

LINDSEY CARR BY RAYNELLE RINO



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As an avid diver, Lindsey Carr spends much of her time in the San Francisco Bay investigating food web dynamics. Her research contributes to restoration techniques in restored and unrestored beds of eelgrass, *Zostera marina*. Knowing which species play important roles in the health of eelgrass beds not only provides clues into the system's ecology, but also gives Lindsey fundamental information needed in order to perform successful restoration techniques in this declining habitat.

As an undergraduate at UC Santa Barbara, Lindsey had the opportunity to work in coral reef systems in Tahiti. Now a SFSU Master's student, Lindsey works in [Dr. Katharyn Boyer's](#) lab at the [Romberg Tiburon Center for Environmental Studies](#) developing restoration techniques for the Bay's eelgrass beds. Lindsey's research aims to answer important ecological questions such as why eelgrass beds are declining, who are the participants in the eelgrass community, and how do they contribute to maintaining a productive habitat?

"The most important thing that I have learned is how to design, execute and run statistical tests on experiments."

Currently, she has found the community to consist of mostly invasive small animals called epifauna who graze on algae found on the surface of eelgrass blades. One interesting discovery she and others in the Boyer lab have made while diving in the beds was the unusual feeding behavior of an amphipod, *Amphithoe valida*. This amphipod, native to New England, had never been reported to consume eelgrass tissue, only the algae on the surface of the blades. It may be that an increase in epifauna limits this resource, and causes grazers to switch from epiphytic algae to eelgrass plant tissue. Lindsey argues that this increase in



epifauna may be due to a decline in fish populations that would normally consume the epifauna, bringing the food chain into balance. One restoration technique involves transplanting whole eelgrass from a donor site into a restoration site; hence, epifaunal feeding behavior and trophic dynamics may be very important to restoration success.

Lindsey hopes to contribute baseline data on the

importance of fish and epifauna populations in the Bay that will inform future conservation and restoration efforts. She recently presented a poster at the [California Estuarine Research Society](#) conference at the [Bodega Marine Laboratory](#).

Lindsey will graduate in May 2008, and is currently applying to Ph.D. programs. She hopes to work in the Caribbean implementing coral reef restoration techniques.

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