

UC SANTA BARBARA

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## **Gaines Named Winner of Top Marine Conservation Award**

Steven Gaines, director of the Marine Science Institute at UC Santa Barbara and acting vice chancellor for research, has been named one of five scholars worldwide to win the most prestigious award honoring and investing in applied ocean conservation science and outreach.

He has received a 2003 Pew Marine Conservation Fellowship, which includes a \$150,000 grant over three years to carry out innovative, interdisciplinary projects addressing challenges facing marine environments around the world.

Below is the text of the press release from Pew Fellows Program in Marine Conservation.

**Steven Gaines Receives Pew Marine Conservation Fellowship to Plan Network of Marine Reserves along California Coast**

September 29, 2003

(Boston) -- Marine ecologist Dr. Steven Gaines, director of the Marine Science Institute at the University of California, Santa Barbara, has received a Pew Marine Conservation Fellowship. He is one of only five individuals selected this year to receive a Pew Marine Conservation Fellowship, the world's most prestigious award honoring and investing in applied ocean conservation science and outreach. Each Pew Fellow receives \$150,000 over three years to carry out innovative,

interdisciplinary projects addressing challenges facing marine environments around the world.

Gaines will use the fellowship to help implement California's Marine Life Protection Act (MLPA). Signed into law in 1999, the MLPA requires California to establish a statewide network of coastal marine reserves. Implementing the MLPA requires a science-based process, involving the active participation of marine experts, to plan and create a network of marine protected areas along the state's extensive coastline.

Gaines brings to this challenge a wealth of scientific expertise in marine reserves and hands-on legislative planning. He is a highly esteemed marine ecologist who has researched marine conservation, the design of marine reserves, the impact of climate change on marine habitats, and the relationships between ocean circulation and the dynamics of marine species.

Many scientific studies have described the serious and worsening state of the world's oceans. A combination of overfishing, habitat loss, and pollution have caused steep and sudden declines in many marine species. A 2003 study published in Nature magazine reported that 90 percent of large fish-tuna, marlin, swordfish, sharks, cod, halibut, flounder, and skate-have been killed just since the early 1990s. Continued destruction of the oceans will end by wiping out all the life-human life included-that depends on their bounty. Although ways out of this crisis have been slow in coming, the state of California has taken a major pioneering step toward a workable solution in passing the MLPA.

A marine reserve-sometimes called a "no-take" area-protects the entire ecosystem that it encompasses, from fishes, plants, and bird life to the habitats that they depend on. A marine reserve protects against habitat destruction as well as all extractive activities, such as fishing, and drilling for oil and gas. It is also often called a "no-take" area. A 2002 report, "The Science of Marine Reserves" by the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), suggests that the larger the reserve or collection of reserves, the greater the potential effects and the more species that benefit. Few extensive marine reserves exist, however. Creating a single large reserve is often not politically feasible, and has been done very rarely. Networks of smaller reserves are only beginning to emerge. Far less than 1 percent of the world's oceans are protected in any type of marine reserves, even though evidence is rapidly increasing that marine reserves can produce many benefits-for

humans as well as ocean life-and can produce them quickly for some species.

Because of California's extensive coastline, the diversity of its sea life, and the number and size of the commercial industries that depend upon its oceans, the MLPA has the potential to usher in enormous changes in how marine life is managed. Gaines says that a successful network of marine reserves in California would "be a landmark event for marine animals and plants. California is so big that an effective network of reserves along its entire coast could be the first system of reserves approaching a size where it benefits entire species." An effective system of marine reserves will help build the long-term future of California's fisheries. Stronger fisheries in turn will positively affect the economies of industry sectors and livelihoods that depend upon fishing.

Steven Gaines will help to ensure that science plays a prominent role in the implementation of the MLPA and to set the groundwork for evaluation. The implications for the future of the world's oceans could be enormous. According to Gaines, "Good scientific information on how marine reserves should be designed has only recently emerged. In the past, reserve designs have relied heavily on theory formulated for terrestrial ecosystems, or on no theory at all."

Gaines is a lead investigator for PISCO, studying marine ecosystems on the west coast of the United States from Oregon to Southern California. He also is a lead investigator for the Santa Barbara Coast Long Term Ecological Research team, which is examining connections between coastal watersheds and the ecology of kelp forests. Gaines was a senior editor for an international working group at the National Center for Ecological Analysis and Synthesis (NCEAS) that wrote the "The Science of Marine Reserves."

Gaines received his Ph.D. in zoology in 1983 from Oregon State University. For the next four years, he was a postdoctoral fellow and research scientist at Stanford University, where he worked on the dispersal of marine larvae by ocean currents and its impact on the ecology and management of marine populations. In 1987, he joined the faculty of Brown University and became an associate professor. Since 1994 Gaines has been professor of ecology, evolution, and marine biology at the University of California at Santa Barbara and currently serves as acting vice chancellor for research, in addition to directing the Marine Science Institute.

In addition to Gaines, the four other 2003 Pew Marine Conservation Fellows are Rainer Froese of Germany, Kristina Gjerde of Poland, Dennis Kelso of the United States, and Ana Parma of Argentina. More information about all the Pew Fellows is available on the PFP website ([www.pewmarine.org](http://www.pewmarine.org)).

### Information about the Pew Fellows Program in Marine Conservation

The Pew Fellows Program in Marine Conservation annually awards five fellowships of \$150,000 each, which contribute to advancing solutions to the oceans' most pressing problems. The program seeks to foster greater public understanding of the direct and crucial relationship between life in the sea and life on land. By supporting the ingenuity and leadership of its distinguished Fellows, the program calls awareness to the critical state of our oceans and demonstrates viable solutions to some of the world's most urgent conservation challenges.

The Pew Fellows Program is an initiative of The Pew Charitable Trusts, which is headquartered in Philadelphia, Pennsylvania. The Pew Charitable Trusts are among the largest philanthropies in the United States, supporting nonprofit activities in the environment, culture, education, health and human services, public policy, and religion. Through their grantmaking, the Trusts seek to encourage individual development and personal achievement, cross-disciplinary problem solving, and innovative practical approaches to meeting the changing needs of a global community.

### Related Links

[Pew Fellows Program in Marine Conservation](#)

[Steven Gaines Web Site](#)

[Science of Marine Reserves Report](#)

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## About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society.

All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.