

## Foreword

In his groundbreaking *History of Animals* (mid-4th century BC), the ancient Greek philosopher Aristotle provided the first description of a pinniped (the carnivorans in the families Otariidae, Odobenidae, and Phocidae), specifically the Mediterranean monk seal (*Monachus monachus*). In this treatise, Aristotle described for the first time a marine mammal that came to open sandy beaches to give birth and raise its pups.

On the other side of the world, the Hawaiian monk seal (*Monachus schauinslandi*), a species that has remained relatively unchanged throughout evolutionary history, was not described until the late 1800s. Hawaiian monk seals lived for millions of years without contact with humans and therefore did not have the natural wariness necessary to avoid interaction with *Homo sapiens*. As such, Hawaiian monk seals were nearly wiped out in the early 1800s at the hands of sealers.

Nowadays, both the Mediterranean and the Hawaiian monk seals, species considered as charismatic megafauna, have become trademarks of the accelerating global process of species extinction. Both species are critically endangered throughout their respective ranges and are being slowly pushed over the edge toward extinction. For the Mediterranean monk seal, times are critical—no more than 600 individuals are thought to survive in isolated subpopulations in the Eastern Mediterranean Sea, the Archipelago of Madeira, and the Western Sahara in the Atlantic. In Hawaii, the situation for the Hawaiian monk seal is not much better. In the Northwestern Hawaiian Islands, where 90% of the Hawaiian monk seal population survives, low juvenile survival rates are responsible for the ongoing population decline of 4% annually. With fewer than 1,100 Hawaiian monk seals surviving, the species and the Mediterranean monk seal are treading in the footsteps of their closest relative, the Caribbean monk seal (*Monachus tropicalis*), the first seal species to go extinct in the 20th century due to human persecution.

Why should we care if two seal species go extinct? As a society, we (*theoretically* . . .) strive to improve ourselves by coexisting and protecting wildlife and the natural environment. As a top predator, seals are indicators of the status of the natural environment—it is a simple fact of life that a healthy environment can support several top predators, whereas an unhealthy one cannot.

There are two distinct populations of monk seals on opposite ends of the globe telling the same story of ecosystem imbalance and the negative influence of humans on the environment. The future of the human race is entwined with that of the monk seals and other top predators. If these species do not have what it takes to survive, then we can expect that resources for humans are also at a critical state of decline.

It is imperative that we protect the Mediterranean and Hawaiian monk seals. On two ends of the planet, the race is on to prevent the extinction of these species. It is also common knowledge that effective management and conservation measures should be based on good science. This issue of *Aquatic Mammals* is the first of any scientific journal dedicated solely to these endangered species. In the 21 papers presented herein, researchers from more than 15 countries share the latest findings from many of the important historical and current, cutting-edge research and conservation programs that have gone into and will continue to develop for the recovery of both the Mediterranean and Hawaiian monk seals.

This special issue is dedicated to the hard work of state, federal, and national agencies; special interest groups; community members; and volunteers who work tirelessly for the conservation and recovery of the monk seal.

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