

# Recovery Planning for the White Abalone

by Melissa Neuman



Photo by Kevin D. Lafferty



NOAA photo

The white abalone (*Haliotis sorenseni*), a marine mollusk highly prized for its tender white meat, is native to the Pacific coast of North America from Point Conception, California, to Punta Abreojos in Baja California, Mexico. It was listed as an endangered species in 2001, primarily due to excessive take by commercial and recreational fisheries. The status review for this species estimated that only 1,600-2,300 white abalones remained and that, without intervention, the species would disappear by the year 2010.

The following threats, which were key factors identified in the final listing determination, continue to imperil white abalones:

- critically low levels of abundance (less than 0.1 percent of the estimated pre-exploitation population size), causing repeated recruitment failure and further population decreases;
- illegal take;
- habitat loss and increased susceptibility to disease through climate change;
- potential inadequacy of regulation for populations in Mexico; and
- hybridization with other species.

Recommendations for the best means of reducing or stopping these threats will be an important outcome of the recovery planning process.

The Southwest Regional Office of the National Oceanic and Atmospheric Administration (NOAA) Fisheries, located in Long Beach, California, began preparing a recovery plan for the white abalone in July 2002. It appointed a recovery team consisting of state (California Department of Fish and Game), federal (NOAA Fisheries, National Park Service), academic (University of

California at Davis and San Diego, University of Arizona, University of Washington), and not-for-profit organization (Channel Islands Marine Resource Institute, Carlsbad Aquaculture and Research Institute) scientists.

Since then, NOAA Fisheries and the recovery team have been working together to determine the scope of the plan and the appropriate level of public and private involvement in the planning process (for example, when and how to form implementation teams; how to involve commercial and recreational anglers; how many public meetings to hold; how to establish international partnerships). A recovery outline and terms of reference were drafted within six months after the formation of the recovery team, and these documents have helped form the framework for the recovery plan.

The major goals of the recovery plan are still under discussion. Preliminary drafts focus on the need to: 1) assess and monitor populations in the wild in cooperation with the state of California and with other federal agencies; 2) protect white abalone habitat; 3) rebuild



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the white abalone population throughout its range by establishing a captive breeding and enhancement program; 4) investigate threats posed by disease; 5) create international partnerships; and 6) develop a public outreach plan.

The most challenging aspect of recovering white abalones will be to overcome the lack of basic biological information for this species. The habitat is remote (depths greater than 35 meters or 115 feet) and juvenile white abalones are cryptic. Therefore, estimates of fecundity, larval survival, larval dispersal distances, recruitment rates, growth

rates, and overall population size in the wild are either unknown or imprecisely known. The recovery plan will emphasize the need to identify critical research questions that must be answered to gain a better understanding of the basic ecological needs of white abalones and, ultimately, to ensure their survival.

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