

Posted on Sun, May. 06, 2007

## TRIBUNE EXCLUSIVE REPORT

# Dark days for black abalone

## A spreading bacterial disease is threatening the species' last major habitat — Big Sur — and could lead to an endangered listing

By David Sneed

Biologists monitoring San Luis Obispo County's coastline have noticed a disturbing sight over the past several years: tide pools littered with the empty shells of black abalone.

The big marine snails are being killed by a devastating bacterial disease called withering syndrome. Exacerbated by global warming, the condition is slowly working its way up the California coastline. Evidence of the disease can be found along nearly the entire length of the San Luis Obispo County coastline and is threatening the abalone's last stronghold—Big Sur.

The problem has become so bad that the Center for Biological Diversity petitioned federal officials to list the black abalone on the Endangered Species List. Last month, the National Marine Fisheries Service declared the abalone a candidate for the list. A decision is expected by the end of the year.

It is unclear what such a listing would mean for beachgoers, but wildlife officials say it is unlikely that tide pools and other areas along the coast where abalone are found would be placed off limits.

"The plight of the black abalone is indicative of what we have done to our oceans," said Brendan Cummings, ocean program director for the Center for Biological Diversity. "The combined effects of global warming and overfishing are pushing the animal to the brink of extinction."

### Once abundant

The black abalone is one of about a half-dozen abalone species in California. They are unique in that they are the only marine mollusk commonly found in rocky intertidal areas, those places that are alternately submerged and exposed by the tides. It is the state's largest invertebrate tide pool denizen.

Black abalone were once abundant, occurring in densities of up to 120 individuals per 10 square feet. However, a disease that causes the abalone to shrivel and die emerged in the Channel Islands in the 1980s.

Withering syndrome quickly wiped out the black abalone in most of the Channel Islands and Southern California. The disease appears to thrive in warmer water and expanded its range northward with each El Niño weather event.

Now, the disease has progressed all the way to the San Luis Obispo/Monterey county line, said Pete Raimondi, a biologist and intertidal expert at UC Santa Cruz.

"We see evidence of it in San Luis Obispo County, but there's no catastrophic decline like we've seen in other areas, and it's moving up much more slowly," he said.

Marine biologists fear that the higher water temperatures associated with global warming will spread the disease to the northern extent of the species' range at Coos Bay, Ore.

Cummings thinks the listing of black abalone is a foregone conclusion.

"There is scientific agreement the species is in trouble," he said. "Unless they found a humongous, disease-resistant population somewhere — which is highly unlikely — I'd be very, very surprised if they decide not to list it."

Raimondi and other biologists hope that a listing of the black abalone will free up research money to study withering syndrome. Although there is no cure for the disease in the wild, researchers want to find disease-resistant abalone, breed them in captivity and reintroduce them to areas where they have been wiped out.

Populations of black abalone that survived the onslaught of withering syndrome have been found in San Nicholas and San Miguel islands in the Channel Islands. They are good candidates for a captive breeding program, said Melissa Neuman, a fisheries biologist with the National Oceanic and Atmospheric Administration.

### **Habitat protection**

If protected, the black abalone will join a list of endangered species that are dramatically influencing California's 1,100-mile coastline. Sea otters and western snowy plovers have already reshaped how State Parks and other agencies manage coastal oceans and beaches in San Luis Obispo County.

Low-impact tide pooling is not considered a significant threat to abalone. For this reason, placing large sections of the coast off limits to beach-goers would do little to help the abalone, Neuman said.

But some prime abalone habitat could receive additional protection. The most likely places for that would be areas that have disease-resistant abalone, she said.

Nick Franco, district superintendent for State Parks in San Luis Obispo County, said protecting tide pools is important but the department seldom resorts to eliminating public access and would only do so if the federal government ruled that current park protections are insufficient.

"State parks are all about access," he said. "How do we allow people to access these resources without destroying them? The way we do that is through education."

Installing informational signs warning park visitors of the fragility of tide pools is the main way of educating the public. The department also does not have any plans to encourage access to tide pools at San Simeon State Park, Franco said.

Wildlife managers also hope a listing of the abalone will free up more resources to fight another threat — poaching. Abalone meat makes a succulent treat, but commercial and recreational harvesting of all abalone is banned south of San Francisco.

### **Poaching a problem**

Adding the black abalone to the Endangered Species List would make poaching them a federal offense, which can carry stiffer penalties. It could also free up more money for stepped-up anti-poaching patrols by state and federal game wardens and park rangers.

Tide pool researchers have found evidence of abalone poaching on portions of the Hearst Ranch that were recently added to San Simeon State Park and are now open to greater public access, Raimondi said.

Evidence of poaching includes finding abalone shells with damaged edges where they have been pried off the rocks and an abundance of larger shells rather than a mixture of shells of all sizes.

"Withering syndrome is an indiscriminate killer, while poachers tend to target larger abalone," Raimondi said.

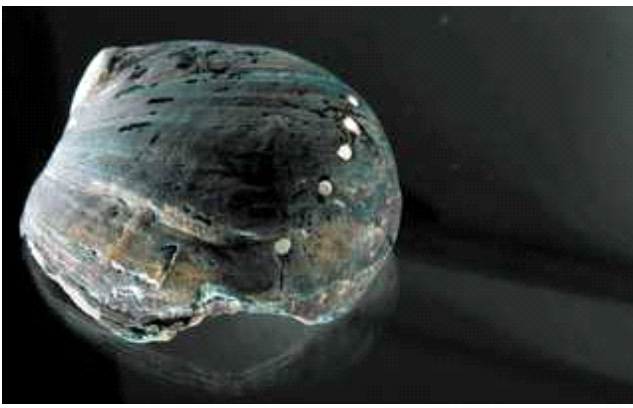
But catching poachers is difficult. Wildlife managers say it often takes a coordinated effort to spot and intercept a lone poacher on an isolated stretch of coastline.

"You have to be looking from sea and land to catch those guys," Neuman said.

*Reach David Sneed at 781-7930.*

Should black abalone be named to the endangered species list?

---



Tribune photo by David Middlecamp

**THIS IS NO SHELL GAME** Once abundant on the Southern California coast, black abalone populations are under siege from a bacterial disease spreading north from the Channel Islands. Recently, further threats to the species are coming from poachers, especially on the newly opened stretch of beach along the Hearst Ranch.



- [PDF Petition to place black abalone on endangered species list](#)
- [PDF Federal notice showing black abalone is on endangered species list](#)

## BLACK ABALONE THREATS

**Disease** — Withering syndrome has reduced black abalone populations by 90 percent in Southern California. Once removed from an area, it is almost impossible for species to come back.

**Poaching** — Abalone of all kinds is a sought-after delicacy. Black abalone populations are particularly vulnerable to poaching because they are exposed at low tide.

**Global warming** — There is a strong correlation between warmer water temperatures and the spread of withering syndrome. For example, the discharge cove at Diablo Canyon nuclear power plant, which is artificially warmed by the plant, was the site of the first Central Coast outbreak of the disease.

**Sea otters** — Abalone is an important food source for otters. Sea otters are a protected species and popular with the public, so very little can be done to curb sea otter predation of abalone.

**Habitat destruction** — Human access to rocky intertidal areas and some kinds of coastal development can damage black abalone habitat. — David Sneed

---