

Series Foreword

“You may rest assured that the British Government is entirely opposed to sharks”
(Winston Churchill, 1945, in response to a parliamentary question about developing shark repellents)

Sharks are just too toothy for their own good. The popular image conjured up by *Jaws* films, and Hawaiian kings who used human bait for shark fishing, has exacerbated the image problem that must be addressed by those attempting the conservation of sharks. Indeed, there has been some success here: Their public image has definitely changed since American shark researchers termed brightly-coloured life preserver jackets “yum-yum yellow.” But the sharks have not changed of course; they seem to have been pretty much the same since the Jurassic. What’s not the same though, is that in the last 25 years, the mere blink of an eye in shark history, many species have been so overexploited that local extinctions have been documented, and worldwide, most large long-lived sharks appear to be at least 90% depleted. We are only just beginning to guess at the ecosystem consequences of these changes.

In classical times, sharks were both admired and feared. In the 2nd century AD, the Graeco-Roman poet Oppian praised the parental instincts of the live-bearing blue shark (Mair, 1928). Five hundred years earlier, Herodotus recounts how the ancient Greeks liked the way that sharks ate a lot of shipwrecked Persians:

“... starting from Acanthos [the Persian fleet] attempted to get round Mount Athos; but as they sailed round, there fell upon them a violent North Wind, against which they could do nothing, and handled them very roughly, casting away very many of their ships on Mount Athos. It is said indeed that the number of the ships destroyed was three hundred, and more than twenty thousand men; for as this sea which is about Athos is very full of sharks, some were seized and devoured by these and so perished, while others were dashed against the rocks.” (Herodotus, *History*, Book 6: 44; Macaulay, 1914)

Herodotus’ story is echoed in modern times. After the U.S.S. *Indianapolis* was torpedoed near Tinian Island in the Western Pacific on 30 July 1945, sharks ate more than 900 men in the three days before rescuers arrived: Only 318 crew were saved. In an ironic twist worthy of a Greek tragedy, rescue was delayed because few knew that the cruiser was there: It had just completed a top secret mission delivering the heavy bits of three atomic bombs, two of which were dropped on Hiroshima and Nagasaki exactly one week later.

This book, whose 38 chapters derive originally from a workshop held in 2000 that attracted over a hundred of the world’s top shark specialists, aims in five sections to consolidate and expand our knowledge of open ocean, pelagic sharks. The three chapters of

Part I cover the diversity and reproductive biology of pelagic sharks. Part II contains ten chapters that set out systematic accounts of the biology and ecology of nine of the principal pelagic shark species, presenting much synoptic information that is new. Part III has nineteen chapters that set out what is known (and not known) about the fishery catches of sharks worldwide. Bycatch in longline fisheries is especially serious and many sharks that are caught are unidentified and unreported. Indeed, sharks constitute only 2% of reported fishery catches on the high seas (areas outside the Exclusive Economic Zones of countries), but the true figure must be many times larger, as evidenced by calculations made from fins sold in Asian markets. The eight chapters in Part IV document the life histories of pelagic sharks, compare them with bony fish and describe genetic tags and markers that can help reveal stock structures. The book closes with Part V, which includes five chapters that review ongoing, but as yet only partially successful, efforts to conserve sharks.

Fortunately, shark conservation does seem to be becoming more popular. For example, under pressure from environmental organisations, in 2005 Disney World in Hong Kong stopped selling shark fin soup, a tasteless, glutinous but expensive dish popular in wedding celebrations but held by many to be responsible for much of the shark decline worldwide. Such welcome actions seem to be spreading in Asia; in September 2007, the Natural Resources and Environment Minister from Malaysia, Azmi Khalid, banned shark fin soup from official function menus.

Back in the Second World War, a young lady called Julia Child was recruited to Allied intelligence; she seemed to have talents with food, so her first job was to develop a recipe for shark repellent. It didn't work too well: What repelled sharks in the aquarium tank piqued their curiosity and actually attracted sharks in the sea. But Ms. Child went on to become a famous food guru and the successful author of many cookery books. As Series Editor I trust that this timely and informative book on sharks of the open ocean will be just as popular as those cookery books, will attract readers, and will encourage conservation of these ancient, magnificent (and still slightly scary, toothy) creatures.

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References cited

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- Macaulay, G.C. (1914) *The History of Herodotus*, Translated (3rd edition). MacMillan and Co. Limited, St. Martin's Street, London, UK. Book 6: 44 (Project Gutenberg).

Series Rationale

Fish researchers (a.k.a. fish freaks) like to explain, to the bemused bystander, how fish have evolved an astonishing array of adaptations; so much so that it can be difficult for them to comprehend why anyone would study anything else. Yet, at the same time, fish are among the last wild creatures on our planet that are hunted by humans for sport or food. As a consequence, today we recognize that the reconciliation of exploitation with the conservation of biodiversity provides a major challenge to our current scientific knowledge

and expertise. Even evaluating the trade-offs that are needed is a difficult task. Moreover, solving this pivotal issue calls for a multidisciplinary consilience of fish physiology, biology and ecology with social sciences such as economics and anthropology in order to probe the frontiers of applied science. In addition to food, recreation (and inspiration for us fish freaks), it has, moreover, recently been realized that fish are essential components of aquatic ecosystems that provide vital services to human communities. Sadly, virtually all sectors of the stunning biodiversity of fishes are at risk from human activities. In freshwater, for example, the largest mass extinction event since the end of the dinosaurs has occurred as the introduced Nile perch in Lake Victoria eliminated over 100 species of endemic haplochromine fish. But, at the same time, precious food and income from the Nile perch fishery was created in a miserably poor region. In the oceans, we have barely begun to understand the profound changes that have accompanied a vast expansion of human fishing over the past 100 years. The Blackwell Series on Fish and Aquatic Resources is an initiative aimed at providing key, peer-reviewed texts in this fast-moving field.