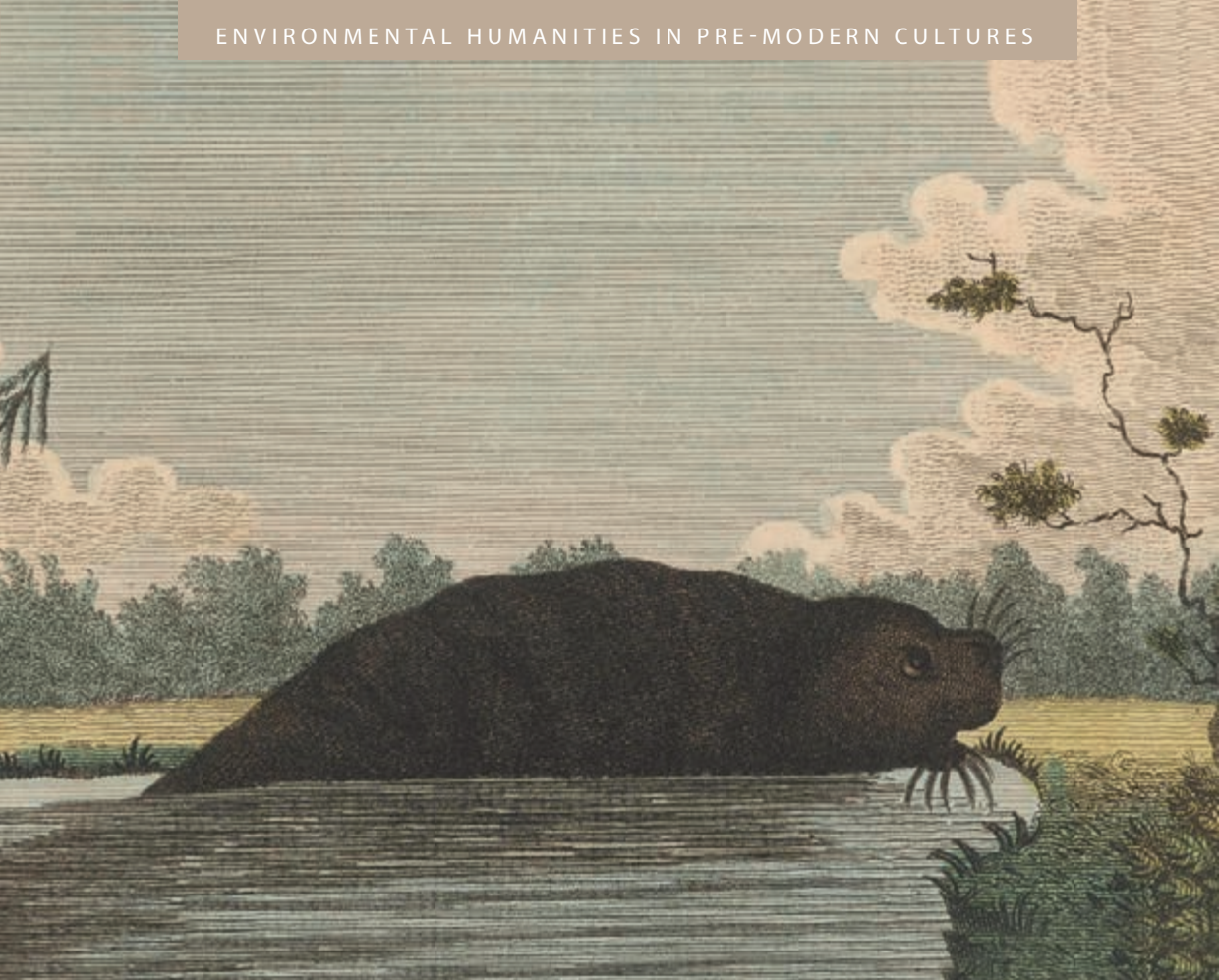


ENVIRONMENTAL HUMANITIES IN PRE-MODERN CULTURES



Cristina Brito

Humans and Aquatic Animals in Early Modern America and Africa

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Humans and Aquatic Animals in
Early Modern America and Africa



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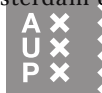


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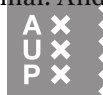
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When I first started to conduct my research on the early modern occurrence of marine mammals and sea monsters in the Atlantic, I was probably something like the naturalist Ulisses Aldrovandi back in the 17th century. I was determined to encompass everything. Quite the contrary to Aldrovandi, who actually (almost) managed it, I soon realised that this would be mission impossible for me. Nevertheless, I endured.

At a certain point, I decided that I was ready to write my piece on Pero de Magalhães Gândavo's sea monster, the one seen and killed on the shores of São Vicente, Brazil, in 1564, whose story was published by the Portuguese author in Lisbon, in 1576. This was having collected many accounts of this event and having compiled a clear chronology of its dissemination throughout Europe in that period. In fact, the news about this sea monster was spread and published in multiple printed formats across Europe right after its publication in Lisbon, and well into the 16th and 17th centuries – not to mention the 20th century. Moreover, despite occasional references in the scholarship, the current international historiography continues to omit Gândavo's sea monster. So, back in 2015, I was almost sure that I had covered everything: documental sources, iconography, and reference books. I was wrong.

Just a couple of weeks before publishing my investigation, by pure chance, I found a book that mentioned the work by León de Pinelo and that featured a new drawing of Gândavo's sea monster with a brief description of the encounter between the beast and the man. Just in time to include it in my work "New Science from Old News." By then, I was confident that I had, indeed, covered everything and I was happy with the direction my essay on this topic was heading. Showing how – to European eyes – this information about sea exoticism and curiosities had been produced in South America and how it was being disseminated from Brazil to Lisbon and from Lisbon to the rest of Europe. I thought I was done with this sea monster and ready to move to another one. I was wrong again.

After Gândavo's sea monster, I started to get interested in mermaids and manatees, and how early modern categories of natural history encompassing these two creatures – one imaginary, the other real – had been constructed by different peoples, and how they intermingled over time and across regions. I was also interested in learning how the animal became a legend, and whether the myth was reflected in the first written descriptions of this tropical marine mammal. And how local and Indigenous peoples in



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Africa and the Americas utilised the animal, and its products, and how it related to European perceptions of nature, the sea, and natural resource exploitation. This aspect of my research led me to the John Carter Brown Library (JCB) at Brown University (Providence, USA), in the Spring of 2018, where I gained access to many sources and a panoply of new possibilities to widen my search. I was on the lookout for manatees, but it took me only about one hour on my first day at the JCB Library to discover new evidence about the whereabouts of the infamous Brazilian sea monster. I then realised that new sources and information were available for me to explore and that further insights would emerge from them. So, where would Gândavo's sea monster take me this time?

My investigation moved forward while looking for representations of sea monsters, seals, whales, sharks, sea turtles, and manatees, and while reading about their lives, habitats, and behaviours, as well as about peoples' encounters with these large marine animals in different parts of the modern Atlantic world, and how the animals sometimes reflected individual and collective peoples' thoughts and choices in relation to their surrounding natural world. In this way, my focus became not just monsters from the seas but also, and mostly, manatees. I arrived at a moment where I felt confident, once more, that I had compiled if not everything, then enough information to make my point. I had found descriptions of episodes where empathy and trust in relation to some marine animals was denoted, appearing in clear opposition to fearful events and episodes of total disconnection with or an indifference towards the aquatic environment.

So, as I started this enterprise of a new book, I thought I had more than enough information to address human perceptions, fears, beliefs, and feelings regarding the marine environment in juxtaposition with early modern practices of their hunting, exploitation, and use along the Atlantic shores and its waters bodies. I may well be wrong again.

But before going any further, I need to say thank you to the many institutions, groups, and people that supported me and helped me along the way, starting in Lisbon and visiting various other locations in the world.

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As mentioned, my investigation has been conducted at CHAM and special thanks are due to many colleagues and friends, both for their direct help in providing access to documentary and iconographic sources, for translation of written material from diverse origins, as well as for their indirect support while writing. Based in Lisbon, I was able to network and interact with colleagues from around the world; some visited us here, others I met while attending scientific events and meetings, while others have kept contact through digital media and online conversations. Hoping not to forget anyone, I would like to acknowledge with special care the following people who in many ways contributed to the book.

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own “monsters,” while discussing manatees and other monstrosities of the waters.

Among the many scholars from different origins and backgrounds I have listened to over the years and learnt a lot from, I must mention: Poul Holm, Francis Ludlow, James Barrett, John Nichols, Alison MacDiarmid, Anne Karin Hufthammer, Florike Egmond, Daniel Quiróz, Ailton Krenak, Pedro Cardim, Margarita Rodríguez Garcia, Pablo Ibanez Bonillo, Maria Adelina Amorim, Juciene Ricarte Apolinário, Wellington Castellucci Junior, Giovanni José da Silva, Samuel Iglesias, Ryan Jones, Juan Marchena[†], Nayibe Montoya, Lucy Keith-Diagne, Diogo de Carvalho Cabral, Regina Horta Duarte, and Steve Mentz. A special word to José Espinosa who tracked down and carefully transcribed a great source in Seville. A word, too, to several research assistants who have worked with our team, over time, helping to select, transcribe, and translate sources.

A final word to the closest of the closest, my loving family, who endure long absences and profound silences with a smile, who listen repeatedly to my ramblings about whales and dolphins, manatees and mermaids, sharks and sea monsters, and who help me believe in all the possibilities of this fluid world we live in. To Jeremias Silva[†], Orlanda Ribeiro[†], Nazaré Rocha, Armando Taborda, Susana Brito, Bruno Silvestre, Francisco Silvestre, Celso Pinto, Martim Pinto, Herbert Maia, Maria Benevides, Rodrigo Galvão, and Raquel Maia.

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A todas e todos, sem exceção, o meu sentido agradecimento.



Introduction

Magnificent and mighty monsters of nature

Abstract: This introduction sets the tone for the whole book, which opens in Chapter 1 with the story of Matto the manatee, written by Lopéz de Gomara in the early 16th century and retold by several other authors, from Herrera y Tordesillas in 1725 to Durand in the 20th century. Here, I address the agency of Native American and European peoples and discuss the agency of marine mammals and other large aquatic animals and water monsters. My aim is to unravel different stories in order to assemble a history of the interactions between humans and marine animals in the early modern Atlantic. I will use documentary and iconographic historical sources for West Africa and the Americas that include aquatic animals in their descriptions.

Keywords: sea monsters; aquatic animals; human and nonhuman interactions; environmental history; early modern age.

*Animals are everywhere, and there has never been
any purely human moment in history.¹*

*We come, in last place, to an animal that terminates the boundary between
quadrupeds and fishes. Instead of a creature preying among the deeps, and
retiring upon land for repose or refreshment, we have here an animal that never
leaves the water, and is enabled to live only there. It cannot be called a quadruped,
as it has but two legs only; nor can it be called a fish, as it is covered with hair. In
short, it forms the link that unites those two great tribes to each other; and may be
indiscriminately called the last of the beasts, or the first of fishes.²*

1 Goldsmith (1822), *An History of the Earth and Animated Nature*, vol. II, p. 339.

2 Goldsmith (1822) vol II, p. 339.

As a child, I used to write secret notes, fold them into small papers, and then, with my body stretched full-length, reach the top of the bookshelf and hide them from everyone's eyes. I lived in that same house from my childhood till college, and never divulged the secrets of my hiding place. Later, when I returned to that place as an adult, I noticed that the top shelf was right in front of my eyes and all my notes were clearly visible to anyone. I realised then, for the first time, the importance of our own perception of our environment and how it changes over time.

Many, many years later, when visiting the island of São Tomé (São Tomé and Príncipe, Gulf of Guinea) with a team of European biologists, I interviewed fishermen about the value of cetaceans. The survey included the question, "Do you like dolphins?" Answer: "Yes." From my conservationist perspective, this seemed to be an excellent indicator for maintaining healthy natural populations. The next question was, "Do you hunt and eat dolphins?" Answer: "Yes"! For these fishermen, liking dolphins meant being happy that they existed, so that they could capture them. We clearly perceived different realities in relation to the same animals.³ These differences reflected the physical, cultural, social, and economic interactions of individuals and peoples with their surroundings, local nature, and resources.

Of course, throughout history, worldviews and perceptions of natural environments have differed according to culture and time. This diversity over time exists not only between different societies and cultural groups, but also within similar local communities bordering the same ecosystems and facing the same ecological issues.⁴ Paradoxically, in different societies people tend to look at and perceive similar resources, elements of fauna and flora, and ecosystems in general, in a similar way. Divergence and convergence in perceptions of nature are found throughout history.

As an environmental historian of the early modern era, I realise that today, more than ever before, most marine habitats, seascapes, and large marine animals have historically been seen as alien to the terrestrial realm, as if the sea itself was a foreign element to the human essence. This strangeness has contributed to most modern Western societies (from the 15th to 18th centuries) describing marine megafauna, for example marine mammals, sea turtles, and sharks, as marvels, monstrosities, and eccentricities.

3 See Hart, Gray, & Stead (2013), *Consumptive Versus Non-Consumptive Use of Sea Turtles?*

4 Besides highlighting the value of acknowledging and understanding local perceptions towards the environment and animals, this may be a clue to the fact that, nowadays, customised environmental management measures are usually necessary. See Hart, Gray, & Stead (2013).



From the 15th century onwards, when European mariners, explorers, and settlers started in situ observations and descriptions of tropical marine fauna, they were relying on their own eyes, mental preconceptions, as well as previously acquired knowledge.⁵ In fact, they had their own mindsets, belief systems, and understandings of the world to cope with. And the same happened with European naturalists, sitting in their offices, writing their encyclopaedias, and establishing networks of information. Thus, whales, sharks, rays, or other large animals could easily turn into a terrifying monster of the depths, regardless of whether humans were observing them or writing about them at a distance.

Yet, no matter how strange these new animals were to the eyes of European pilots, naturalists, and humanists, they were not strange at all to native peoples bordering the Atlantic Ocean. Peoples depending on nature or living in close connection with it have typically paid closer attention to their environment, creating traditional cosmologies where humans are part of a complex web of ecological relationships.⁶ History shows that, across the globe, animals are more than just things to be named or eaten; they have magical or symbolic meanings,⁷ and have been considered an important part of a whole community up to today.

Ways of perceiving marine animals have changed during the early modern period. Meanwhile, practices and exchanges developed, peoples interconnected, and knowledge and values evolved. The human mind understands reality, builds knowledge, and moves forward through a dialectical process between experience and preconceived ideas. This cognitive process is triggered in a reciprocal and labyrinthine dialogue, leading to the construction of a certain idea or perception of reality, whether it concerns modern Europeans or natives of any region.⁸

Sea monsters from the past gradually became valuable exploitable resources and, more recently, due to their imminent danger of extinction, global conservation icons.⁹ This is the case of large whales across the globe;

5 The concept of recognising the known, when addressing the novelty by Europeans, in the early modern Atlantic explorations is discussed in “*De ‘partes (de África)’ não se faz um todo,*” in Almeida (2015), *Despenteando Parágrafos*.

6 See the paper by Sepie (2017), “More than Stories, More than Myths.”

7 Holmes et al. (2018), *Fantastic Beasts and Why to Conserve Them*.

8 Following Almeida (2015).

9 Several authors have been addressing these paradigms of marine megafauna changing in humans’ perceptions from sea monsters to icons. See e.g. Laist (2017), *North Atlantic Right Whales*; Brito (2018), *Beauties and Beasts*; Giovos et al. (2019), *An International On-Line Social Survey of Public Attitudes Towards Cetaceans*.



nowadays, nearly all countries are working towards the preservation of these giants of the oceans. Nevertheless, different societies perceive and materialise their relationships with whales in quite different ways. For instance, Japan has recently resumed its national right to hunt whales in their territorial waters, thus leaving the International Whaling Commission (IWC) in December 2018.¹⁰ Despite this, there is a tendency towards a more conservation-oriented perspective in Westernised countries. Predatory consumptive attitudes regarding marine megafauna had remained common practice in these countries for centuries. This is true not just for whales, but also for sea turtles and even large fish. It is also true in regard to manatees.¹¹

This change arises from a long-lasting history of negative interactions between humans and the marine environment and a deep-rooted tradition of perceiving and using nature as a human playground and a garden of infinite resources to explore. As mentioned above, there are many cases of an evolving convergence in the use of similar resources by groups of people who have never met one another – whaling is one of them. Upon understanding the value of the resource there is a tendency to develop techniques to exploit it continuously according to human needs. The methods can differ, but the principles of capture – fishing or hunting – as well as the final goal are actually similar. However, even within the same communities or cultures, there are small groups of people, or individuals, who regard some aspects of nature differently from the others. Concurrently, there are robust and durable cultural dissimilarities in the perception of certain animals; examples include sharks and manatees.

While reading Portuguese and Spanish early modern sources for the Americas, I came across a well-known history of a certain manatee. Its name was Matto. Or, more accurately, her name was Matto, as apparently this manatee was a female. It reminded me of how of a single animal can be seen so diversely by different people. And it led me to extrapolate to the way the same marine animals are seen universally – sometimes in convergence and times in divergence. But before heading into the story of Matto, let me go through the current situation concerning manatees in West Africa and the US. These are two places on Earth where nature and resources

10 The IWC is the global body charged with the conservation of whales and the management of whaling. <https://iwc.int/home>

11 Manatees are herbivorous aquatic mammals of the Order Sirenia, which encompasses three species distributed along the eastern and western shores of the tropical Atlantic Ocean. They are listed as vulnerable by IUCN. The population trend is decreasing for the American Manatee (*Trichechus manatus*) and Amazonian Manatee (*Trichechus inunguis*) and unknown for the African Manatee (*Trichechus senegalensis*). Keith Dagne (2015), *Trichechus senegalensis*.



management are quite different. Yet, human activities and presence still impact tremendously upon the natural populations of manatees and other aquatic megafauna here, albeit in different ways. Manatees are killed for human consumption in West African countries, while manatees are killed by boat strikes in the US.¹²

In Senegal, we find an NGO¹³ that works successfully towards the conservation of manatees and other aquatic animals. But, even with the development of conservation movements and local and regional measures, they continue to be exploited for aquatic bushmeat¹⁴ and many other purposes. Recent news from Nigeria highlights such cases:

Manatee killed today at Oguta Lake by a local fisherman. According to him, he has never seen something like that, therefore, the creature is a sign of [the] end time...Another senseless killing of manatees in Nigeria last week – this time a mother and her young calf. We are now working closely with our colleague in the region to get education programs started for the public. Getting wildlife officials to enforce the laws protecting manatees is extremely challenging, but we've got to start somewhere.¹⁵

This event reveals some similarities with past ways of perceiving and valuing marine animals. As we will see later in the book, we find the mythical and the mundane animal simultaneously in the same body. The creature is a sign of the end of time, but it is also used as a food resource.

In West Africa, aquatic bushmeat was mostly obtained opportunistically and probably originally intended solely for local consumption. Despite this, direct catches occur today in the following countries: Benin; Gambia; Ghana; Guinea; Guinea-Bissau; Ivory Coast; Liberia; Mali; Niger; Nigeria; Senegal; Sierra Leone; and Togo.¹⁶ Manatee meat is used nowadays in West Africa

12 Florida manatee deaths hit a record high in 2013, with 829 killed – about 17 per cent of the known population – including 126 calves. Reported causes of death included: 276 by algae blooms; 115 by unknown disease; and 72 by boat collisions (see the website of the organisation Sirenian International <https://sirenianinternational.org/>).

13 African Aquatic Conservation Fund: <https://www.facebook.com/AfricanAquaticConsFund/>

14 Aquatic bushmeat is products derived from wild aquatic megafauna (e.g. marine mammals), which are used for human consumption and non-food purposes, including traditional medicine.

15 Facebook post from African Aquatic Conservation Fund, about the manatee captures in Nigeria, 2017. This NGO is locally applying legislation for the protection of manatees, working in the recovery and rescue of manatees captured by fishermen and working on environmental education and dissemination of nature conservation in local communities.

16 Cosentino & Fisher (2016), *The Utilization of Aquatic Bushmeat from Small Cetaceans and Manatees in South America and West Africa*.



as a food resource, and some parts of the manatee (such as the heart or bones) are used in ritual ceremonies and as an important natural element for traditional communities. Additionally, several traditions in these regions that revolve around hunting the manatee continue to this day. Thus, despite legal protections, the use of manatees is apparently growing.

During the summer of 2017, we witnessed the fury of Hurricane Irma in the United States. Alongside the devastation caused by this phenomenon, we experienced moments of strong empathy towards nature and animals, as rescuers braved the hurricane to save manatees. Due to their conservation status, each animal counts and any animal is considered to be an individual to protect and save.

Hurricane Irma's winds drained waterways around Tampa Bay late this morning, even though the storm was 200 miles away. It happened so fast that some manatees were apparently caught off-guard, leading to at least one impromptu rescue.¹⁷

The animals in this situation were considered intrinsically valuable; a single individual of such endangered populations is worth the risk of saving it. But the history of Florida's manatees is also one of hard impacts from human activities on natural populations.¹⁸ The local government is working towards the safeguarding of endangered marine populations in the region and it is pushing resources into their recovery or, at least, their preservation.¹⁹ People are (re)acting both in accordance with their own perception of the environment and their own needs. In some cases, we find more mundane needs, in others more psychological or emotional ones.

Today, across their distribution range, manatees are seen very differently according to their location, country, and peoples' respective cultural practices. Some peoples (or individuals) follow old practices in the use

17 "Rescuers Brave Hurricane Irma's Fury to Save Manatees." Fox 13, 10 September 2017. <https://www.fox13news.com/news/rescuers-brave-hurricane-irmas-fury-to-save-manatees>

18 "A record number of Florida manatees were killed by boat strikes and a near-record number of overall manatee deaths were reported in 2018: a total of 804 manatees died in Florida waters last year, close to the record 830 set in 2013, according to data from the state Fish and Wildlife Conservation Commission; boats killed 19 manatees in 2018, breaking the record of 106 set in 2016 and tied in 2017. The commission started keeping manatee mortality records in the 1970s." Information retrieved from <https://eu.tcpalm.com/story/news/local/indian-river-lagoon/health/2019/01/02/804-florida-manatee-deaths-during-2018-highest-5-years/2461825002/> (January 2019).

19 "Manatees in Peril as Toxic Red Tide Tests Florida's Resources for Rescued Animals". <https://www.theguardian.com/us-news/2018/nov/19/severity-of-toxic-red-tide-tests-floridas-resources-for-rescued-manatees> (December 2018).



and exploitation of resources, while others have moved towards a more conservation-oriented approach. “Nobody wants to kill a manatee,” said Jaclyn Lopez, Florida director at the Center for Biological Diversity, in January 2019,²⁰ during a news report about the record number of 119 Florida manatees being killed by boat strikes in 2018.

Research and conservation efforts developed in West Africa indicate that people continue to hunt manatees and see them as resources to be exploited. On the other hand, environmental education and science outreach are gaining space in these matters. Historical uses, traditions, and practices may provide an understanding of continuous and current local drivers of the use and consumption of manatees. In fact, as already seen in some cases, animals are used for food, medicine, and/or products for magic/religion. A better overall understanding of the drivers of aquatic bushmeat consumption will be essential in the development of effective mitigation measures.²¹

Many Western and Westernised “human–nature” dichotomies fail to express the true complexity and ambiguity of people’s attitudes concerning the natural world.²² A deep comprehension of local and regional historical and cultural drivers is key for the development of management and conservation measures. The case of Matto, the manatee, which I explore in this book, may be able to help precisely in this issue as well as to shed light on many others. Animal monstrosities of the seas or aquatic bodies also provide good examples of contrasting worldviews and interpretations of nature.

As we will see later, for Portuguese America, the so-called marine men (*Hipupiara* or *Igupiáara*) embodied all the possibilities of the huge and scary sea monster or water devil. Some authors were not certain whether they were a true animal or rather a ghost, while others described them as dangerous creatures able to kill humans with their embrace. This creature encompassed all the hybrid or strange typologies of great aquatic beings, which are not always known by locals – particularly when rare in specific regions (assuming an actual species is being considered) or when absent from local cosmogonies and mythologies (assuming it is a fantastic being under consideration). The work of the missionary Fernão Cardim,²³ for instance, mentions that the local peoples were truly terrified by this creature, to the extent that they feared they might die just from the thought of it, with no

20 <https://eu.tcpalm.com/story/news/local/indian-river-lagoon/health/2019/01/02/804-florida-manatee-deaths-during-2018-highest-5-years/2461825002/> (January 2019).

21 Cosentino & Fisher (2016).

22 Nabhan (2013), *Singing the Turtles to the Sea*, p. 126.

23 Cardim (1980) [1540?–1625], *Tratados da Terra e Gente do Brasil*.

one who saw it being spared. According to the author, marine men lived in the springs and mouths of freshwater rivers of different regions in Brazil and their physical appearance was either that of an adult man, or a female with long hair and beautiful features.

Sea monsters continually rose to the surface of the waters, or laid upon the shores, or were thrown inadvertently onto the long coasts of the American shorelines (Figure 1). In each situation, letting themselves be seen. Even so, very little was known about them – in most situations they were considered as dangerous but were not sharks – and the species was not known, nor was there any news of anything similar anywhere else in the world.²⁴ And all of them were worthy of interest and curiosity.

They were monsters both in the place where they were observed and when transposed to other cultural settings. In a Europe aiming at becoming increasingly erudite and scientific at the rising of the Renaissance, monsters were still monsters. And the ever-present monsters of the sea left no room for doubt that “as there are several monstrous animals of various forms on Earth, there are also several types of them in the sea, some of which are men from the waist up, called newts, other women, called sirens, who are both covered with scales, as Pliny described them.”²⁵

These hybrid beings – unknown and belonging both to the sea and to the land – had human and animal features alike, and could be both real and imaginary, and were often separated from those other monstrous creatures, the large beasts of nature. The first, for instance, the notorious Gândavo’s monster (Figure 2), to which I will return, and the latter, the soon famous and magnificent manatee. Called *Goaragoa*²⁶ or *Iguaragua* in the Indigenous *Tupi* tongue, the occurrence, description, and habits of manatees prevented them from being confused with any of the frightening and unknown monsters. Several early modern authors differentiate them as they describe the aquatic fauna of the Atlantic – whether off the west coast of Africa or on American shores. The authors of this age – humanists with a more naturalistic character – were open to all sorts of monstrosities and strange possibilities of nature, and offered personal categories to classify them, at a time when the biological classification system as we know it today was far from being thought out.²⁷

24 Vasconcellos (1668), *Noticias Curiosas, e Necessarias das Cousas do Brasil*.

25 Paré (1982) [1585], *On Monsters and Marvels*.

26 “*Goaragoá is the fish that the Portuguese call ox*.” Sousa (1989) [1587], *Tratado descritivo do Brasil*.

27 See, for the case of manatees, the discussion I present in Brito (2018) about the evolution of knowledge production and the natural history of these marine mammals.



Monsters, sea lions, sea horses,²⁸ manatees, whales, sea turtles, mermaids and tritons, flying fish and *dourados*, sawfish and sharks of many types – almost all are evident in the annals of the Iberian and European natural history, supported by empirical and natural history knowledge and local experience obtained in Africa and the Americas. These are the animals that I intend to historicise, give a face to, and, in some cases, allow them to express their own voices. Here, I will be writing about the relationship of these nonhuman animals with human beings. Humans found, perceived, knew, used, categorised, and described them – and took ownership of them – in all sorts of ways. My intent is to examine the entanglements between marine animals and humans, with the Atlantic as the medium in which both met and interacted, as an example of how historians can address the long, intricate, and often shared voyage that all creatures on Earth have undertaken. In exploring time and space – moving between the past and the future, and the North and South Atlantic worlds – and considering the many different technological, scientific, and cultural developments this encompasses, I expect to offer a new contribution to the ways humans look at the history of the oceans and the ways we might, eventually, rethink their future.

We live in the age of humans. We live in a new epoch on Earth, defined as the Anthropocene, in which human actions and their impacts significantly alter the planet. Although various debates remain ongoing in different spheres of the scientific world, the general existence of the Anthropocene is relatively accepted given that we live today on a truly global scale, in an era of environmental manipulation with effects on planetary systems equal or greater to those of geological phenomena.²⁹ The human species has, in this sense, become a geological agent, given the drastic transformation of relationships and interdependencies between people and the rest of the natural world.³⁰

The Anthropocene, as a geological epoch, is typically delimited from the mid-20th century, with the Great Acceleration (economic and technoscientific) being the point of reference. Several disciplines have, however,

28 The so-called sea horses were hippos, referred to since the 15th century as the latin *hippopotamus*, and in local tongues as the *guzulico* or *cavallo marino*, those land mammals with habits of sea animals that were as large as an ox and as dangerous as a beast.

29 Steffen et al. (2011), *The Anthropocene: Conceptual and Historical Perspectives*; Ruddiman (2013), *The Anthropocene*.

30 Castree (2014), *The Anthropocene and the Environmental Humanities*; Castree (2020), *Speaking for the Earth and Humans in the "Age of Consequences"*.



been debating both the concept and its periodisation and, for example, the *early Anthropocene* concept pinpoints the Neolithic Revolution as its origin. European expansions from the 15th century onwards, which instituted global trade and the circulation of people, goods, and natural elements, are also considered as preconditions for the Anthropocene.³¹ In these historical contexts, human action was markedly predatory, causing contamination and destruction of ecosystems, overexploitation of resources, and extinction of species, simplification of habitats and natural systems, as well as marked ecological, social, and cultural discontinuities. The massive changes that have taken place in marine ecosystems are the result of a continuous and excessive exploitation of resources by humanity over millennia. The negative impacts of anthropogenic action on the marine environment are visible, mainly due to the intensification of human presence in coastal areas across the globe.

Peoples – their constructed ideas and ideologies, their political structures and hierarchies, their understanding of the world – were quite distinct from one another at the dawn of the 15th century. Indigenous and traditional worldviews were markedly different from the European one, no better no worse, simply different,³² as were the respective conceptual architectures and mental structures used to conceive of the natural world and understand the multiple possibilities for using (the rest of) nature and its resources for the sole or shared benefit of people. Once permanently in contact, from the beginning of the 16th century onwards, they were turned into the all-encompassing “old plus new world” landscapes of conflict, of appropriation, and of exacerbated destruction. And given that culture and nature are equal sides of a single coin, environments, ecosystems, natural populations, individuals of fauna and flora, became biomes or biospheres of permanent contestation as well. Even today, differences persist, as do clashes in living in and understanding the natural–human world. Should we rather see these ecological niches and interrelated human cultures as *anthromes* or anthropocentric biomes?³³

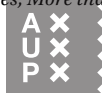
Among the many Indigenous societies scattered around our Earth, it is clear that the ways of living well together with the planet are based on reverence, responsibility, reciprocity, respect, and good relations between people and the rest of the natural world, as Sepie³⁴ puts it. Today, the West, with its own ways and particularities, is only a small piece of this huge world. A world full

31 Mentz (2020).

32 Mann (2011), 149; Krech III (1999), *The Ecological Indian*.

33 Fuentes & Baynes-Rock (2017), *Anthropogenic Landscapes, Human Action and the Process of Co-Construction with other Species*, pp. 1–3.

34 Sepie (2017), *More than Stories, More than Myths*.



of different perspectives and ways of facing what surrounds human beings – other people, other environments, the Other, and the Radically Other. In fact, many of the Earth's ecosystems and most of its untouched biomes are under the eyes, uses, managements, and ways of living of Indigenous peoples. Knowing how to see, to understand, to accept, and to use in harmony with the resources that the Earth offers, in the form of shared use, happens less in the Westernised world, because living in larger concrete cities sets most of us increasingly apart from the natural truth – that of mutual dependency. We must recognise that, “at every level, humans are entangled with other species. We become ourselves via biological amalgamations; we are the result of melding bodies and genetic legacies. However, even at this level, humans are never alone; our biological selves are multispecies communities.”³⁵

Most of us seem to exist so far removed from the traditional and Indigenous worlds in terms of the most common ways of living, in everyday practices, and in the ways we conceive the world. We are so ahead and yet so far behind what is lived and conceived of in other societies – in those places where feet and hands are connected to the soil and eyes and hearts to the water. Should this economic and technological development – the true Capitalocene³⁶ – be stopped, or should it be put to a different purpose? Can people learn, not just from history, but from one another? We can surely listen more and encompass more.

We can see a certain notion of spiralised time in some traditional non-Westernised societies. I first encountered this concept and these ideas in a lecture by my Brazilian colleague Giovani José da Silva, at the Centre for the Humanities of NOVA University of Lisbon in early 2019. Time in a spiral appears as a continuum between the past, the present, and the future, reflecting the consequences of human acts in what is to come and mirroring, at each moment, what has been done, learned, and transmitted by previous generations. Some tribes in Brazil today refer to a temporal connection between what exists and what happens now and what has already happened (some of us would say between the present and the past), in a way that several moments in time might touch one another. This understanding of time is reflected in the concept of knowledge about nature, and even of existence; moments and events touch one another. This belief conceives time not in a continuous or circular way, but in a spiral, it being possible to see and return to each moment and remember or perceive each moment of interaction. Thus, the present can go back to the past and the past is reflected in the present. What is done at one time influences

35 Fuentes & Baynes-Rock (2017).

36 Haraway (2015), *Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin*.



what happens at another time. There is time, space, and various relationships that establish layers of reciprocity that need to be understood and preserved.

Time(s), cycles, spirals.

These are life cycles conceived of in a temporal format that goes beyond our place in space. These are reciprocities that are manifested between layers of people living (in) different times and, in turn, they are transformed into respect. Of course, time on Earth has its own thickness, and different layers, which go beyond what is possible to readily quantify using human mechanisms and instruments. Time assigns a moment that is specific to each person and to each society – in some cases it runs at a brisk pace and in others it is slower and denser. Today, as the world is pressing pause amidst a pandemic, the simple notion of time (days, weeks, months) runs differently. It is important to materialise time's measures because times touch each other, go back and forth; histories may repeat themselves, narratives may be entangled; and, whether we must learn from them or not, we can at least (re) view ways of adaptation to events and address the consequences of certain actions. In these last couple of years, I listened to and read more about non-linear perceptions of time. As Duara puts it, "historical processes are not fundamentally tunneled, channeled or directed by national, civilizational, or even societal boundaries but are circulatory and global, much like oceanic currents."³⁷ His circulatory history deals with a non-traditional flow of time, acting as a movement or distribution from place to place, comparable with the ocean currents, which are not channelled but instead develop in interaction with and under the influence of many factors. Species, events, and moments flow on, shaping and being shaped, and continually influencing each other.³⁸ This seems to be relevant to how humans and some other animals' relationships are established and maintained, in an interlocked web of critters, time, and space, as if a shared memory of kinship might exist between all elements of "ecocultural" systems. In considering our current days and the ways things are, we may want to adapt by perceiving such a circularity and continuously looking back into the future.

Different ways of conceptualising the world are also reflected in the ways of theorising one's own surroundings – families, relatives, kin – and in the paths and processes individuals and peoples use to transmit to future

37 Duara (2021), *Oceans as the Paradigm of History*, pp. 2–3. See also the 2021 lecture "When is the Anthropocene? The Multiple Lifetimes of Climate and Nature Emergency" by Helge Jordheim in the Oslo School for Environmental Humanities. <https://www.hf.uio.no/english/research/strategic-research-areas/oseh/>

38 Duara (2021), pp. 4–5.



generations their ancestral stories or construct their history. While looking at the mainstream currents of natural history and philosophy – which I will go into shortly – some people from some of these traditional or Indigenous groups or cultures say it was not the Europeans who taught or catechised the Indigenous peoples since their arrival in the Americas. On the contrary, it is the native genetic, biological, and cultural reality that is embodied in European treaties on tropical natural history, and, consequently, mainstream science and practices were themselves converted and colonised by Indigenous knowledge.³⁹

This book will contribute to new currents, turns, and twists in the Environmental Humanities, with an inter- and multidisciplinary approach that uses several methodological approaches to respond to the current ecological crisis from plural perspectives.⁴⁰ Here, I use these approaches not quite as a scientific discipline, but more as a way of thinking through worldviews and different ways of expressing interactions between humans and the nonhuman aquatic worlds – both from within and outside academia. I am also following the so-called Oceanic Turn⁴¹ as well as the Animal Turn.⁴² In this way, I am locating my investigation at the crossroads between animal studies and marine environmental history, both emerging fields of research, and in mainstream research on oceans and animals' agencies. The focus is on the animals of the waters (either individuals or taxonomic groups) and the relationships historically established between various peoples and other species surrounding them. Attention is given to the marine environment and large marine or aquatic animals' agencies, considering and discussing the

39 Lecture by the Brazilian professor and scholar Gioavani José da Silva (CHAM – Center for the Humanities, 2019).

40 The Environmental Humanities is a new field of investigation that involves studying and conceptualising new ways of dealing with the urgent challenges of current environmental crises, through disciplinary and methodological integration. See Rose et al. (2012), *Thinking Through the Environment, Unsettling the Humanities*; Castree (2014), *The Anthropocene and the Environmental Humanities*; Kitch (2017), *How Can Humanities Interventions Promote Progress in the Environmental Sciences?*; Holm & Brennan (2018), *Humanities for the Environment 2018 Report*; Mentz (2020), *Ocean*; Merchant (2020), *The Anthropocene & the Humanities*; Castree (2021), *Environmental Humanities*; Environmental Humanities is a wide and flexible field that needs to be expanded further. Jørgensen (2022), *Isn't All Environmental Humanities 'Environmental Humanities in Practice'?*.

41 DeLoughrey (2017), *The Submarine Futures of the Anthropocene*.

42 Nance (2015), (Ed.) *The Historical Animal*; Colby (2015), *Change in Black and White: Killer Whale Bodies and the New Pacific Northwest*.



fact that aquatic animals' distribution and natural behaviours occur without human control but do affect peoples' daily lives and decision-making.

I expect to address the close interconnection of past human actions and marine environments, of the continuous heavy exploitation of marine resources, with current trends towards decreasing species populations and diversity, of extirpations and extinctions, and the disequilibrium forced upon marine ecosystems. In fact, all the species that are discussed here are currently severely endangered, their geographical distribution is highly constricted, and their habitats are suffering from serious damage and fragmentation. The concept of a pre-Anthropocene or of an early Anthropocene⁴³ will also be discussed, placing the book within the framework of the most recent scholarly thinking in this field.

More than simply revisiting these themes, this book aims to present a novel approach by using understudied (marine) animals and ecosystems as examples, for a period and place also less studied in the fields of environmental humanities, environmental history, and animal history. Moreover, it aims to give some animals their well-deserved voices and fixes their places in history. It also employs a strong cross-cultural approach to showcase differences and similarities in peoples' use of nature and partnerships with animals.

This book is also a journey. Not just in terms of a voyage taken into the past of marine environments, but also one taken into the integration of different methodologies in the Humanities. I am presenting interdisciplinary and cross-cultural research to address the past of relationships between humans and nonhumans. And, as mentioned above, I will try to emphasise the interactions of individuals and peoples with the oceans during the early modern period in the Americas and Africa.

These subjects and actors – aquatic animals, peoples, and the Atlantic waters – have rarely been considered together. Here, different worldviews and concepts of nature will be addressed in a cross-cultural approach in a place and time where both indigeneity and imperial motivations played an active role in shaping the human forces that acted upon aquatic environments and their animals. Severe long-term anthropogenic impacts deeply changed habitats and natural populations, and altered seascapes and ways of living to the point where several aquatic species are now facing extinction.

43 See Crutzen & Stoermer (2000), *The "Anthropocene"*; Steffen et al. (2011), *The Anthropocene: Conceptual and Historical Perspectives*; Ruddiman (2013), *The Anthropocene*; Lewis & Maslin (2015), *Defining the Anthropocene*; Bonneuil (2015), *The Geological Turn: Narratives of the Anthropocene*; Mentz (2020); Merchant (2020). See also the "Anthropocene Project" by the Rachel Carson Center for Environment and Society. <https://www.carsoncenter.uni-muenchen.de/outreach/past-projects/anthropocene/index.html>



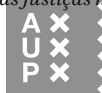
By looking into the past, I will try to transcend my own cultural roots and attempt to perceive the world through the eyes of others. These “others” include both other peoples and nonhumans. Transcending binaries and breaking with historiographic traditions in which only the winners’ stories are written based on the sources they have made available,⁴⁴ will be my way of contributing to cross-cultural more-than-human historical narratives.

Most of stories told in this book are set in colonial Brazil, Central America, and the Caribbean – an additional consideration of West Africa allows comparisons and an approach to an Atlantic globality. Examples spanning from the mid-16th century to the late-18th century are available mostly from Portuguese and Spanish historical sources. My human actors are the Europeans, in Europe and elsewhere, and local or Indigenous societies in the places early modern encounters and clashes took place. I direct my attention to multiple agencies, directions of influence, and modes of socio-cultural relationships between humans and between humans and the nonhuman world. Furthermore, I look at the contact zones between Indigenous societies and colonising societies, and the consequent mutual and asymmetric effects of the different types of “ecocultural” interactions that have been established.

Throughout the book, I use the terms Native Americans, Indigenous, Amerindians, and native or local groups or societies, many times interchangeably, to denominate a myriad of origin peoples from the Americas whom Iberians contacted in their overseas colonisation. Even if the terms I have chosen to use were constructed based upon the views of colonisers and in situations of control, appropriation, and subjugation, I am not using them as general, simplifying, and detrimental words and concepts.⁴⁵ Moreover, I am aware that these denominations do not reflect the totality of cultural indigenous diversity and local realities, neither past nor present. Whenever I have sufficient information from the historical sources, I have identified original nations, such as the *Tremembé* or the *Tupi*-speaking groups for coastal Brazil, the *Taíno* for the Caribbean, or the *Calusa* for North American continental regions, to name some examples. In any case – either using names for individual groups, or names for social categories to classify those groups – I am aware how easy it is to run into terminological quicksand. So, as Charles Mann correctly states, I must affirm that I use these terms as

44 Bauer & Norton (2017), *Introduction: Entangled Trajectories, Indigenous and European Histories*.

45 I am following the lead by many other scholars, such as Bauer & Norton (2017) and the Portuguese historian Pedro Cardim and all the colleagues he cites in one of his recent works. See Cardim (2018), *Os Indígenas e as Justças no Mundo Ibero-Americano*, pp. 29–33.



cultural and geographical categories, not racial ones.⁴⁶ I also try to follow his rule of thumb and use the names these groups would know and identify with – which, again, is not an easy task for a European scholar relying upon European sources. I am trying to keep up with a number of current debates that address these historical questions (including from an anthropological viewpoint) and keep abreast of recent Indigenous historiographies. I use these words also in the context of learning and hearing from different colleagues, such as Juciene Ricarte Apolinário, a Brazilian scholar working directly on the history of Indigenous societies, and from the Indigenous scholar Ailton Krenak, as they refer, for instance, to the *Potiguara* or the *Krenak* societies.⁴⁷

European sources may open a window to the past of Indigenous and traditional societies, which I am focusing on, because the aquatic animals were elements of their local ecologies and cosmogonies. From time to time, I need to go deeper into European contexts where Western globalised views of the world, scientific concepts, and the sketches of disciplines started to emerge during the early modern age. I am building my discourse based on European productions and that will bias my words and my interpretations of local realities. However, a true effort was made – and I will continue to pursue it – to give voice to silenced agencies. In my future investigations and writings this must, surely, include an ever-greater consideration of the work of Indigenous and non-European scholars, and the recognition of the importance of the Western Hemisphere and the South Atlantic, besides the Eastern Hemisphere and the North Atlantic, to the construction of a global history of the world.

So, as I move across the Atlantic realm, West Africa also has its say; even more importantly, because manatees occur off the shores of both the Eastern and Western Atlantic and comparisons are inevitable. Africa contributed to the construction of the early modern Atlantic, even more than the other way around; its social and cultural influence is clear across the American continent, as it is in the displacement of African ecologies, cosmogonies, and relationships with nature. The place of Africans in their home continent and of enslaved Africans displaced elsewhere in the Atlantic during the early modern period, in a nexus with other animals and ecosystems, is not yet fully understood and I will just barely scratch that surface – there is a

46 Mann (2011), 1491, Appendix A.

47 When I write about what I have learnt from my Brazilian colleagues, it is my own understanding of their words that I am presenting, and any error or misinterpretation is solely my responsibility.



full narrative to be written regarding these peoples' entanglements with their home and displaced environments.

General and natural histories, letters and accounts, maps, and prints, all include some (or several) aspects of the tropical fauna and flora of this part of the world. These sources document natural novelties from the seas and aquatic bodies were frequently regarded as monstrous, because Europeans were seeing them for the first time, even though they were often very familiar to Indigenous peoples. Marine ecosystems and animals admittedly comprise a smaller portion of the information in these works, as most of them are dedicated to trees, fruits, and plants, or to terrestrial animals, or even dedicated at their core to many different aspects of foreign ways of living and distinct biogeographic regions. But still these marine and aquatic animals represent an important part of this. Both descriptions and illustrations of many different animals are supplied, ranging from the creatures deemed useful and valuable to those feared or odd-looking. Some of these will be discussed in detail in the various chapters of the book.

This book also reflects a personal aspiration. As an environmental historian I expect to achieve this by using a type of interdisciplinary, trans-chronological, cross-cultural investigation. When I consider my research, my readings, my experience with and comprehension of certain marine ecosystems, and the world as a whole system, I see that my own path and the stories of these animals and monsters are bound together. I aim to continuously learn from past human societies and environments, and from nature and animals' agencies, to investigate sustainable and ethical ways for humans and animals to live together. I choose moments in the past that help me to understand my present context and attitudes. This is my current way of carrying on "saving the whales," and the sea turtles, and the manatees and the sharks, and all endangered aquatic fauna – by pushing forward the limits of understanding and getting to know the ocean; by offering historical narratives and building empathy.

This is my personal and very modest way of saving our Earth. I came up with the idea of this book back in 2018, but I was writing a major part of it between March 2020 and March 2021. During this exact year, the world was facing the Covid-19 pandemic; it encompassed the so-called Great Pause of 2020, when most of the world stopped for many weeks and the very dark weeks of early 2021 in Portugal that took a heavy toll on our country's population and on everyone's minds, on the national health system, and our common ways of living. We were in total lockdown once more, restricted in our movements and daily activities, and fighting for our spirits to be free. I felt I had something to say, even if it was addressing sea monsters and



aquatic animals and humans in the past. It made sense to me because we are all interconnected in space but also in time.

I know already that my current views are plural and my perceptions – like those of any *Homo sapiens sapiens* today – are varied and in constant movement. Likewise, the views of people who lived in biogeographically and culturally different Atlantic zones between the 15th to the 17th centuries were naturally different and far from static. Similarly, their understandings of the world – which world was that? – encompassed an incredible multiplicity. This multiplicity reflected, among much else, the variety and richness of adaptations of societies and human groups – as a species dependent on the planet's natural resources and subject to its ecosystematic, environmental, and climatic conditions.

I also now know that I do not have the courage to say that this will be a finished work. I am trying to historicise nonhumans as beings that changed over time and space, trying to find new evidence of nonhuman life and human interactions with it in anthropocentric archives and sources, while most of us have been trained to edit animals out of our analysis.⁴⁸ The information from the written and iconographic sources that I have compiled so far, and my interpretation of these, allows the writing of my own narrative about these histories or, at least, a part of them. I would need many lives, many different eyes and viewpoints, and greater expertise in multiple scientific areas, to unravel and relate the profound entanglements of peoples and animals living along those early modern shores of the Atlantic.

This book may also turn out to be my small contribution to the intricate process that has been, and still is, marine environmental management and conservation. Peoples and aquatic populations, or individuals of the different species that inhabit Earth are, for better or worse, interconnected and interdependent. Each and every one of us – humans and other animals – have our own agency. And all need to be addressed and taken into consideration, not as opposite poles of a spectrum, but rather as a web of elements within a common and integrated “human–nature” system.

48 Nance (2015), *Introduction*.





▲ Figure 1 – A representation of animals and monsters from the land (right) and the sea and shores (left), including, among others, a manatee, seals, and a shark. In the background we can see Amerindians spearing and roasting an animal (far right) and a sailing boat with people onboard pulling something from the water (far left). *Poisons, etc. des Indes Occidentales* by Hooghe (1710). © JCB Archive of Early American Images (permalink: <https://jcb.lunaimaging.com/luna/servlet/s/266mrf>).

◀ Figure 2 – The original title of this image in Portuguese is “*Do monstro marinho que se matou na capitania de São Vicente no anno de 1564.*” It is the sea monster, found and killed in São Vicente by a European, off colonial Brazilian shores (today the shores of São Paulo, Brazil), in Pêro de Magalhães Gândavo’s work *História da Província de Santa Cruz* (1576). © JCB Archive of Early American Images (permalink: <https://jcb.lunaimaging.com/luna/servlet/s/w7hvg3>).

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