

## NORTH ATLANTIC RIGHT WHALES: FROM HUNTED LEVIATHAN TO CONSERVATION ICON.

By DAVID W. LAIST. Baltimore, Maryland: John Hopkins University Press, 2017. ISBN 978-1-4212-2098-1. xviii + 432 p., chapter notes, appendix, index. Hardbound. US\$44.95; £33.50. Also available as an e-book.

As an ecologist who has conducted research on the North Atlantic right whale (*Eubalaena glacialis*) for the past 18 years, I think of myself as someone who knows a lot about right whales. However, after reading David Laist's fascinating and exhaustive history of this species, I have been humbled by how *little* I know of their entire history. *North Atlantic Right Whales* comprises 22 chapters. After an introductory chapter and three chapters on the natural history and evolution of the species, Laist devotes 10 chapters to the history of the human exploitation of right whales from AD 1000 to the present, and from the Bay of Biscay all the way to the east coast of Florida. The remaining chapters are dedicated to the modern issues facing right whales, with two chapters each on the major causes of their death: ship strikes (chapters 18 and 19) and entanglement in fishing gear (chapters 20 and 21). In the context of current, fraught discussion about the continued survival of right whales, Laist makes a compelling argument that to truly understand the scope of the modern-day problems, we need to place them in full, historical context. At this task Laist excels, bringing to light both the history of human impact on right whales and the more recent attempts to save them from extinction. I heartily recommend this book.

At present, there are approximately 450 North Atlantic right whales presumed to be alive, and the threat of extinction is very real. Laist places the extinction threat in a historical context, noting that for a population of a few hundred remaining whales, a reasonable recovery time is roughly 100 years, or about the length of three careers of a right whale biologist. When I started conducting research on right whales in early 2000, approximately 300–350 whales were presumed alive. Going back even farther to when I was born in 1971, Laist writes that “in the mid-1970's almost nothing was known about North Atlantic right whales other than that they were on the brink of extinction and were occasionally found along the East Coast of the United States” (p. 279). Going back about 100 years to when my grandmother was born in 1919, the picture was even more grim. Commercial harvest of right whales in the United States effectively stopped by the 1920s largely because there were essentially no right whales to be seen. Laist estimates that between 25 and 100 whales remained in the population and adds: “that any North Atlantic right whales survived to see the twentieth century is something of a miracle” (p. 266).

While the present population is considerably larger than the 50 presumed alive in 1920, in 2017 the population experienced an unusual mortality event, and so far in 2018 not a single right whale calf has been observed. As

compared to 1920, humankind's footprint on the oceans is now much different and much larger—leaving right whales with a heavy cumulative burden. Laist's crisply rendered history of this species' relationship to ours makes fascinating reading for anyone interested in the complexities surrounding the management and protection of endangered species, be they terrestrial, aquatic, or marine. This book would be as much at home in an introductory freshman seminar on conservation biology as it would in a graduate course on marine policy. Indeed, Laist's description of the regulatory environment reveals the many difficult decisions and compromises that have to be made; he laments throughout that many of these regulatory compromises have not favored right whales. If I have one quibble with the book, it is that this chapter would benefit from a timeline showing the different steps in the regulatory process.

But by offering readers a broad historical overview, Laist enables us to step back and put present-day conservation issues into a historical context. For example, since approximately 2011, the distribution of right whales seems to have changed. There are several hypotheses: one explanation is a climate-mediated shift in water temperatures accompanied by changes in the distribution of right whale prey. In his description of historical distributions of right whales and bowhead whales (*Balaena mysticetus*) in the Strait of Belle Isle in the 1600s, Laist reminds us that that period coincided with the Little Ice Age, when oceanographic conditions were no doubt very different from those of the recent past. As our climate and oceanographic conditions continue to change, we can only expect whales to alter their movement patterns. By assimilating the anecdotes from historical times, we can better address the conservation challenges we face today.

In addition to providing a scope for understanding habitat change, *North Atlantic Right Whales* provides its readers with a historical take on whaling techniques that ends up coming full-circle. Laist describes hunting methods used by Arctic whalers 3000 years ago, whereby whalers attached a sealskin drogue (or float) to a harpooned whale in an effort to slow it down. This technique was passed down and refined over the years as humans began exploiting whales in large numbers across the globe, as exemplified in the skill with which Basque whalers plied their trade. In a twist that can be fully appreciated only in its historical context, the opening chapter describes the same technique being used in a conservation attempt to disentangle a right whale.

In *North Atlantic Right Whales*, Laist deftly ties together many additional threads. For example, entanglement is now the leading cause of death and serious injury in right whales, and solving this problem remains a thorny legal and conservation issue. Laist's thorough description of the problem ranges from the first anecdote of an entangled whale (by Henry Hudson in 1607) to the intricacies of fishing gear configuration in and around the Gulf of Maine. Right whales are often found carrying gear of unknown

origin, which causes scientists and managers alike to ask whose gear is responsible. Laist's discussion of figuring out which type of gear is worst for right whales nicely dovetails with his earlier discussion of landing laws in Iceland, Cape Cod, and elsewhere. Specifically, he describes the medieval and colonial-era laws to settle disputes on ownership: namely, who should profit from a whale that washes up on shore bearing a harpoon—the whaler or the landowner? These parallels crop up throughout the book, and allow one a much broader and deeper understanding of the current issues.

As humans have progressed as a species, our technological developments have been astounding. Yet these developments have come with a cost, as we have made it easier and easier to extract resources from the Earth. Whether the resources are the blubber and baleen of right whales or crude oil and offshore wind, humans have been able to move to new places, harvest resources until they are gone, and then move to a new place. As Laist documents, eventually humans ran out of new places to go and right whales to catch—thereby ending the commercial whaling of this species. Though right whales have been protected since the 1930s, Laist makes the case that our environmental consciousness didn't really blossom until the late 1960s and early 1970s. This means we have been actively trying to save the species for about 5% of the 1000-year collective history of our two species. Let's hope we have the patience and foresight to bring about changes needed to protect this and other threatened species—a burden that needs to be shared by us all.

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FOUR ANTARCTIC YEARS IN THE SOUTH ORKNEY ISLANDS: AN ANNOTATED TRANSLATION OF CUATRO AÑOS EN LAS ORCADAS DEL SUR, by JOSÉ MANUEL MONETA. Translated by KATHLEEN SKILTON and KENN BACK; edited by ROBERT K. HEADLAND. London: Bernard Quaritch Ltd., 2017. ISBN 978-0-9955192-0-6. 439 p., maps, illus., appendices, index. Softbound. £50; US\$65.00; €56.

This book is an account of four winters spent in the South Orkneys by the Argentine Manuel Moneta in the 1920s, as observer and leader of a team at the Argentine base on Laurie Island. Antarctic affairs were then in a period of change: international interest in the Antarctic, initially inspired by depletion of whales in the Arctic, had been growing, and now questions of sovereignty were arising.

The Laurie Island base, today the longest operating research station in Antarctica, has been collecting weather

and other geophysical information since 1903. For the first two decades, the overwintering crews sent to the base were very cosmopolitan. The first all-Argentine crew, led by Moneta, did not arrive until 1927.

Moneta had a lifelong interest in the polar regions: he had trained as a meteorologist so that he could be part of the 1923–24 expedition to the station, and he was its only Spanish-speaking member. The expedition sailed from Buenos Aires via British-controlled South Georgia, where two-thirds of the world's whale oil was processed in plants operated by various nations, including Argentina.

The expedition crew transferred to a whale catcher for the journey to South Orkney. They had a rough trip, encountering huge waves, icebergs, and pack ice. Reaching South Orkney, their siren woke up the resident crew who had been there for a year. As there had been no communication during the year, it had been pre-arranged that a flag signal would indicate whether anyone had died. Moneta describes the arrival and succeeding days of changeover in a very personal style. There were several days of unloading supplies, including sacks of coal, and unpacking for their year. Then the old crew left.

The base consisted of a living house, which was clean and in good condition, with nearby observatory huts. Water was derived from melted glacier ice, and perishables, such as potatoes, were packed into the living quarters for warmth. The main protein source for the crew was penguins and their eggs. They settled into a tight daily routine necessary for men living and working in close quarters and speaking different languages. Their routines were based on the experience of their predecessors.

There is greater detail on the daily life of the men than is usual in polar books—such things as personal hygiene, weekly baths, thoughts of home, dietary preferences (e.g., some penguin species were preferred over others; they ate hundreds of penguins each year), and the effects of tight 24-hour work and living schedules.

Moneta describes the hourly schedule of weather and other observations, with inside and outside measurements night and day. The data were accumulated for shipment to Argentina at the end of their year. He describes his own experiences becoming disoriented (with a hurricane lantern) while traveling 150 m to make night measurements. He recalls accidents of the past, when one man had simply disappeared and another lost his fingers to frostbite. Their 24-hour routine of work and social life was important to them. Although one man was technically the leader, things seemed to be organized on a consensual basis with shared chores and duties.

As spring 1923 approached, birds, seals, and penguins began to return. Fresh penguin eggs became available again, and they collected 4000 for the following winter's crew. Open water was sometimes visible in the distance; the penguins traveled long distances over the ice for food.

The expedition members began thinking about their departure, which was still months away. They had no idea about when exactly they would be picked up. Small tensions