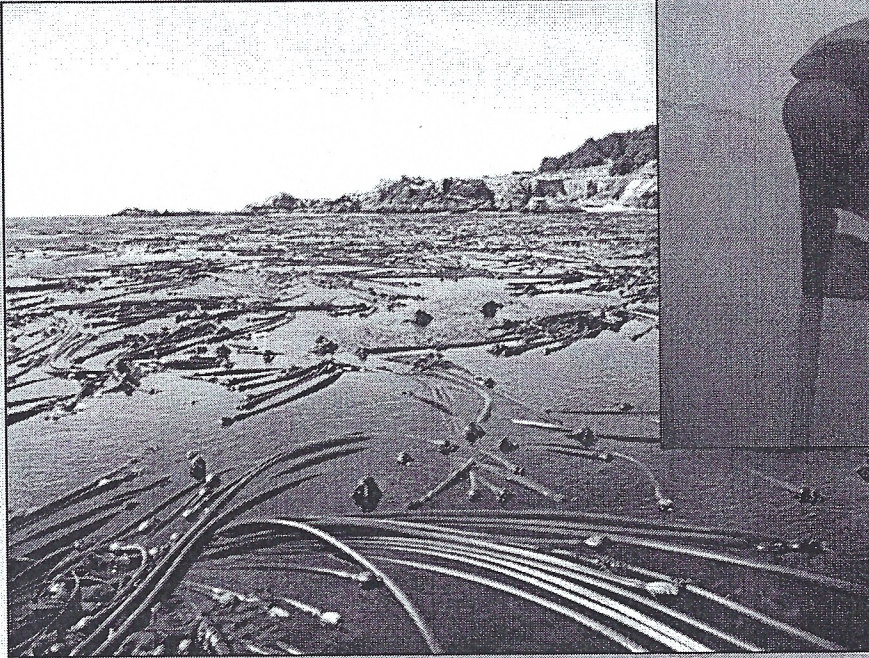
**Body mass:**  
20% reduced

**Reproduction:**  
>90% reduced



# Kelp Recovery in 2016?

So far, very patchy



K. Joe (CDFW)



# Van Damme State Park

## April 2016





# What Are We Doing?

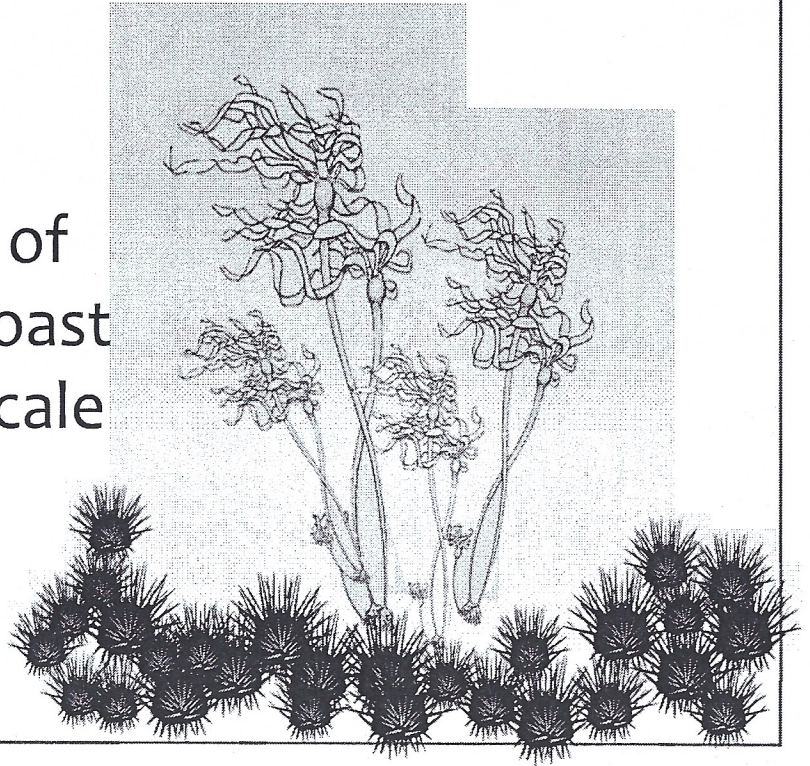
K. Joe (CDFW)

- Continued monitoring and targeted research
- Alert policymakers, industry, science community, and the public
- Form partnerships to develop solutions



# CDFW Kelp Recovery Goals:

- Assess kelp recovery potential in 2016
- Establish small areas of recovery along the coast to aid future larger-scale recovery





# Outreach and Media:

- CDFW blog and Facebook page (March 2016)
  - Top-read article on CDFW blog
  - >8,800 views
- Presentations to local and state government, fishing groups, and universities
- TV, newspaper, and radio interviews

*CDFW Abalone webpage*

<https://www.wildlife.ca.gov/conservation/marine/invertebrates/abalone>



# Developing Partnerships

- Urchin industry
- Pomo Nation
- The Nature Conservancy
- Universities
- Citizen Volunteers



A. Maguire (CDFW)





K. Joe (CDFW)

**Dr. Cynthia Catton**

Marine Region

Invertebrate Management Project

[Cynthia.Catton@wildlife.ca.gov](mailto:Cynthia.Catton@wildlife.ca.gov)