

Giuseppe Notarbartolo di Sciarra

# Sailing Across a Wounded Sea



 Springer

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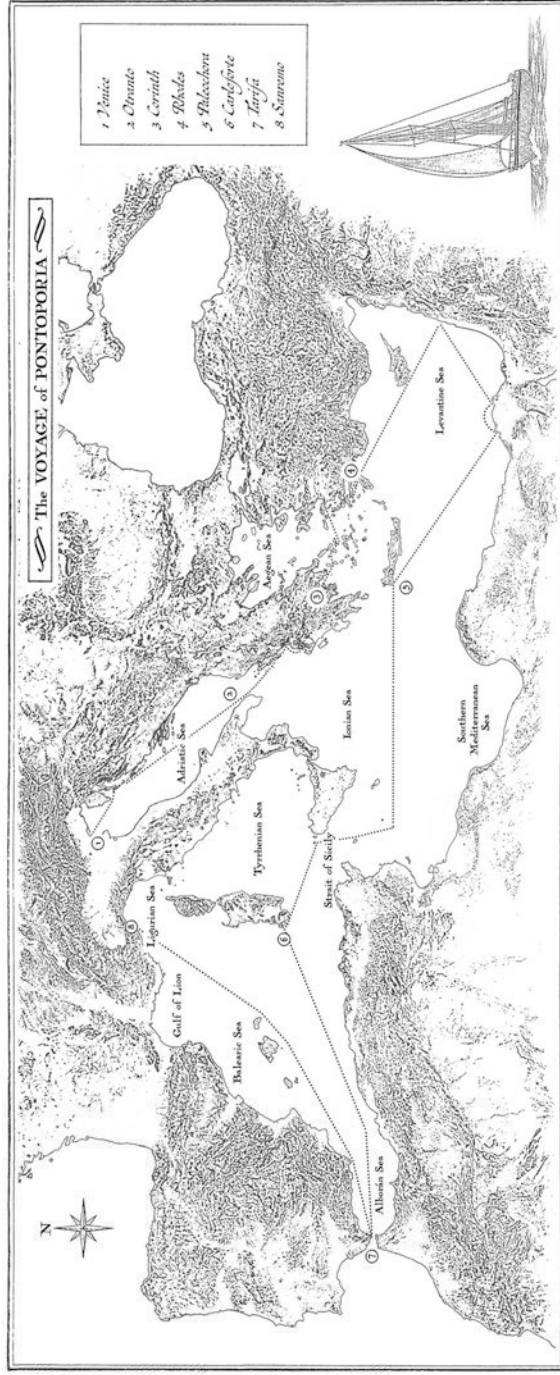


Illustration by Massimo Demma

Giuseppe Notarbartolo di Sciara

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 Springer

Giuseppe Notarbartolo di Sciarra   
Milano, Italy

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“Drawing from decades of first-hand experiences, in *‘Sailing Across a Wounded Sea’* Giuseppe Notarbartolo di Sciara offers a compelling narrative that interweaves the beauty of the Mediterranean Sea’s non-human inhabitants with the challenges they face due to human activity. As he reflects on his journey, the author underscores the imperative for collective action and the need for heightened awareness and proactive conservation measures to protect our oceans. *‘Sailing Across a Wounded Sea’* serves not only as a captivating voyage but also as a sobering call to responsibility. Join Giuseppe Notarbartolo di Sciara on this insightful expedition and discover the profound significance of preserving our marine ecosystems for future generations.”

—**Peter Thomson**, *United Nations Secretary General’s Special Envoy for the Ocean*

“The Mediterranean, the cradle of civilisation, is a sea steeped in history. From Apollon and Artemis to Pythagoras and Hercules, names in this book summon up images of civilisations past and lost. The greatest Greek philosopher of them all, Aristotle, is also regarded as the father of marine biodiversity, stemming from his research conducted on Lesbos Island. And yet this ancient world, familiar to so many, is under threat. In this book Notarbartolo di Sciara takes us on a modern-day odyssey through these waters, based on over 50 years of personal observations. He reminds us of the impact of the progressive footprint of human action and endeavour, which has spread out across the whole sea, changing, and depleting its beauty and splendour. His voyage paints a picture not just of what is at stake but also of the potential the future can hold if we all work together to give nature a breathing space, to allow it to restore and recover. In our modern world, where we have become more disconnected than ever from our surroundings, this book is a rallying call to remind us that all our futures are intricately interwoven with nature, and that we damage that at our peril.”

—**Professor Dan Laffoley**, *Emeritus marine Vice Chair, IUCN World Commission on Protected Areas*

“Who doesn’t love a travelogue? The serendipitous nature of a journey, places and characters along the way, shared insights and a joyous homecoming. A key difference with *Sailing Across a Wounded Sea* is that encounters are all with marine creatures and their places in the natural world. Set in the Mediterranean, Notarbartolo di Sciara draws upon experiences from a life-long love of the sea to take us with him: cataloguing pressures and stresses on different communities of animals he knows well. Explaining all is not as it should be. Revealing that we have been unaware of impacts, or in denial, or asleep at the wheel. Personal yet profound his consistent message is that we have taken too much and respected too little. Too much food, too much space and too many liberties. Underpinning this journey is a heartfelt call to wake up and put things right, which makes for a compelling read and a new and novel insight.”

—**David Johnson**, *Honorary Professor University of Edinburgh, Coordinator Global Ocean Biodiversity Initiative, Mission Blue Hope Spot Champion*

“Everyone who cares about the Mediterranean Sea should read this impassioned and insightful book. Few people know the whales, dolphins, seals and other marine wild-life struggling to survive in the ‘Cradle of Civilisation’—and what needs to be done to help secure their future—better than Giuseppe Notarbartolo di Sciarà.”

—**Mark Carwardine**, *Bestselling author and environmentalist*

“Jump aboard the *Pontoporia* with Giuseppe Notarbartolo di Sciarà. This book is a grand tour of the Mediterranean Sea made luminous through the eyes, passions, and concerns of a dedicated scientist and conservationist who has spent his life living and working in these waters. Discover the history, culture, politics and, most of all, the diverse nature of the Mediterranean. This well-written memoir offers a wonderful ride, though at times bumpy, as a scientist who has done so much to help the Mediterranean come to terms with the future of this ancient, storied sea.”

—**Erich Hoyt, Author, Planktonia**, *Creatures of the Deep, Marine Protected Areas for Whales, Dolphins and Porpoises, and other books*

“Warm and inviting as a Mediterranean breeze, renowned marine biologist Giuseppe Notarbartolo di Sciarà’s beautiful book takes us on a modern-day Odyssey around the sea of his birth. It is a journey of entrancing encounters with the natural world, tempered by a sobering warning – that the ‘Cradle of Civilisation’ cannot call itself civilised if it continues to destroy the sea that gave it life.”

—**Isabella Tree, Author of *Wilding***



# Prologue

I have been waiting for you. All my life I have been waiting for you, every time I found myself encroaching upon your world. Scanning the sea surface for hours, day after day, looking for tell-tale signs of your presence: a ripple in the water or the flash of a pair of flippers breaking the surface, caught with the corner of the eye. I knew you were there, somewhere. But you persisted unseen.

With the passing of years, I have learned to take solace in my search by simply knowing that you existed, by valuing the notion of your existence as a surrogate of a missing direct experience of you. Enjoying the beauty of the world you evolved to live in, so pleasant to body and mind as if my habitat were to coincide with yours. Because it does, to some extent: waters transparent like the purest of crystals; the fragrance of sun-baked rockrose, lentisk, thyme, and wild sage wafting down to the water from the scarp cliffs; the antics of screeching Eleonora's falcons soaring overhead. Basking in the blissfulness of your home had become a proxy for the excitement of seeing you in flesh and bone.

You had good reasons to be shy, for you were, and still are, the rarest of the world's seals. They called you Mediterranean monk seal, with nobody to this date able to convincingly explain the origin of that puzzling monastic attribute. Your species was not meant to be a rare species. There is nothing wrong with you and the ability of your tribe to make a decent living along the Mediterranean shores. And in fact, in past times, you populated the beaches throughout the Great Sea, from Gibraltar to Palestine and from Venice to Gabès. Records of your abundance abound, starting from Homer, that very first chronicler of the tribulations of Mediterranean men and women. In the *Odyssey*, the poet narrates about flocks of seals being herded by Proteus, son of Poseidon, around the island of Pharos, just off what later became the harbour of Alexandria.



Many accounts after that, across the millennia, provide unambiguous evidence of your former prosperity. Until recently, to be precise. It was mainly during the past century that the relentless persecution you received from humans has managed to push you to the brink of extinction, reducing your numbers to just a few hundred individuals, thinly spread over remaining strongholds in the Eastern Mediterranean and on a few remote Atlantic islands and shores.

The reason for so much animosity was, and still is, quite unfair. True, you do damage nets from time to time, but this is only because humans have left too few fishes in the sea for you to subsist on. Theirs is entirely the responsibility for destroying the natural balance in the marine environment, and you are a most convenient scapegoat.

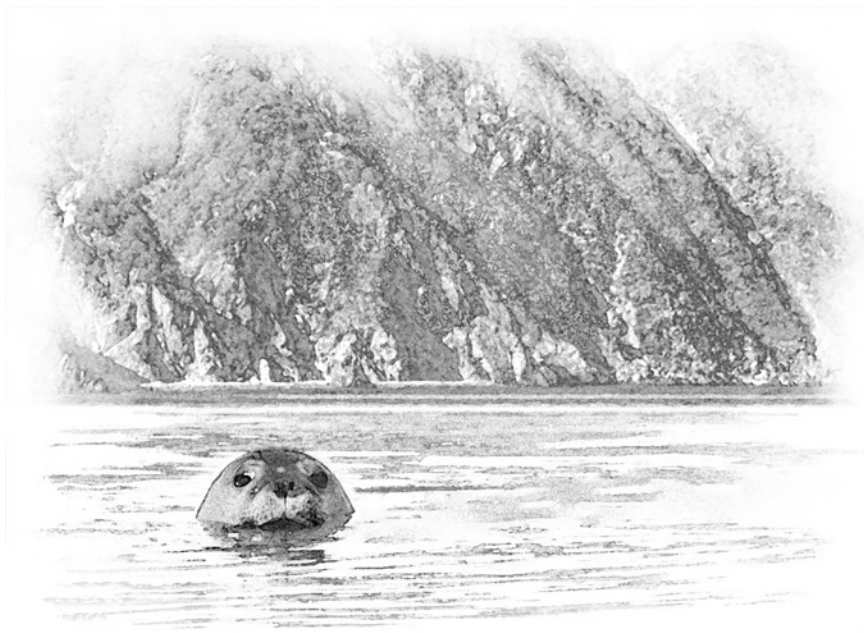
So few of you exist today that the man in the street, having lost the experience and the knowledge of your kind, is mind-boggled when told of the existence of seals in this part of the world. “Seals in the Mediterranean?”—is the typical reaction—“Come on, I cannot believe it. Seals only live in cold waters”. So it is that, on top of everything, you are even being deprived of the dubious benefit of being mourned for your impending demise.

You might wonder why I have been so keen on seeing you, why I developed this special relationship with an almost obsessive idea of you in my mind. It was the abstract idea of the monk seal that I was seeking. Mediterranean monk seals have become a symbol of the wilderness that my sea is losing because of the senseless destructiveness of my species. Touching your continued existence with hand would have worked as a reassuring charm, rescuing me from a sentiment of distress.

And then, on that mid-summer afternoon, you appeared to me when I least expected to see you. I had not given up on finding you, of course; I was only momentarily distracted. I was sitting on my caique reading a book, lulled by a gentle swell, anchored in the shade of a cliff on the island of Patmos. You surfaced in front of me, your large round head silently and slowly emerging from the water like a magic apparition, with your long, dripping whiskers and a small, remarkable white spot between your eyes. What I remember most distinctly was your gaze: your big, dark eyes staring at me, straight into mine, piercingly. Eyes that were not smiling (Fig. 1).

I was spellbound. After my long search, there you were, but only when you had decided to reveal yourself—how very fittingly, right in the shade of the island of the Apocalypse, or Revelation.

What I had in front of me was not the abstract idea of a monk seal but the real thing: breathing, staring at me in direct, person-to-person contact. It was clear that it was you, not me, in the full faculties of your phocine personhood, who called the shots.



**Fig. 1** “You surfaced in front of me, your large round head silently and slowly emerging from the water like a magic apparition, with your long dripping whiskers and a small, remarkable white spot between your eyes” (Illustration by Massimo Demma)

I was struck by the painful asymmetry of the situation. You were not reciprocating my affectionate emotion. You likely couldn't care less about me. After staring at me with that stern gaze that seemed to last forever, you gave a curt snort and disappeared from sight below the surface. The spell was over as you resumed doing the things that seals normally do. Minutes later, I did see your back briefly surfacing again at a distance, and then again even farther on before you were no longer visible as you patrolled the reef in search of some meagre prey, leftovers from your greedy human competitors.

There were so many things I wished I could ask you, but mostly, I wanted to tell you how appalled I was by the terrible wrong humans have been inflicting on you. At that moment, I remember a sense of outrage against my kind simmering within, and the formulation in my mind of the resolve that I would try my best to right that wrong. To do something, anything, that could contribute to improving your condition.

Patmos, Greece  
1 August 2002

# Acknowledgements

On 15 March 2018, as I was in Kota Kinabalu, on the island of Borneo, for a workshop to identify Important Marine Mammal Areas (IMMAs) in the North East Indian Ocean and South East Asian Seas region, I was having dinner with Erich Hoyt, long-time friend and *partner in crime* in the IMMA adventure. At one point during the dinner, Erich looked at me and said: “You know, you should write a book to tell all your Mediterranean stories”. It was there and then that the spark for writing this book was ignited. Perhaps out of guilt for having sent me down a rabbit hole that kept me toiling during my spare time for the ensuing 6 years, Erich was constantly on call with all his expertise and an extra dose of patience to lend his unfortunate colleague all the advice and support he desperately needed during this writing and publishing adventure.

I am immensely grateful to Editor Eva Loerinczi, who encouraged me to submit the manuscript to Springer Nature and made its publication possible. Thanks to the competent collaboration of Bibhuti Bhusan Sharma and Manigandan Jayabalan, the book production process ended up being quick and smooth. I wish to thank Elizabeth V. Hillyer for ensuring that my writing would not turn out to be too dissonant from Shakespeare’s idiom, and Massimo Demma for his artistic skill and patience in preparing the maps of *Pontoporia’s* voyage and the beautiful portraits of the main marine characters that this book is about. My son Marco, a diplomat at heart and much wiser than his father, strived to redress elements of political incorrectness interspersed in my prose, occasionally irate towards the most egregious agents of environmental damage; elements that survived his revision are my responsibility alone.

My friend and colleague Sabina Airoidi gave me invaluable support by providing access to many photographs of the highest quality that inspired Massimo Demma to create this book's illustrations. These include a picture of a striped dolphin and one of a pilot whale taken by N. Pierantonio, one of a fin whale and one of a spinetail devil ray taken by L. Lodigiani, one of Risso's dolphins taken by V. Fadda, one of a sperm whale taken by G. Passoni, and one of a Cuvier's beaked whale taken by herself. Joan Gonzalvo provided, for the same purpose, pictures that he had taken of a bottlenose dolphin, a common dolphin, and a Mediterranean monk seal. The image of rough-toothed dolphins was based on underwater video footage taken by Silvia Frey in 2016, and that of orcas was inspired by photographs courtesy of Alfredo Rodrigues, "Ocean Vibes Algarve".

Simone Panigada is the author of the stunning cover photo. We were together on a dinghy, floating in the calm waters of the Pelagos Sanctuary, when a fin whale surfaced between us and our vessel. I was filming the scene, and the photo is his.

This book contains interviews of colleagues Draško Holcer, Joan Gonzalvo, Claudio Cuoghi and Spyros Kotomatas. I thank them all for revising the text portions that concern them, agreeing to their publication, and ensuring that they correctly reflected their thoughts.

My highest appreciation goes to Mark Carwardine, Hal Whitehead and Carl Safina for advising and helping me in my search for a publisher before I submitted my book proposal to Springer Nature. Thanks also to Simone Repetto for providing information on the tonnara on the Island of San Pietro in Sardinia, and to my sister-in-law Donata Pizzi for her learned advice on Dodecanese architecture.

I owe much of the way I think about nature and science to the cultural medium in which I had the extraordinary luck of growing up, and to the single persons who had made such medium substantive, rich, and meaningful. All the ideas, decisions, and initiatives I took during my lifetime are connected, one way or the other, to very special minds and characters that have inspired and supported me in many ways. First and foremost I recall my beloved mentor, the oceanographer Walter Munk, who, with his wife Judy, hosted me at Seiche, their extraordinary La Jolla residence, for almost a decade. Like a father when I was taking my first steps as a marine biologist, Walter taught me about the challenge of dealing with uncertainty in the effort to understand natural phenomena, and the art of turning setbacks into successes. Walter's second wife, Mary, supported the continuation of his moral legacy after his death. Luigi Cagnolaro, the late director of the Natural History Museum of Milano, was an important role model in his unique combination

of scientific rigour, zoological passion, human kindness and hilarious humour. Tundi Agardy, that splendid, indomitable marine scientist/warrior, taught me everything there is to know about protecting ocean spaces, right in that mid-life phase in which my professional inclination was morphing from scientific curiosity to environmental commitment.

The Tethys Research Institute—funded in 1986 on the initiative of the late Egidio Gavazzi, and named after the mythological demi-goddess, wife of titan Oceanus—was the cultural incubator where all the colleagues were hatched from, who have walked with me for the good part of half a century along the most exciting pathways of marine discovery: Sabina Airoidi, Arianna Azzellino, Giovanni Bearzi, Silvia Bonizzoni, J. Fabrizio Borsani, Amina Cesario, Marina Costa, Maddalena Fumagalli, Adriana Geraci, Joan Gonzalvo, Maddalena Jahoda, Simone Panigada, Elena Politi, Margherita Zanardelli, to mention only the ones whom I worked closer with over extended periods on a day-to-day basis. Later came the exciting new (and ongoing) adventure of identifying Important Marine Mammal Areas across the world's oceans, in the intrepid company of Erich Hoyt, Gill Braulik, Gianna Minton, Randy Reeves, Vienna Eleuteri, David Johnson, Dan Laffoley, Mike Tetley—accompanied by several of the above-mentioned Tethys' colleagues—and many, many others. Throughout my lifetime, with the only notable exception of when I was entangled in the drab atmosphere of government, I enjoyed the priceless privilege of working in the company of friends.

The family ecosystem I have been lucky enough to thrive in has been fundamental to my sanity. It has all been pivoting around Flavia, my wife, our children Marco and Bianca and grandchildren, and my many sisters with their families. I could not be grateful enough to all of them for having created around me the solidest life-support system.

Last of all, and most of all, I wish to thank the individual whales, dolphins, seals, sharks, rays, turtles, fishes, and birds that I have encountered in the Mediterranean during a life spent at sea looking for them—for all the inspiration and the wild joy they unwittingly gave me every time I could make contact with them, and for having made me feel so alive in their company and welcome in their world as if I had been one of them. Because that is, in reality, what I was.

## About the Book

The capacity of humans to destroy their environment is playing out like a Greek tragedy in the Mediterranean Sea. After having coexisted with a diversity of marine animals throughout their history, humans have broken the balance in recent decades, and the survival of countless marine creatures is now increasingly uncertain. However, unlike in classical tragedies, real-life entities are not necessarily doomed by their fate, and there must be hope to turn the tide in nature's favour. Lack of concrete conservation action might be simply due to a lack of awareness: how can we feel concerned about a loss if we don't know what we are losing? *Sailing Across a Wounded Sea* is the story of an ideal journey around the Mediterranean to meet its non-human inhabitants: a reconstructed collage of really happened episodes collected over half a century as the author observed real animals, exchanged views with people, and argued for such views in the policy arena.

Giuseppe Notarbartolo di Sciara has been involved for a lifetime in protecting Mediterranean marine biodiversity in various capacities—as a scientist, civil servant, advocate, and sailor. Having studied in California and worked with whales, dolphins and sharks worldwide, he returned to the Mediterranean in 1985, keen on using his acquired tools to discover more about the ancient sea's natural history. Here, he described small but vibrant populations of fin and sperm whales, along with various species of dolphins, devil rays and the monk seal.

At the same time, seeing the sea's progressive degradation at the hands of humans, he feels a surge of rebellion against this squandering of natural values and hopes that encountering whales, dolphins, seals, and rays in their habitat and on their terms will contribute to building up in readers a collective commitment to secure a future for these species. A future in which they are allowed to flourish as they were meant to, had humans never trod so heavily on the sea's delicate ecological balance and the interwoven natural processes.

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## About the Author

**Giuseppe Notarbartolo di Sciara** is a marine ecologist who spent his life trying to shoehorn scientific evidence into policy and politics. So far, he must admit that he has largely failed, despite episodic successes here and there. He is fascinated by devil rays and horrified by seafood after a childhood encounter with a trout gone bad. When he is not on the Greek island of Patmos he spends his time in Milan, thinking of ways to get back to Patmos.

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# 1

## Introduction: Mediterranean Stories Worth Telling

In the distant past, our planet did not look like it does today because continents were arranged differently on the world map. About 250 million years ago, they were all jumbled into a single landmass we called Pangea, surrounded by a single ocean called Tethys. But Pangea, under the impulse of continental drift, was not meant to stay as it was. The landmass started to break apart, and the pieces—the continents—moved around, progressively changing their relative positions until they reached the familiar configuration. As continents moved about, so did Tethys, filling with portions of the ocean the interstices between them, as these formed under the push of continental drift. At one point, the continents known today as Africa and Eurasia (Europe plus Asia), in their movements, pinched between them a small remnant of Tethys that became the Mediterranean Sea.

Eventually, about 6 million years ago, Africa and Eurasia moved towards each other a bit too much, cutting off the Mediterranean from the rest of the ocean. Six million years ago is a relatively recent time as geological events go, considering that Earth's age is estimated at 4.5 billion years; scaling down the lifetime of our planet to a span of 24 hours, the event in which the Mediterranean became isolated would have happened no earlier than 2 min ago. In that episode, known to geologists as the Messinian Salinity Crisis, water subtracted into the atmosphere by evaporation from the Mediterranean could no longer be replaced through a connection with the rest of the ocean. This situation caused the basin to dry up within the time span of a few hundred thousand years, with only puddles of hyper-concentrated brine remaining at its bottom. Along with its waters, almost all the original Tethyan marine organisms living in the Mediterranean were wiped out. Only a few species

survived, mainly from the crustacean and mollusc tribes, having been able to withstand the extreme levels of salinity and temperature resulting from the upheaval. Then, 670,000 years later, the African and Eurasian plates moved ever so slightly once more, and a connection with the world's ocean opened up again where Gibraltar is today. Seawater started rushing back into the basin with titanic impetus, the flow rate reconstructed to be a thousand times that of the Amazon River. Impetus notwithstanding, the complete refilling of the Mediterranean might have taken no less than an entire decade.

At the beginning of the Mediterranean's new lease on life, modern humans did not exist yet. It was the time in which our Hominine ancestors, all concentrated in the centre of Africa, split from Chimpanzees, and a good 2 million years before their various Australopithecine descendants started experimenting with stone tools. The world had to wait for 3 million more years for *Homo sapiens* to make its fateful appearance. Before him, thousands of animal forms of life - from bacteria to whales—had come in from the Atlantic Ocean across the Gibraltar breach to call the Mediterranean home, flourishing in its hospitable waters and balmy climate, evolving into increasingly well-adapted forms, contributing with their existence to the character and the health of their marine and coastal environment, and ultimately accruing to an unrepeatable, exquisitely balanced combination of biotic and abiotic ingredients.

When humans discovered the Mediterranean coasts during their out-of-Africa migrations, some were quick to notice the favourable environmental conditions offered by this sort of promised land, and settled in to stay. These conditions proved to be essential for their prosperity. It was not by chance that the Mediterranean is known as the cradle of Western civilisation: the region's environment was the backdrop against which human societies developed. It was a powerful ingredient in the recipe that shaped the Western world's citizens and their thinking and achievements across the millennia.

Mediterranean marine and coastal organisms were essential to the development of the region's human cultures, in part as exploitable sustenance resources and in part integrated into their myths, enshrined in local lore and protagonists of the most diverse traditions and stories, from the Bible to Greek mythology and from the Odyssey to Pinocchio. However, as soon as the newcomers started handing down stories about their adventures, the narrative became more and more absorbed in themselves, with the original Mediterranean landlords relegated to an increasingly rarefied cloud of irrelevance. None of the representatives of Mediterranean charismatic megafauna come even near to retaining for our peoples the cultural value, for instance, that dugongs have for the indigenous Australians, the whales for the Māori,

the orcas for the First Nations of the Canadian Pacific, and the sharks for many Polynesians.

This drift probably occurred as the Mediterranean peoples' cultural framework turned sharply away from nature. There was a stark divergence here from philosophies from other parts of the world, such as Buddhism, Taoism, and Confucianism in Asia that recognised a universe in which all parts—humans included—are interdependent, embedded within nature, with us humans expected to be in awe, respectful and even guardians of its indivisible harmony.<sup>1</sup> In the Mediterranean, arising monotheist doctrines adopted the opposite approach by peremptorily placing humans on a pedestal of purported superiority over all other beings. Once appointed (self-appointed, in fact) as masters of the world, they were given a privilege from above to conquer, dominate, and exploit without any prescription for care. In their delusion of grandeur, Mediterranean humans saw little use in providing the natural world and its non-human inhabitants the attention and respect they deserved. This neglect has become so widespread across the millennia and so typical of Western thinking that it persists today as the predominant way of conceiving humans' relationship with nature.

This state of things is well exemplified in history books describing the human trajectory along the Mediterranean shores and across its waters from the beginning to the present day. Of course, when mentioning history, what is typically meant is human history, and it would be naïve to expect otherwise. And it cannot be denied that historical accounts of the human conquest of the region—e.g. by Fernand Braudel,<sup>2</sup> David Abulafia,<sup>3</sup> and Predrag Matvejevic,<sup>4</sup> to name three of my favourites—make for inspirational reading.

And yet, as engaging as such stories are, whilst wading through these works, I keep sensing that an essential element is missing: what about all the other Mediterranean peoples, the non-human ones that had been here long before us? Of course, there are fewer details we can delve into about the whales, the dolphins, the turtles, and the sharks than we can about humans because we know ourselves much better than we know them. Nevertheless, the little we know about them is no less interesting nor deserves less attention, if only because of the interconnections with our own story. This is why I find myself so often craving for stories that are not so monothematically human-centred, produced by an increasingly introspective and self-referenced culture that has

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<sup>1</sup> Lent J. 2021. *The web of meaning*. Profile Books Ltd., London.

<sup>2</sup> Braudel F. 2009. *La Méditerranée: l'espace et l'histoire*. Flammarion.

<sup>3</sup> Abulafia D. 2014. *The Great Sea: a human history of the Mediterranean*. Penguin.

<sup>4</sup> Matvejević P. 2020. *Breviario mediterraneo*. Garzanti.



successfully managed to segregate the scholars of non-humanistic disciplines within the walls of dusty natural history museums or anodyne laboratories, and condemned them to mainly talk to themselves.

This gaping rift that has developed in the most learned Mediterranean public between a majority who have regard chiefly for humanities and the others who are interested in science and nature,<sup>5</sup> is not only unnecessary and anachronistic, for there is never a good reason for creating barriers within the realm of knowledge; it is also harmful. The evident lack of interest in the natural world affecting such a large portion of Mediterranean societies, which includes influential categories such as lawmakers, teachers, judges, writers, and the media, is at the root of our inability to grasp the importance of timely addressing environmental crises caused by humanity, such as the disruption of the planet's climate, the acidification of the oceans' waters, the depletion of biodiversity, the extinction of species, the dissemination of contaminants and plastics and the spread of pandemics, with all the tightly interrelated effects that these novel Horsemen of the Apocalypse inflict on the wellbeing of Earth's inhabitants, humans included.

Mine here is an attempt to help kindle the interest of readers in the wondrous natural aspects of the Mediterranean region by telling stories about the picturesque marine characters in the play, such as the whales, the dolphins, the seals, the turtles, the sharks, and the rays—in short, the so-called “charismatic megafauna”—which I have been so fortunate to encounter during half a century of fieldwork as a marine conservation ecologist. I know that it will come as a surprise for many to discover that the Mediterranean Sea, commonly considered by the layperson a region poorly endowed with interesting natural features, is not quite what most people think, and that the sea is populated by fascinating beings, hiding in plain sight as they struggle to survive in an environment that humans are rendering increasingly inhospitable.

Kindling interest in Mediterranean marine fauna comes none too soon. So many Mediterranean species need all the help they can get, and fast, because their survival is increasingly uncertain. And yet, surprisingly, none of the famed historical accounts mentioned above that so masterly tell the exploits of humanity in the Mediterranean across the millennia care to adequately capture the fact that this same humanity, with all its wondrous achievements in terms of philosophy, arts, music, poetry, gastronomy, farming, technology, searches for beauty and creativity, has morphed today into a monster unable

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<sup>5</sup> This rift was famously lamented by British novelist and chemist Charles P. Snow, who noted in 1959 the splitting of the intellectual life of the whole of Western society into two cultures, “both sides developing their own language and ending up creating an unsurpassable cultural divide preventing each side from understanding and appreciating the other”.

to avoid soiling the very cradle of the civilisation it created, and on a fast track to destroying the region's inhabitants, itself included.

The Mediterranean marine environment is known to be amongst the world's most imperilled, and this is only because of the intensity of human activities. Ninety-six percent of Mediterranean fish populations (fishery scientists call them “stocks” probably because they see them neatly arranged along the shelves of an imaginary warehouse, ready for marketing and human consumption) are being captured unsustainably, with an average ratio of current fishing three times higher than fishing at a sustainable level.<sup>6</sup> Plastic pollution in the Mediterranean is one of the planet's densest. The Mediterranean is also one the world's busiest waterways, sustaining one-fifth of the global maritime trade over a surface of just 1% of the world's oceans: a feat not without consequences, as marine traffic is a significant source of noise, disturbance, and pollution. Not to be outdone, the world's navies insonify Mediterranean waters with their powerful submarine warfare sonars, whilst industrial fleets instrumented with deafening contraptions complete the job in search for oil and gas hidden within the sea bottom. All this noise is having a dire effect on the acoustically hypersensitive whales and dolphins. But the straw that breaks the camel's back is the warming of the sea due to the human-caused disruption of climate, which leaves very little escape options for marine animals wishing to shift their range northward to compensate for temperature increase—an option precluded to them by the geography of Mediterranean coastlines.

And yet, the health of the Mediterranean Sea is essential not only for the non-human beings that live in it; it is substantial for us humans as well. Benefits to humans from the Mediterranean natural environment are of many types, material and immaterial—such as beauty and inspiration—but let me simply note here the economic values, a currency everybody understands well. Although, as we have seen, the Mediterranean accounts for only 1% of the world's ocean, it generates about 20% of the global revenues related to maritime activities. Today's resources produce benefits worth US\$450 billion annually, supporting jobs and wellbeing for almost 500 million people in the region. This value depends to a large extent on the marine ecosystems' health and biodiversity, which is currently in dire danger.<sup>7</sup>

No wonder so many marine inhabitants in this region are threatened with extinction: a sad irony considering that the Mediterranean is one of the world's

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<sup>6</sup> Mediterranean fish stocks on the brink: <https://tinyurl.com/mrmdj9ne>.

<sup>7</sup> Pianté C., Ody D. 2015. Blue growth in the Mediterranean Sea: the challenge of good environmental status. MedTrends Project. WWF-France. 192 p.

top biodiversity hotspots.<sup>8</sup> In its cramped space—one-hundredth of the global ocean surface—the Mediterranean Sea hosts more than 6% of the known marine species of animals and plants, many of them endemic. And yet, this natural wealth is at risk of disappearing. One-third of the seagrass beds have gone. Most marine mammal species and more than half of the shark and ray species regularly occurring in the Mediterranean are in a threatened category in the Red List of Threatened Species compiled by the International Union for the Conservation of Nature.<sup>9</sup> It is a miracle if megafauna still occurs there. Its terrestrial counterparts—all those lions, leopards, hippos, and even elephants trotting along the Mediterranean shores until historical times—have gone extinct because human-induced extinction progresses faster on land than in the sea. Bears and lynxes hang on by a thread; wolves are regaining terrain because they have been strictly protected recently and because of the species' inherent resilience. Marine animals, by contrast, are more difficult to dispose of, as it takes longer to extirpate species from their watery habitats. So, they are still with us—but many of them just barely.

Lawmakers from the Mediterranean coastal nations recognised time ago that their sea required urgent political attention and resolved to express their concern in 1976, during a meeting in Barcelona, by agreeing on a treaty called the “Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean.” Beautifully crafted and assisted by competent, dedicated professionals, the Barcelona Convention remains, unfortunately, not much more than a “gentlemen’s agreement”—because the pussyfooting signatories decided that respect for their collective decisions had to be based on the goodwill of the concerned instead of on clear rules. For example, endangered animal and plant species—from whales to seagrasses—are listed as protected in a special protocol of the Convention. Still, the mechanisms for ensuring the compliance of such protection are lame. Unfortunately, gentlemen’s agreements require gentlemen to function, too rare a breed when managing humans’ effects on the environment is concerned.

Meanwhile, the men and women in the streets in Rome, Barcelona, Athens, or Tunis today are largely oblivious to what lives, swims, and dies in the Mediterranean Sea, and ignore that marine biodiversity is slipping away from

<sup>8</sup> Coll M., Piroddi C., Steenbeek J., Kaschner K., Ben Rais Lasram F., Aguzzi J., Ballesteros E., Bianchi C.N., Corbera J., Dailianis T., Danovaro R., Estrada M., Froggia C., Galil B.S., Gasol J.M., Gertwagen R., Gil J., Guilhaumon F., Kesner-Reyes K., Kitsos M.-S., Koukouras A., Lampadariou N., Laxamana E., López-Fé de la Cuadra C.M., Lotze H.K., Martin D., Mouillot D., Oro D., Raicevich S., Rius-Barile J., Saiz-Salinas I., San Vicente C., Somot S., Templado J., Turon X., Vafidis D., Villanueva R., Voultsiadou E. 2010. The biodiversity of the Mediterranean Sea: estimates, patterns, and threats. *PLoS ONE* 5(8):e11842. doi:10.1371/journal.pone.0011842.

<sup>9</sup> IUCN Red List: <https://tinyurl.com/56djmsuf>.

our lives really fast. An increasingly urbanised population is affected not only by the extinction of nature but also by the extinction of its own “natural experience”; and so it is that ignorance, in turn, spawns indifference. How can we care for something the existence of which we are unaware? As Senegalese conservationist Baba Dioum once said, “In the end, we will conserve only what we love, we will love only what we understand, and we will understand only what we know”.

The whales, the dolphins, the seals, and the sharks encountered in these pages first occupied my scientific mind, only to move to my heart as I started to see them not so much as study subjects but as fellow passengers in the interstellar trajectory aboard spaceship Earth. Despite being all fundamental players in the balance of the marine ecosystems that are everyone's lifeline, these species persist unnoticed by human landlubbers who have lost the ability to see much of what is non-human around them. I wish that encountering these animals, albeit only through ink on paper, and pondering on their struggle, might provide the stimulus for considerations that go well beyond the mere geography of my story.

The time has come to take stock of mistakes and redress human behaviour. I do not think that humans misbehave because they are inherently evil. There is no element of misanthropy in my effort. Quite the opposite, humanity is, for me, a constant source of wonder for all its extraordinary accomplishments. However, precisely because of these accomplishments, humanity is caught in a trap, unable to shake itself from the intoxication of the power afforded by technology (with the added recent injection of support from artificial intelligence); and incapable of reining in such inebriation by imposing on itself the wisdom of restraint. If we manage to free ourselves from the trap, nature will again lend her hand as we mend a rediscovered alliance.

The elusive Mediterranean monk seals, sticking their round moustached heads out of the surface to stare at us, can be a powerful symbol of this desirable new deal, for if monk seals will be able to make a comeback from oblivion—as they seem to be doing—anything else can follow. The monk seal “revelation” I had on the island of Patmos decades ago, told in the Prologue, embodies the metaphor that illustrates the main messages I wish to convey: one of regret for what humans did to our common house and our co-tenants, of resolve to help to right the wrongs, and of respect not just for the marine species intended as Aristotelian categories—“the” monk seal, “the” fin whale, “the” loggerhead turtle—but for all the individual Mediterranean inhabitants that go under such categories: these cognitively-, emotionally- and socially-capable non-human persons who deserve our awareness, sense of justice, respect, empathy, and ultimately, love.

Often, interesting ideas come during the night, and one night, as I was tossing myself in bed between one sleep cycle and the other, I had this idea. During my lifetime, I accumulated a good deal of first-hand stories about the Mediterranean non-human inhabitants. What if I imagined telling all these stories by embarking on a 5000-mile,<sup>10</sup> 2-month-long journey across the Mediterranean Sea? This imaginary journey would begin in early summer 2021 from Venice, my place of origin, and end in Sanremo in the Ligurian Sea, the base my colleagues and I have been using for decades for our scientific explorations—after having sailed clockwise across all the main seas composing the Mediterranean. It would be a long voyage, “full of adventure, full of knowledge”, as prescribed by Constantine Cavafy in his timeless poem “Ithaka”<sup>11</sup>: a journey where what matters is not the point of arrival but the journey itself, with all the wisdom derived from the experience and knowledge received along the way.

Accordingly, the story unfolding in these pages is a collage of real episodes that happened to me over a span of half a century in which I had the opportunity to sail across real waves, observe and discover real animals, exchange my views with real people, and argued for such views in the policy arena. All the episodes, deconstructed and reassembled here for a narrative purpose to create a single journey, are experiential tesserae from different places visited at different times, rearranged to create the mosaic of a single ideal journey. As a consequence, the fictional element of the story is its temporal dimension. I hope that the resulting narrative will convey to my readers the excitement of meeting the wondrous inhabitants of the Mediterranean Sea and help to build a collective wish of securing a future in which they will be left to flourish the way they were meant to, had humans not treaded so heavily on such a delicate balance of lives and natural processes.

*Pontoporia*,<sup>12</sup> the sailing boat aboard which I am making the journey, is also an imaginary vessel impersonating and reassembling in herself the essence of the many real vessels—Santal, Gemini Lab, Fling, Pelagos, Sirius, Saen, Chance—that have hosted and protected me against the sea's vagaries during my voyages, and innumerable other boats that I have ferried across from one

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<sup>10</sup> Distances at sea are customarily measured in nautical miles, so they are here wherever they pertain to nautical narration. When miles are mentioned in these pages, they are always meant to be nautical miles—one nautical mile being 1,852 metres long and equivalent to one prime of Latitude. Furthermore, speed at sea is measured in “knots”, i.e. the number of nautical miles covered in one hour.

<sup>11</sup> Constantine P. Cavafy. 1911. Ithaka. <https://tinyurl.com/ykczk6st>.

<sup>12</sup> *Pontoporia blainvillei* was also the name used by zoologists Paul Gervais and Alcide d’Orbigny in 1844 to describe the La Plata dolphin, also known as “franciscana”, a dolphin found in the coastal and estuarine waters of southeastern South America (and therefore not in the Mediterranean)—the species so named to celebrate the nineteenth century’s French zoologist Henri de Blainville.