

# Urchin divers to become scientists

## They'll join UCSB students in collecting data for survey of marine habitats

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Sea urchin divers are being enlisted for an underwater survey that will help steer the course of local marine habitats.

Today and Sunday, about 17 divers from Ventura and Santa Barbara counties, along with students from UCSB, will learn what to look for in California's near-shore rocky reefs, how to classify what they find and what it all means to the ecosystem.

The hope is that fishery management types and the public in general will make decisions about the marine environment based on science and not emotion.

Leading the class at UCSB is Craig Shuman, environmental director of Reef Check California, part of the nonprofit international Reef Check Foundation.

Tapping people whose livelihoods depend on the ocean makes perfect sense for researchers, said Mr. Shuman, who patterned the project on research from his doctoral dissertation involving surveys done by illiterate fishermen in the Philippines.

"Oftentimes the fishermen are the best surveyors out there," he said. "It's just the matter of giving them the tools to translate the data they collect into a scientific language."

Fishermen of all types "want a bountiful ocean for their children," Mr. Shuman added, "they just disagree on how to get there."

The divers will be looking for specific "indicator species" of fish, invertebrates and algae.

In the summer, survey sites will be chosen and the real work can begin.

Reef Check has the backing of the state Department of Fish and Game, and its protocol was peer reviewed by the department's Scientific Advisory Team to be compatible with existing regulatory and academic monitoring programs, according to Mr. Shuman.

Helping to sell the project to fishermen is Reef Check's pledge to do unbiased research.

"We're kind of unique," said Mr. Shuman. "We don't do any advocacy.

We do sound science. We're giving the community the tools to go out and monitor their own local resources."

And whether it's a person who makes a living off the ocean or one who goes there for recreation, "the underlying thread is their love and passion for the ocean," Mr. Shuman said.

You don't have to talk to longtime Santa Barbara urchin diver Jeff Maassen long to sense his passion: "I'm a homeowner here, not a transplant. That underscores my feelings about caring for the environment, my backyard."

Mr. Maassen, who helped organize the survey with Mr. Shuman and serves on the advisory board of Heal the Ocean, said, "We're excited that we're going to work collaborative with the scientists to collect data to measure the health of the ocean."

Urchin diving has been Mr. Maassen's calling for half of his 50 years and he understands the effects fish and man have on his workplace — and he notes that he and others are willing to keep the ocean healthy.

"We're open-minded and will embrace any science that has been peer reviewed," he said. "That means it's looked at by others and is not just looked at as the gospel."

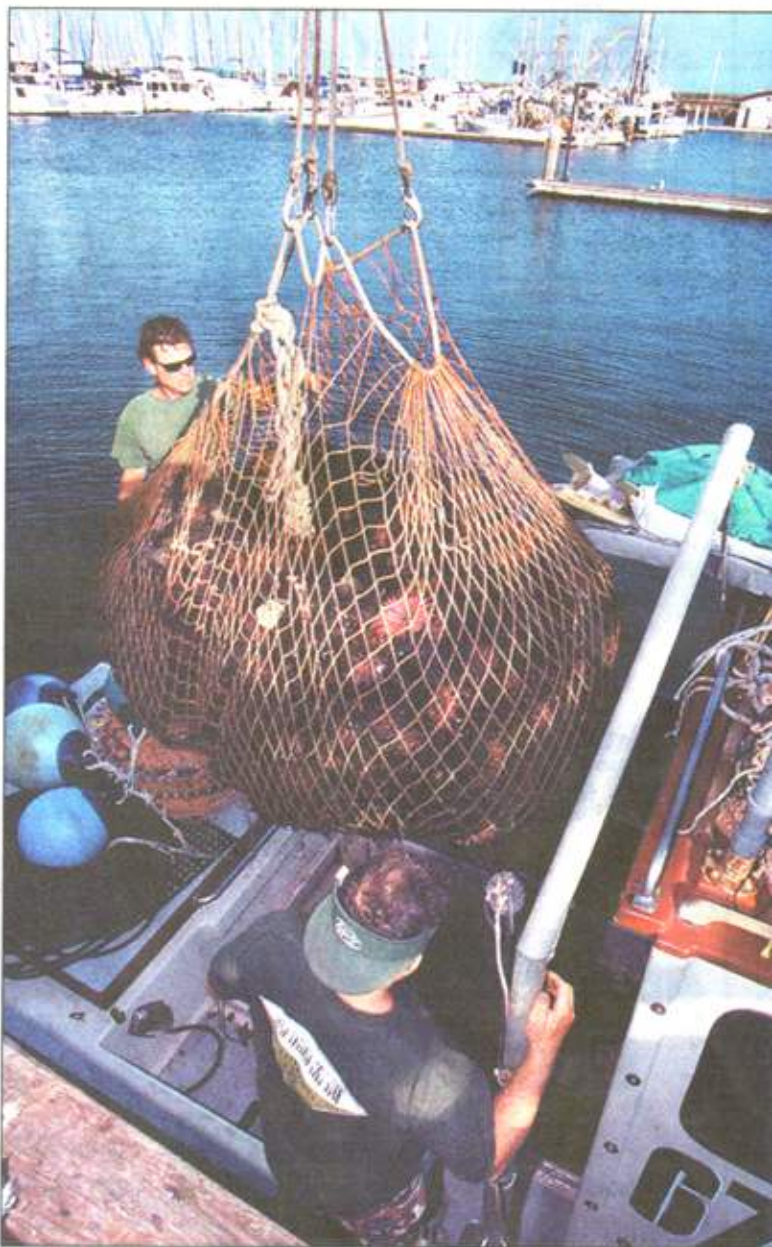
Many scientists, Mr. Maassen added, get a grant and churn out "some flimsy study"; he likened their work to saying coffee's good for you this week, bad for you the next.

His hope is that fishermen's participation in surveys like these will result in a robust sea for all.

"A healthy environment supports a healthy ocean," he said. "Our livelihoods come from the sea. I recreate in the ocean, I derive my living from the ocean. That being said, we all benefit from healthy oceans."

"There are different impacts to the ecosystems: fish eating fish, sea otters eating abalone . . . man's influences," Mr. Maassen said. "With this survey, we'll be establishing baseline data to show changes over time."

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STEVE MALONE / NEWS-PRESS FILE

About 17 urchin divers from Ventura and Santa Barbara counties have been enlisted to gather information for an underwater survey of near-shore rocky reefs.

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**Craig Shuman**, environmental director of Reef Check California