



Island Press launches a major outreach campaign surrounding the release of Callum Roberts' new book, *The Unnatural History of the Sea*.

This summer, Island Press has launched an outreach campaign to coincide with the release of *The Unnatural History of the Sea*. The author, Callum Roberts, is a professor with the University of York (United Kingdom). He is one of the world's most well-regarded marine conservation biologists and an outspoken advocate for marine protected areas.

His new book is an account of how the seas have been transformed by human exploitation for far longer than previously supposed. He describes how fishing has transformed the seas, disputing the myth that these waters remained wild and their resources barely tapped until the late 20th Century expansion of industrial fishing. The truth, as Roberts describes, is that fishing profoundly changed the marine environment long before modern times. Using a mixture of history and science, this book forges a new understanding of human relations with the sea. The last section is devoted to strategies to preserve and reinvigorate the sea, with particular emphasis on the value of marine protected areas and other conservation measures.

The following review of *The Unnatural History of the Sea* was published on the front page of The Washington Post's Book World.

Jonathan Yardley

How humans imperil the oceans and all that lives in them.

By Jonathan Yardley
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THE UNNATURAL HISTORY OF THE SEA

By Callum Roberts

Island Press. 435 pp. \$28

There are times when the capacity of mankind to blind itself to plain reality is simply breathtaking. Thus to this day we still believe, as was universally believed two centuries ago, that the seas surrounding us afford an infinite source of wealth. As recently as half a century ago, two respected academics asserted in a book titled *The Inexhaustible Sea* that what the ocean "has to offer extends beyond the limits of our imagination -- that someday men will learn that in its bounty the sea is inexhaustible."

A boundless delusion. What informed scientists now know, as Callum Roberts writes in this measured but passionate and immensely important book -- a persuasive synopsis of existing scholarship augmented by the author's own research -- is that the resources of the sea are as limited as those of land and air, and that our penchant for exploiting them to the point of extinction is appalling.

To cite one especially egregious instance, the majestic bluefin tuna has been so over-fished that in [Japan](#) and other countries (this one included) where sushi is cherished, a single fish sells for \$100,000; apparently homo sapiens, ever self-interested, would rather pay the price than find something else to eat and give the bluefin a shot at survival. Today "there is probably only one bluefin left for every fifty present in 1940," Roberts writes. "The last of these regal fish are today pursued more relentlessly than ever. . . . The fish are now so valuable that it pays to employ planes and helicopters to scan the ocean, guiding boats in for the kill when fish are spotted. This isn't fishing any more -- it is the extermination of a species."

To be sure, it's not that everyone has been willfully ignorant of the sea's declining health. Nearly a century and a half ago a [Maryland](#) official told the State Oyster Commission that the oyster industry was dominated by reckless, uneducated men who paid no attention to consequences. In the official's words, the industry was "more like a scramble for something adrift," where every participant's goal was "to get as much as he can before it is lost."

Well, now to all intents and purposes, the oyster industry is lost. "Today," Roberts reports about the [Chesapeake](#), "the whole bay yields only 80,000 bushels a year, down from a peak of 15 million in the nineteenth century."

As Roberts makes plain, the history of fishing -- commercial fishing primarily and most flagrantly, but many instances of sport fishing as well -- is one of human selfishness persistently outracing attempts to bring it under control, to mandate restraint. And yet, though the evidence that Roberts presents of exploitation and destruction is damning, his book is not "a requiem for the sea." A marine biologist at the University of York in [England](#), Roberts is an optimist about the future, so long as that future includes national and international networks of protected areas and simple fishing reforms. Unfortunately, though, the very history that Roberts recounts suggests that attitudes held now for hundreds of years will be difficult if not impossible to change.

That history begins in the 11th century with a revolution in England and [Europe](#). Whereas in the past fishing had been done primarily inland, in freshwater lakes and rivers, now fishers turned to the sea. There were a number of reasons for this, ranging from improving fishing techniques to "deteriorating freshwaters" tainted by pollution and sewage, but what matters is that the sea was quickly seized upon as a principal source of food and that its exploitation began at once. As methods for preserving and transporting fish steadily improved -- and as coastal fishing grounds were rapidly decimated -- fishers moved ever farther away from home:

"There is a common theme in European expansion and exploitation of the sea. First, the explorers -- [Columbus](#), Cabot, Drake, Bering, Cook, and others -- set sail for God, country, fame, and wealth. They returned with tales of strange seas teeming with wildlife. Through books . . .

the possibilities for exploitation became known in Europe, stimulating a second wave of travel financed by merchant adventurers in pursuit of profit. Those voyages, although commercially motivated, were instrumental in extending the boundaries of the known world. As well as the animals slaughtered for commercial ends, sailors and travelers had major impacts on the fauna of islands and the sea, butchering millions of animals for provisions."

"Butchering" is the word, all right, but don't let that lead you into thinking that Roberts is a bleeding-heart sentimentalist. He readily accepts fish as a source of human sustenance, clearly enjoys eating fish himself, and recognizes that a large commercial fishing industry is inevitable and necessary in a populous, demanding world. But he is offended, as well he should be, by the barbarity that so often has characterized fishing and by "the destructive and wasteful way in which we fish." Exact and reliable figures are difficult to obtain, but scientists have estimated that "a quarter to a third of all animals caught are simply tossed back into the sea, most of them dead or dying." This is especially true of trawling, which was introduced in the 14th century and throughout its history has swept everything off the seabed and into its nets: not merely the fish being sought, but any other creatures that have the misfortune to get in the way.

As trawling expanded -- and particularly after the introduction of steam-powered commercial fishing ships in the 1870s, which increased incalculably the range and maneuverability of the fleet -- its depredations grew ever larger and more serious. A couple of decades before the introduction of steam, "fishers complained that the trawlers were wiping out fish stocks, especially by the destruction of fish spawn and immature fish," that "the trawl cleared the bottom and ruined their bait beds," that "crab populations were imperiled by soft crabs being crushed when shedding their shells" and that "the trawl broke up and dispersed schools of fish, driving them away." These complaints were motivated more by self-interest than by altruism, but they set a pattern that has been repeated and magnified ever since.

These, though, were complaints about coastal fishing. Now trawling is widely practiced in the open seas, as "distant-water fleets spread fisheries across the Atlantic from pole to pole." (The same is true of the Pacific, but Roberts admits he couldn't find enough documentation on the changes in Asian waters to write about them in detail.) Now, too, technology has greatly expanded the reach, and the devastation, of trawling. Global positioning devices attached to floating logs alert fleets to the whereabouts of fish:

"Purse-seine boats now seed the ocean with veritable forests of floating decoy logs and other fish-aggregating devices to bring together scattered shoals of fish. When they return, they scoop up the fish with ruthless efficiency, taking with them turtles, sharks, and dolphins -- whatever happens to be there. For some reason, logs preferentially attract juvenile tuna, so their take even of the target species is wasteful. By catching young tuna before they reach adulthood, purse seiners forgo much higher catches for themselves later, and they are also denying these tuna the chance to reproduce, putting future catches at risk. Where once the vast canvas of the sea was great enough for fish to lose themselves in, escaping capture, today even the high seas afford little refuge. New technology has given old fishing methods a far more lethal edge."

Against this gloomy backdrop, Roberts finds more than faint cause for hope. Progress has been made in reducing pollution of the coasts and oceans from sewage and other contaminants.

Marine reserves -- "places that are protected from all fishing" -- have had notable success in giving endangered species breathing room, but only .006 percent of the ocean is thus protected, and "we need fifty times more reserve areas to do the job well, spread across the waters of coastal nations and the high seas." Given that the fishing industry has a far louder and more persuasive voice in the halls of government than do the fish themselves, it is difficult to share Roberts's optimism. I am haunted by this passage:

"Perhaps geologists feel saddened by the loss of some remarkable gypsum formation rendered to dust for plasterboard. I don't know. But I certainly feel anguish on seeing coral glades leveled. It hurts to know we are losing species whose forms have never been described and perhaps have never been seen by people. They have shared our planet for countless millennia, living undisturbed lives deep in the sea. Extinction, the irrevocable loss of a species, causes pain that can never find relief. It is an ache that will pass from generation to generation for the rest of human history."

It is also nothing less than a global catastrophe, about which Callum Roberts has issued a powerful, galvanizing call to arms. Wishful thinking tells me that perhaps this time the call will be heard. Experience teaches another, and far gloomier, lesson. ·

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