

Unlocking the Mysteries of the Sea

"BASICALLY," muses Mary Silver, peering into a sample of tiny drifting algae (plankton) taken from the Santa Cruz wharf, "I'm an old-fashioned naturalist who looks at organisms with my eyes and my microscope."

Her research toolkit is, of course, much more high-tech than that, including underwater robots and remotely operated vehicles for deep ocean sampling. But Silver's perspective as a naturalist is at the heart of her career, which now spans more than three decades.

The oceanographer, 66, is best known for her landmark "marine snow" research, revealing the key role this constant shower of mainly organic detritus plays in ocean ecosystems. In recent years, Silver has shifted her attention to the harmful algal blooms (HABs) that plague coastal waters, tracing how HAB toxins cascade through marine food webs to poison fish, birds, marine mammals, and eventually humans.

Silver's research accomplishments more than secure her place in the annals of oceanography, but she is also widely recognized for her pioneering role as a woman field scientist.

"When I was a grad student at Scripps Institution of Oceanography in the mid 1960s, almost all researchers were male," recalls Silver. She was one of the first women to serve as chief scientist on a Scripps research vessel—and



when the cook on that voyage asked her to mend his pants, "I did," she says dryly, "with a great sense of both the irony and the humor of the situation!"

In 1972, Silver became the third woman faculty member of UCSC's Division of Natural Sciences. She was only the second to have children, and had few role models as she balanced the birth of her first child with the demands of tenure review. According to fellow UCSC professor of ocean sciences Peggy Delaney, "Mary led the way for people with strong family commitments to go to sea; we wouldn't be here without her."

Silver is a valuable mentor for grad students and young faculty—and she is equally dedicated to undergraduate teaching. Top faculty rarely teach large introductory classes, but Silver loves the 200-student course *Life in the Sea*. "Students are so open-minded and excited," she says. "I learn as much from them as they do from me."

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Silver plans to retire at some point but will continue teaching and research, especially, she says with enthusiasm, "spending time at sea." She will also play more music (she is an accomplished pianist and a novice hammer dulcimer player) and pursue an emerging love of photography. Silver is rapidly gaining recognition for her exquisite shots of microscopic marine organisms.

—VICTORIA BOLAM