

Book Review

CARIBBEAN MONK SEALS: LOST SEALS OF THE GULF OF MEXICO AND CARIBBEAN SEA. John Hairr. Coachwhip Publications, Landisville, Pennsylvania, USA, 2011. ISBN 978-1616460631, 190 pp.

It was 1992 and I was speaking with Dave Lavigne about monk seals in the context of preparing an action plan on pinnipeds for the International Union for the Conservation of Nature. In response to the paper by Burney Le Boeuf and colleagues, "The Caribbean Monk Seal Is Extinct" (Le Boeuf et al., 1986), Dave remarked that he thought it would be wonderful to someday be able to publish a paper simply titled "No It's Not." As it turns out, in 1994, the IUCN concluded that the species should be considered extinct and listed it as such (Kovacs, 2008). Some years later, U.S. scientists and bureaucrats concurred, and *Monachus tropicalis* was removed from the list of species covered by the Endangered Species Act "due to the extinction of the species" (National Marine Fisheries Service [NMFS], 2008).

John Hairr has just published a book that summarizes much of the story about monk seals in the Caribbean, and it unfortunately does nothing to change the conclusion that they are in fact "lost." It has been 60 years since these seals have been reported by a reliable source in spite of a number of substantive efforts to locate survivors. While it isn't possible to prove a negative, the chance that there is a Caribbean monk seal left alive is vanishingly small.

If, like me, you aren't conversant in the details about this sad situation, you will learn a lot from reading Hairr's book. Here's the story in short form. Prior to European discovery, monk seals were widely distributed and common in the Gulf of Mexico and Caribbean Sea where they flourished in pristine coral reef environments. Christopher Columbus found them in 1494, and his men promptly killed some for food. That's how you fed the crew of a sailing vessel in those days. Over the next four centuries, people killed Caribbean seals by the thousands, for food, for oil, for science, and for no good reason at all. By the early 1900s, their range had contracted, and they were scarce even where they still could be found. By 1950, they were functionally extinct. After about 450 years of contact with modern man, *M. tropicalis*

had vanished from an area where it had survived perfectly well for millions of years.

John Hairr's book does a good job of exploring what more is known about these happenings. The first chapter provides context for how this monachine seal came to be in the region and what it was generally like. It falls short of giving a complete description of what is known of the species biology; the best source for that is Adam (2004). The next five chapters provide a chronology covering the period from Native American prehistory through 20th century extirpation. Much of this relies on fragmentary evidence and incomplete early records, which are thoroughly reviewed. Much of the archaeological evidence is quite recent, and it's impressive that the book includes an appendix by a leading archaeologist from the Yucatán describing some of his group's finds. However, sometimes pieces of information are related with a questionable amount of detail. For example, almost three pages are spent on the 1609 Harcourt expedition to Guiana, from which the author concludes "Unfortunately for our study, Harcourt gives no detailed description of monk seals, nor does he name any specific locales where they were spotted." Hmmm. There are, however, many specific locales where seals once lived mentioned in the book, but the reprints of old charts that are included do little to put that information into a useful context. A good map of overall distribution as shown by the information discussed would have been very helpful. Portraits of early explorers do little to support the monk seal story. One "thorough description of these seals" from a book is given in the original French, without translation—the author has too much faith in my foreign language skills.

These criticisms aside, this part of the book provides quite a bit of the flavor of what this region was like in the second half of the last millennium and gives a good description of what happened to the seals. For example, the one estimate of the pre-exploitation population of *M. tropicalis* is 233,000 to 338,000 (McClenachan & Cooper, 2008). This is a whole lot of seals, two to three times more than the number of harbor seals presently in the eastern North Atlantic, many more than I would have expected. However, the book includes the story of a 19th century Navy captain who saw what he initially thought was a ¼ mile long reef where it

should not have been, but he later realized it must have been “from the gambols of a large shoal of seals, which abound on this bank.” Clearly, there once were many seals in this area. Several pages of Chapter 6 are given to describing the capture and killing of seals for public display at zoos and for museum specimens. These occurred mostly in the late 1800s and early 1900s, and resulted in perhaps 100 seals being removed from the already very depleted population. In hindsight, it seems a foolish act to have sacrificed these animals for entertainment and to provide skins and skeletons for collections.

I found Chapters 7 and 8 to be particularly interesting, perhaps because they deal with modern times and there’s more to say. Chapter 7 tells that seals in captivity mostly died after less than two years, with a common diagnosis at necropsy being some sort of lung problem. Could it be that *M. tropicalis* suffered from encountering novel microbes, in ways similar to how the indigenous people of Mesoamerica died from diseases brought by explorers and colonizers? Much of what is in the chapter on the hunt for survivors and recent sightings has been published elsewhere (e.g., Kenyon, 1977; Le Boeuf et al., 1986; Boyd & Stanfield, 1998), but the photos and Hairy’s text add color to what you’ll find in dry science journal articles.

So what did happen to *M. tropicalis*? Humans have been killing seals for millennia—in the past few centuries, sometimes at an industrial scale. Most commonly, the seal populations, even those greatly depleted like elephant seals, have rebounded after uncontrolled harvests were stopped by regulation or economics. Not so for monk seals. Although harvest data are very incomplete, it’s reasonable to conclude that directed killing was enough to make monk seals rare. Did a human kill the last surviving monk seal? There’s no way to know for sure, but I doubt it. Once populations are reduced to rarity, a number of other factors can deliver the final blow.

The author concludes his introduction by saying that he hopes his book will help spur action that can prevent the extinction of other tropical seals, and he returns to this subject in the final chapter. How likely is that to happen? The stories of Mediterranean and Hawaiian monk seals are frighteningly similar to what has happened in the Caribbean. We know more about these species and should be better equipped to deal with threats to their survival. We get excited when a new pupping area for *M. monachus* is discovered or when 90% of the habitat used by *M. schauinslandi* is made into a marine protected area, but this isn’t enough. Are we really willing to act smartly, strongly, and quickly enough to save these species

that are barely hanging on at perilously low numbers? What happened with *M. tropicalis* is certainly not a comforting precedent. Let’s hope this isn’t a situation of “one down and two to go.”

Lloyd F. Lowry
University of Alaska Fairbanks
73-4388 Paiaha Street
Kailua Kona, HI 96740, USA

Literature Cited

- Adam, P. J. (2004). *Monachus tropicalis*. *Mammalian Species*, 747, 1-9. doi:10.1644/747
- Boyd, I. L., & Stanfield, M. P. (1998). Circumstantial evidence for the presence of monk seals in the West Indies. *Oryx*, 32, 310-316. doi:10.1046/j.1365-3008.1998.d01-61.x
- Kenyon, K. W. (1977). Caribbean monk seal extinct. *Journal of Mammalogy*, 58, 97-98. doi:10.2307/1379738
- Kovacs, K. (2008). *Monachus tropicalis*. In IUCN (2011), *IUCN red list of threatened species* (Version 2011.1). Retrieved 11 July 2011 from www.iucnredlist.org.
- Le Boeuf, B. J., Kenyon, K. W., & Villa-Ramirez, B. (1986). The Caribbean monk seal is extinct. *Marine Mammal Science*, 2, 70-72. doi:10.1111/j.1748-7692.1986.tb00028.x
- McClenachan, L., & Cooper, A. B. (2008). Extinction rate, historical population structure and ecological role of the Caribbean monk seal. *Proceedings of the Royal Society B* [Online], 1-8. doi:10.1098/rspb.2007.1757
- National Marine Fisheries Service (NMFS). (2008). *Endangered and threatened species; Final rule to remove the Caribbean monk seal from the federal list of endangered and threatened wildlife*. Retrieved 11 July 2011 from www.nmfs.noaa.gov/pr/pdfs/fr/fr73-63901.pdf.