

[« back](#)

Ancient Humans Knew Sustainable Fishing

Michael Reilly, Discovery News

June 1, 2009 -- Early humans living off the coast of California may have been the first "farmers" of the sea.

By managing sea otter populations they maximized their harvest of abalone and mussels, making them pioneers in the art of sustainable [fishery management](#), according to a new study.

Jon Erlandson of the University of Oregon and team of researchers collected thousands of shells from ancient settlements of the Chumash people in the Channels Islands near Santa Barbara, Calif., dating back to around 12,000 years ago.

They found that while people were harvesting millions of shellfish annually from the local kelp forest ecosystem, shell sizes remained relatively stable even as the local population grew and became more technologically advanced.

The trend suggests Channel Island settlers may have been the first to work out a sustainable form of [fishing](#). When certain areas became depleted, they simply moved to another, effectively imposing a "no-take zone" in the old fishing grounds. And when harvests dwindled throughout the region, they switched to hunting and eating otters until shellfish numbers recovered.

In previous studies, researchers have documented human impacts on shellfish populations in the Mediterranean Sea as long as 25,000 years ago. And evidence from South Africa suggests humans were [hunting the seas up to 120,000 years ago](#).

Related Content:

- [Ancient Fishermen Lured Fish With Fire](#)
 - [Slide Show: Ancient Fishing Gear](#)
 - [HowStuffWorks.com: Fisheries](#)
 - [More Discovery News](#)
-

"For most of the 20th century, we thought any intensive use of marine resources was limited to the last 10,000 years, the same time as the agricultural revolution," Jon Erlandson of the University of Oregon said. "But you have to understand that humans have been messing with Mother Nature for a long time."

Erlandson presented his findings last week at the Oceans Past conference in Vancouver, British Columbia.

Daniel Pauly of the University of British Columbia argues the shells are signs of opportunism, not management.

"Management implies you do something intentionally, you have a plan, a goal," he said. "I think these people had a strategy to exploit resources, and when it had a bad result, they switched from shellfish to otters."

Still, Pauly said the work could teach us a valuable lesson about managing modern day fisheries. About one-third of the global fish catch goes to feeding farmed animals like pigs, chickens, salmon and tuna. And it takes about four kilograms (8.8 pounds) of smaller fish like sardines or anchovies, to produce one kilogram (2.2 pounds) of tuna or pork.

Just by eating those smaller fish, Pauly said we might greatly reduce pressure on global fisheries.

Related Links:

[Discovery Green](#)

[Discovery News Blog: Earth Pub](#)

[Discovery Earth for images, interviews and more.](#)

[« back](#)

SITE SEARCH

SUBSCRIBE TO OUR [NEWSLETTERS](#)

CREDITS [DCL](#) |

DISCOVERY SITES [Discovery Channel](#) / [TLC](#) / [Animal Planet](#) / [Discovery Health](#) / [Science Channel](#) / [Planet Green](#)
/ [Discovery Kids](#) / [Military Channel](#) /
[Investigation Discovery](#) / [HD Theater](#) / [Turbo](#) / [FitTV](#) / [HowStuffWorks](#) / [TreeHugger](#) /
[Petfinder](#) / [PetVideo](#) / [Discovery Education](#)

VIDEO [Discovery Channel Video Player](#)

SHOP [Toys](#) / [Games](#) / [Telescopes](#) / [DVD Sets](#) / [Planet Earth DVD Sets](#) / [Gift Sets](#)

CUSTOMER [Contact Us](#) / [Free Newsletters](#) / [RSS](#) / [Sitemap](#) / [TV FAQs](#)

SERVICE

CORPORATE [Discovery Communications, LLC](#) / [Advertising](#) / [Careers @ Discovery](#) / [Privacy Policy](#) / [Visitor Agreement](#)

ATTENTION! We recently updated our privacy policy. The changes are effective as of October 30, 2008. To see the new policy, [click here](#). Questions? See the policy for the contact information.

Copyright © 2009 Discovery Communications, LLC. The number-one nonfiction media company.