



CONCHA 2nd Workshop:

Sea and Animals: History, Culture and Marine Conservation

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2nd CONCHA Workshop Sea and Animals: History, Culture and Marine Conservation

CONCHA is a European project focused on the construction of early modern global cities and oceanic networks in the Atlantic: An approach via ocean's cultural heritage. The main goal of CONCHA, as well as of the 2nd Workshop, is to bring together researchers from the project partner institutions and other institutions, and also to highlight the ongoing scientific debate about Sea and Animal Studies. Scholarship in the Marine Environmental Humanities is currently allowing to address the role of animals, landscapes, and environments as agents in the construction of local and regional histories, and the close interactions, relationships and inter-dependence of humans with the non-human world.

The workshop focusses on interdisciplinary research, from different time scales, with a cross-cultural and across methodologies and chronologies approach to: Sea narratives, literatures and traditions; Oceanic and littoral history; Humans and animals interactions; Marine animal studies; Sea and marine animals' agency; Exploitation of the sea; its animals and other resources; Cultural and natural heritage and Marine conservation: past, present and future.

With a special interest on the Atlantic Ocean, but not exclusively, the workshop is welcoming the work and research from historians and environmental historians, archaeologists, scholars from art and literary studies, as well as artists and science communicators. We are also very pleased to welcome early stage researchers and different stakeholders related to the preservation of cultural and natural heritage from different countries.

Organising Committee

Cristina Brito; Patrícia Carvalho; Nina Vieira; Catarina Garcia; Joana Baço (CHAM, FCSH, Universidade NOVA de Lisboa); Isa Pais (APCM/CRIA, FCSH, Universidade NOVA de Lisboa); Inês Carvalho (APCM/IGC).

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Total extractions of North Atlantic cod in the Norway, Iceland, and Newfoundland fisheries, c1500-1700

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Throughout the past five centuries, the cod on the Grand Banks in the Northwest Atlantic off Newfoundland sustained the largest single fishery on the planet. The rise of the fishery in the early decades of the sixteenth century was of momentous consequence for peoples on both sides of the Atlantic. In the medieval period, cod was primarily produced as dried fish - so-called stockfish - by Norwegian and Icelandic fishers. Around 1400, total Norwegian cod exports were about 6,250 tonnes while Icelandic supplies were probably around 2-3,000 tonnes. By 1550, Norwegian and Icelandic exports had risen to about 15,000 tonnes, but Newfoundland catches provided the true step change. By 1580, Newfoundland output is estimated to have reached around 200,000 tonnes). This was a 15-fold increase in cod supplies, and it tripled overall supplies of fish (herring and cod) protein to the European market. The paper presents revised estimates of total fisheries effort and discusses implications for our understanding of processes of ecological globalisation.



ON MONSTERS & HEROES: NARRATIVES ABOUT RELATIONS BETWEEN SOUTHERN RIGHT WHALE [*Eubalaena australis*] & CHILEAN SHORE WHALERS IN 19TH CENTURY

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The first and almost only target of Chilean shore whalers in the 19th century was the southern right whale. The literature of that epoch defines the link between whalers & whales as “heroes & monsters”, where the whale occupied, of course, the monster position. “The beach [of Tumbes] yesterday offered a very lively spectacle, many curious people have come to admire the monstrous whale hunted by the courageous fisherman Olivares, who was on this occasion exposed to a serious danger as a result of a hard blow of the tail of the whale in the water, which threw on the boat's crew a strong wave that threw the fisherman into the water and almost made the boat go down”. The Chilean writer and diplomatic Diego Dublé Urrutia relates these battles passionately: “the cetacean flees and attacks by throwing huge amounts of water and foam or giving terrible blows with the tail; it is a frequent occurrence that in this fight the boats are sunk and shred, and the people who are instantly rescued by the other boats; In the best of the battle suddenly presents the propitious occasion for the monster to be harpooned”. The monstrous in the whale is associated with its enormous size and its great bravery. The whale is “the queen of the seas”. The monstrous is not justification to avoids confrontation. The oil, meat, baleen, teeth and bones of cetaceans are very necessary for people. This need leads them to face the whale in the sea and sustain epic battles where the winner is not sure. These “great” battles generate a complex narrative in the Chilean literature (poetry & story) of 19th century where the whaler acquires the characteristics of a hero and the right whale of a monster. Local newspapers collected and disseminated these stories.



Paisajes y sociedade hídricas en el Caribe colombiano: Pasado y presente

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Sea, rivers, wetlands and floodplains are central components of the Colombian Caribbean geography. Historically, these water bodies played essential roles in the settlement and the livelihoods of local inhabitants, the colonization of peoples and territories, and development of large-scale economies. This work wants to explore how water-society relationships evolved hand-in-hand with physical changes in the landscapes of this region. It shows that to understand the history of landscape transformations in regions such as the Colombian Caribbean requires knowledge of how hydrosocial relations materialized over time. Because, different historical processes produce particular landscape configurations.

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FLIGHTLESS BIRDS, FLYING FISHES AND OTHER STRANGE CREATURES: Perceptions of Southern African nature in the early modern age and its contribution to environmental history

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In the 16th century, sailing in the South Atlantic, and especially in the Indian Ocean, represented to European navigators a challenge both in the art of sailing and in the recognition of the navigation signals guiding them in the sea or when approaching land.

Among the usual signs, maritime fauna was regarded as one of the most significant. Therefore, birds, sea mammals and fishes were extensively mentioned in Log books and diaries of navigation of that period. Although the registries had an immediate practical purpose, most of them include details of the species observed revealing the way 16th century seamen perceived and reacted to the unknown species and their behavior. They were exotic, monstrous, beautiful, unusual and strange, but... they were all useful, in the sense that they could be used to “solve” human problems / purposes. What those seamen observed and how they did the register reveals much on their insight on human – nature relation but it has also conditioned this relation in the following centuries.

Using the 16th century Portuguese Log books and Diaries of navigation, as well as other narratives of this period, this paper addresses the relation human-nonhuman species through the way Southern African maritime fauna was perceived, described and compared with the one known by the Europeans. Additionally, enhancing the importance of recovering historical information and its contribution for a better understanding of the present day situation regarding this topic, it will discuss how the new descriptions, while fitting in the European imaginary, contributed either to deconstructing this same imaginary and to build up a world’s global vision driven by the European encounter with the African and the Indian Ocean worlds, or to draft a first approach to Southern Africa’s environmental history.



Shipwreck and animal accounts during the Portuguese expansion: introducing *Tragic History of the Sea* by Bernardo Gomes de Brito

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The commonly known book *Tragic History of the Sea* by Bernardo Gomes de Brito has acquired its popularity mainly due the very detailed and fascinating accounts of shipwrecks during the 16th century. However, there's a lot more information that we can gather from these reports, mainly the hundreds of animal sightings and interactions described that are often overlooked when studying this piece. From elephants to unicorns, this presentation will show the results of a project carried out earlier this year under the curricular option "Materiality of the Sea: Sea products, human transformation", from CHAM, that gathered over 150 transcriptions about the fauna present in *Tragic History of the Sea*. It will also introduce new ways and new questions to ask this book regarding animals: which animals did they see? Which were more common/rare? Which animals were known/unknown to the narrators? What methods did they use to hunt? How did the natives interact with the different animals? And more.



Observing and Describing: Sea Animals during the Italian scientific expedition of the “Magenta” (1865-1868)

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The paper deals with the zoological observations of the maritime animals during the scientific and diplomatic expedition around the world of the Italian steam-corvette “Magenta” (1865-1868). The mission departed from Montevideo, Uruguay, in 1865 and arrived in Naples, Italy, in 1868, after visiting South Africa, Singapore and Southeast Asia, China, Japan, Australia, Peru and Chile. The voyage was very significant and challenging, representing the first circumnavigation of the globe by an Italian official vessel. Different aims characterized the expedition: in diplomacy, in order to sign commercial treats with China and Japan, and to increase to Italian national prestige as European power; in science, in order to improve the geographical, zoological, botanical, geological knowledge and to enrich the Italian museum collections. Filippo De Filippi (1814-1867), professor of Zoology at the University of Turin, eminent naturalist and first introducer of Darwinism in Italy, was appointed scientific director of the expedition. The mission allowed De Filippi and his assistant, the young naturalist Enrico Hillyer Giglioli (1845-1909), to make observations about the fauna and to collect many natural specimens. Thanks to long sailing across Atlantic, Indian and Pacific Oceans, a significant part of these observations and collections during the voyage involved sea animals, from marine mammals to birds, from fishes to invertebrates. The paper, through De Filippi’s correspondence to the Academy of Sciences of Turin, Italy, and Giglioli’s expedition report, which published the scientific outcomes, intends to examine the approaches to the marine animals of the “Magenta” mission: how they were considered and described, the importance of these observations in order to improve the knowledge about sea animals, especially amongst Italian zoologists, their role and reception in scientific discourse, popular science and museum collections in middle-19th century Italy.



In the beginning there was the sea: the Mesopotamian cosmogonic traditions and the divinization of oceans

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By the banks of the Tigris and the Euphrates, at the end of the 4th millennium BC, the Mesopotamian civilization arose, by building the first known cities, and by creating the first known writing system. It was there that the first human thoughts about their surroundings were annotated, in a vast and rich literary *corpus*, which survived until present day in thousands of clay tablets.

Though this data was only directly analyzed by academia from the middle of the 19th century onwards, with the first archaeological findings, throughout centuries, the Mesopotamian mental framework echoed in the western world, via the Judeo-Christian tradition. In fact, the millenary interactions between Mesopotamia and the Mediterranean oriental coast allowed the survival of several conceptions from the “land between the rivers”, though deeply transformed.

Encompassed by the great rivers and delimited by the “Upper and Lower Seas” (the Mediterranean and the Persian Gulf, respectively), it was only natural that the Mesopotamians bestow a great symbolic importance to the aquatic element. From the 3rd millennium onwards, there are several Mesopotamian mythic compositions that manifests the divinization of the sea, as *primaeval* deities responsible for the creation of the cosmos. The analysis of this *corpus* allows us to understand not only how these ancient historical agents envisioned oceans, but also how their symbolic conceptions regarding this element influenced later cultural contexts.

Thus, with this paper I aim to discuss the symbolic and religious meanings of oceans within the Mesopotamian literary tradition, hoping to contribute to the debate on sea narratives, literatures and traditions of the 2nd CONCHA Workshop.



The debate between bird and fish: thinking aquatic environments in ancient Mesopotamia

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The Mesopotamian civilization (4th -1st millennia BC) is one of the roots for the construction of the Judeo-Christian matrix. As such, it is interesting to analyze its conceptions about aquatic nature and animals, to better understand the relationships between humans and the natural world throughout time.

The Mesopotamian literary category known as ‘debate’ usually presents two figures that discuss and dispute something, which allow us understanding the figures’ conception and also the item being disputed. One of these literary compositions is “the debate between bird and fish” where the southern marshes of Mesopotamia is being quarreled by these animals. They present their case to Enki|Ea, the Mesopotamia deity of wisdom, who also controls “the sweet waters” of the cosmos. The arguments used display information about the characteristics and behavior of these animals, as well as their role in Mesopotamian nature.

On another level, the intervention of the god Enki|Ea shows a notion of balance between different creatures that coexist in the same aquatic environment.

In my current work, I intend to intertwine Environmental History with Ancient History. With this paper, in particular, I aim to present the many possibilities of analysis of the Mesopotamian aquatic sceneries, through the symbolic meanings displayed in this literary composition.



Perceptions on large cetaceans in Brazilian coast: scientific contributions to the contemporary history of human-whale interplay

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This communication aims to explore the ongoing scientific debate concerning the occurrence and distribution of large cetaceans in the Brazilian Atlantic coast from a compilation of 15 scientific studies published in the period of 2003 to 2017. In a broad exhibition, I will present results, methods and a visual identification of the marine areas where were identified the occurrence of various whale species (right whales, humpback whales, mink whales, Antarctic mink whales, sperm whales, kogia whales, fin whales, sei whales), stranding events and conflicts concerning fishing. The National Action Plan for Conservation of Aquatic Mammals (2011) will contribute to additional sources of information regard to the present and future developments of the Brazilian agenda for marine conservation, as well considerations on goals, lacks and priorities concerning international efforts to the creation of the South Atlantic Whale Sanctuary.

The scientific approach has provided privileged narrative in contemporary human-whale interplay, sustaining communication between scientists, societies and policy makers. Nevertheless, does this communication truly effective to support real-world questions? Since that global environmental treaties have been increasingly questioned by certain national agendas, the challenges related to policy actions and conflict of interests at the national and local levels may inspire tangible discussions on the present and future of the ocean's biodiversity. The matter of substance of this debate seems to be the relevance of historical narrative as a pivotal component to cross frontiers between societies, cultures and systems of thought in the Atlantic domains. The contemporary history of whaling is an important step forward through integrative and collaborative linkages between the disciplinary and interdisciplinary areas of intercultural studies, emphasizing the coupling process of natural sciences and humanities. A history to be written and understood as well.



Memories of the sea. Human-animal relationships in images, tombs and pre-Columbian objects of Atacama

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Along the Atacama desert coast, in northern Chile, humans and marine animals had create multiples forms of relationships since the first peopling until today. At pre-Colombian times, for humans collectivities the beings of the sea were much more than a simple nutritional or economic source, they were also selected and included as an input in their imaginary, symbolic universe and political relationships. They construct an extremely dense and deep knowledge corpus about their behaviors, habits, distinctions, ethology and interspecies relationships. Regional archaeology had discovered a rich material culture that faithfully expresses these associations, painted and engraved rock art, funerary offerings and different kind of objects that uses or refer to sea animals and humans links. In rock art marine species are carefully distinguished by their ethological and physiognomic traits, but also depicted is hunting scenes with rafts, harpoon lines and seafarers. In the engraved and painted images it is possible to recognize sharks, sea lions, squids, swordfishes, porpoises, turtles, dauphins and whales. Miniatures figurines of the same species had been identified over metal, bone and stone supports. Archaeological excavations in tombs had shown the regular presence of sea animals as part of the mortuary arrangement and offerings to the deaths, especially swords of swordfish, ornament and pendant made of turtle shells, whale ribs and dauphin skulls red colored. Finally, they had incorporated and employed bones, tendons, grease, skins and teeth animals as constituent elements of their technology, as in their hunting and fishing devices, rafts, residences and clothing. In summary, material culture had serve to humans as a relational strategy to create links with sea animals, and today to us it constitutes an extremely rich memory database about their pre-Colombian relationships.



The sea in Jorge Barbosa, Raul Brandão and Ruy Duarte de Carvalho

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The sea, that enigmatic place, is cosmically understood as a basis of productive energy, which makes it take on a typical part in the numerous cartographies extending beyond the factual limitations of maps and initial immaterial spaces bowled out to mythical, imaginary, and historic breadth.

The ocean is hence formed as an immense aquatic image upon which secondary languages of nature are reproduced. The resonances of the sea and the rhythms of the tide change as catalytic representatives of underwater reminiscences, delivered to the collective, legendary, memorable unconscious. That tie to the collective reminiscence makes it obtain individual associations, as an itinerary for returning to the origins and for a thematic polyphony in authors from different nations, such as Jorge Barbosa, Raul Brandão and Ruy Duarte de Carvalho.



Seamen's Wisdom: the 'Advice on Navigation' of the *Genna Kokaisho*

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Japanese seamen had long navigated successfully in the East and South China seas for centuries before the sixteenth century. The arrival of the Portuguese to Japan in 1543 made possible cultural exchanges between the two nations. European techniques and practical knowledge were introduced and adapted into the Japanese life. However, their acceptance and adoption was never passive. In parallel with appropriation there was also rejection, criticism, and adaptation.

The *Genna Kokaisho*, a treatise written by Ikeda Kōun around 1618, bears testimony to this process of criticism and adaption, acceptance and rejection in navigational techniques. It presents Portuguese navigational techniques, such as measuring the height of the Sun and how to use declination tables, together with some criticism and corrections to the proposed procedures. It also presents, in one of its sections, 'Advice on Navigation', a collection of 124 adages and folk-wisdom, which range from human behavior to weather patterns, that a wise seaman should follow.

The purpose of this communication is to present this treatise, its structure and contents, together with an analysis of adages found in section 'Advice on Navigation'.



Whalers' memories in the Azores: Oral History and Heritage practices

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Since the end of shore whaling in 1984, practices and perceptions towards cetaceans in the Azores have changed radically. In this paper, we investigate the process of heritagization of whaling in the Azores over the last two decades, which focused on the symbolic preservation of historical industrial sites and traditional whaling boats. Regional governments paid attention to the fact that whaling was one of the few economic activities practiced in every island of the archipelago. With the rapid rising of whale-watching, tradition (whaling) and modernity (ecotourism) seem to be allied in a hegemonic view of regional identity, which tries to establish a relationship between past, present and future.

Whalemen in the Azores are not seen as evil, but rather as representing ideals of braveness and heroism, even if in the past they were associated with poverty and hardships. They also represent an important cultural link with the USA, where a significant Azorean community exists, since they were among the first migrants to that country after embarking in the American whaleships that crossed the Atlantic Ocean. However, little in this heritagization process is known about whalers' personal experiences and traditional knowledge. With the project *Archive of Whaling Memories*, we interviewed 64 former whalemen in the 9 Azores islands, arguing that collecting their memories can help to preserve traditional local knowledge, create new evidence and new areas of inquiry for historical research and rethink the process of heritagization in the Azores, which can become more participated and avoid oversimplification by incorporating the subjective narratives of former whalemen.



“Territory has a new ruler” Shifting boundaries in underwater documentary film

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Nature documentary films are obviously concerned with discourses about the nature-culture divide and the anthropological difference. Moreover, they deal with other precarious relations as the gender difference. For a long time they have been ignored by film scholars, which has changed recently within the context of Cultural Animal Studies and Ecocinema Studies. However, the special case of underwater documentary remains an underrepresented research topic, though it highlights some central characteristics as the construction of “untouched” nature with massive technological effort. It is marked by its complex production requirements as well as by the strong mythological impact of the sea, which is seen as a space “radically different” and dissolving boundaries at the same time.

The films often move on the threshold between scientific observation of nature and visualization of utopian fantasies, as indicated in the title of a book about marine biologist and filmmaker Jean Painlevé: “Science is fiction”. With regard to Painlevé, film theorist André Bazin claimed that “microbes are the greatest actors in the world”. The more popular films of Jacques-Yves Cousteau focused on sea mammals and fishes, suggesting humans to become “manfishes” themselves through the use of scuba diving equipment. Recent examples as the BBC television series BLUE PLANET 2 are still attached to the fiction of a “pure” and infinite sea space to be explored, but also to interspecies cooperation, transformations and entanglements of natural and artificial materialities. In times of rising sea levels and the exploration (and exploitation) of ever deeper ocean layers, relations seem to be renegotiated. In my paper I will explore the history of underwater film as a triangular relationship between humans, non-human creatures and technology, which is now also attracting the interest of media theorists.



Archaeological footprints in Antarctica: nineteenth century sealers' shoes in refuges on Livingston Island

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This research analyzes the footwear of whalers from the Livingston Island (South Shetland Archipelago, in western maritime Antarctica zone), of 19th century, as a way of understanding identities. I examined four groups of information: footwear itself, the model and the social classifications, the use of shoes and the influences of the environmental aspects upon the perception of the use. Studies about the construction technique inform about the historical context of seal and whale hunters, mostly coming from New England (United States). The research verified that the footwear production involves handcrafted and traditional constructive characteristics but, at the same time, involves the serial production, typical of the pre-industrialization of production. The model of shoes repeats in various archeological sites, revealing a clothes pattern of this group of workers. Traces of repair and tear show us the available resources and the material conditions of life and work. Elements form the space, ships and the Antarctic environment affect the daily life, require skills, knowledge and adaptation, that were being added to their identity as an experience of place. The main propose of my work is to reach identity aspects of those who first occupied the Antarctic continent.



Between the land and the sea: dunes as natural and cultural heritage

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Coastal dunes are aeolian landforms that develop in coastal situations where an ample supply of sand is available to be transported inland by the winds. They are unique ecosystems located in a spatial transition between the land and the sea. Traditionally, the studies about dunes fall under the scope of natural sciences, which are mainly interested in analysing their location, formation, morphology, vegetation, management and restoring processes. Numerous scientific works have been produced about them, yet, few consider the economic, political, social and cultural contexts concerning the human uses and transformation of these spaces. The history of the interaction of people and dunes over time is poorly known. In fact, when such issue is mentioned most people are amazed: “do dunes have an history?!”.

Many authors have tried to characterize relations between nature and society and the consequences of this entanglement for both. These authors stress that humans use the means they have – knowledge, skills, tools – to change the world accordingly to their ends, creating new attended and unattended environments, hybrid environments, to each they are intrinsically attached. Dunes, normally seen as “natural landscapes”, are in many cases physical hybrids of ecological and technological systems. Studying them as both natural and cultural assets, by tackling issues like perceptions, property, local economies, traditional and technical knowledge, land reclamation, state power, risks and vulnerabilities and nature rehabilitation, put dunes in the spotlight, in a time when they are particularly relevant in face of the present challenges concerning the sustainable managements of coastal areas worldwide. Taking from these ideas, this lecture emphasizes how and why human societies shaped the dunes to create composite landscapes, used to different ends.



The exploitation of marine resources during the late Pleistocene and the Greenlandian and its relation with sea-level changes (SW Iberia)

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The archaeological record from SW Iberia reveals major changes in human settlement and subsistence strategies during the late Pleistocene and the Greenlandian. During these millennia, sea-level is rising, changing the coastal morphology, despite the severe retraction occurred during the Younger Dryas event. The comparative analyses between sites accumulated by hunter-gatherers groups dated from the final Upper Palaeolithic (c.16500 – 11700 cal BP) and the Mesolithic (11700 – 7000 cal BP), shows that the later are mostly located along the present-day coastline or in the influence area of marine waters, i.e. palaeostuaries, while the former present a more ubiquitous geographic distribution. Based on the archaeological record and on isotopic data, Mesolithic groups show an extremely dependence on the exploitation and consumption of marine resources (both fish and shellfish), being shell middens the most common type of site during this period. Regardless the lack of direct dietary information from the preceding phase, the subsistence component shows that marine resources are absent or poorly represented in sites dated from final Upper Palaeolithic. Differences between both human societies can be related to taphonomic issues, derived from sea-level rise and subsequent hypothetical submerging of Pleistocene sites, or to cultural diverse behaviours. Although both hypotheses have surely played a role in the observed behavioural pattern, it seems that with the enhancement of climatic conditions that characterizes the beginning of the Holocene and the consequent advance of marine waters, a new environmental scenario was created offering innovative opportunities to people, connecting them to the sea.



Stories of whales from the past: the study-case of whaling in Brazil (XVII-XVIII)

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When the Portuguese arrived in Brazil, the whales they saw and feared were not new. Whales were being hunted in the coast of Iberia since medieval times and people knew what a whale was: a resource and a monster. The novelty about these animals was their abundance. Baleen whales are migratory marine mammals that travel annually between the cold waters of their feeding grounds in the southern oceans and the tropical waters of breeding grounds. The waters adjacent to the southern coast of Brazil are within the distribution range of southern right whales and humpback whales that occurred in countless numbers, as registered in 16th century-written sources.

Due to its behavioural and distribution patterns it was profitable to hunt whales and to invest in the whaling monopoly established between 1614 and 1801. Whale oil was the lighting fuel that allowed extra labour hours of sugar engines during the night and illuminated the main villages of colonial Brazil. With the support of the Portuguese crown and administrative officers whaling promoted the foundation of new settlements along the coast and the establishment of whaling stations in four states namely Bahia, Rio de Janeiro, São Paulo and Santa Catarina. Whale oil and baleen were also sent to the Portuguese Atlantic islands and mainland and were used in or exported to other European countries, assigning the importance of whale products as valuable commodities of the modern era.

In this paper I intend to address this shared history of whales and people through the lens of an imperial monopoly established in Brazil, emphasizing how the animals were a trigger element of settlement. The occurrence and abundance of whales was a factor of development of the territory with a great impact on the whales' populations, just now recovering from centuries of exploitation.



Sea of Pearls and Turtles? Asymmetric Appropriation of Marine Resources in the Gulf of California, XVII-XX centuries

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Baja California Sur is situated between latitudes 23°N and 32°N, where the great desert regions of the northern hemisphere are located. It has an area of 73,677 km² representing 3.7% of the total area of Mexico. It is the state with the longest coastline, measuring 2,230km (22% of the national total) including three islands in the Pacific Ocean and more than 100 islands and islets in the Gulf of California. This territory occupies the southern part of a little over half of the second largest peninsula in the world, measuring 690km in length, 43km at its narrowest part and 227km at its widest. The Gulf of California is the only territorial sea of a single nation in the world assuming 49% of the Mexican littoral and 50% of the national insular territory. It is one of the five marine ecosystems with the highest productivity and biodiversity on the planet and contains, with respect to the total number of species in the world: 40% of marine mammals, 33% of cetaceans. 4500 of marine invertebrates, 181 of birds, 695 of Ramsar. In the Gulf, 70% of the national fishing production is verified and it is the only place in the world with underwater waterfalls.

Overall objectives:

- Reconstruct, from the decolonial critique, the environmental history of the GdC from the 16th century to the present;
- Identify changing forms of perception and constants of asymmetric appropriation of coastal marine space through the use and management of resources;
- Visibilize community processes capable of breaking the asymmetry by constructing productive alternatives and sustainable use of marine-coastal ecosystems;
- Evidence the forms of space production caused by the asymmetry.

Main Ideas:

With this proposal from the field of Environmental History we made an approach to the process of appropriation and extraction of natural resources of the Gulf of California, extractivism from the Colonial Era that begins with the myth of the Sea of Pearls and that is inserted in the arrival

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of the Jesuits and their process of colonization of the territory (design of Misiones-Huertas-



Oasis). A process of appropriation-extractivism of land and sea resources begins at the moment, which can be verified in the table below, with the extraction milestones. This project is inserted in an ecology of knowledge with the hybrid methodologies of Environmental History, Political Ecology (analysis of territorial and marine conflicts), Critical Geography and Ethnobiology.



Marine animals in *Crónicas de las Índias*. The European look about the American aquatic fauna in the Caribbean coast and islands, XVI and XVII centuries

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UPO – Universidad Pablo Olavide

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In the known *Crónicas de las Índias* a compilation of descriptive texts about history, geography, fauna and flora of the Caribbean coast and inland are referred. Those lands invaded by the Spanish Atlantic Expansion, were conquered with a “mix of admiration and fear”. Written mostly in the 16th century (and also on the first decades of the 17th century), we can find plenty of descriptions and explanations about innumerable marine and aquatic animals that were part of the fauna of the region.

Those texts merge the antiquity and the medieval mythology (their principal references), with a first hand observation *in situ*, sometimes with a primary experimentation. For the authors of these chronicles the comparison with the “known” in Europe seemed the best way to explain the things they had in front of them and that they were seeing, in order to be understood by the European readers.

This work is dedicated to these first descriptions about the Caribbean aquatic fauna and to the referential world that was the starting point for these chroniclers. Texts by Juan de Castellanos, Pedro Mártir de Anglería, Fernández de Oviedo, Lopez de Gomara, José de Acosta, Gaspar de Carvajal, among others, will be analysed in this presentation, showing us a complete catalogue of species accounts, being extremely important to understand the mentality of the authors who contributed to the development of “Natural History”.



From the Atlantic to the Mediterranean: sea curiosities in the Salvador's cabinet

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Although Barcelona is not at the Atlantic coast, we can trace Early Modern's trade and collectionism activities that grew with the expansion of Atlantic and world voyages towards and from this city, or by objects that ended up there.

The Salvador family developed their commercial activities, mainly as apothecarist, during five generations -from 1598 to 1855-. At the same time, they built a significant library, an herbarium and a collection of specimes that configured a cabinet of curiosities in the back of their pharmacy which became a space of meeting and exchange for naturalists, voyagers and curious visitors.

Moreover, they were specially the third generation in the XVIII century- regular correspondants of naturalists based in different European cities: the Jussieu family in Paris, Hermann Boerhaave in Leiden or James Petiver in London. Also, their connections and exchange with Lisbon were important as many overseas information and products arrived to Europe through this city.

Through the well-preserved collection and documentation about the Salvador collection at the Botanical Institute in Barcelona, we can picture their role in the Republic of Letters' network.

All this information we still find in the cabinet allows us to picture their interests in not only plants and mineralia but also a different variety of marine curios -nearly monstros- specimens that traveled from all parts of the globe to find their place in the Salvador's drawers.



The *scientific study of the sea*: the Foz Maritime Zoology Station during the First Portuguese Republic

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A knowledge of the scientific study of the sea in the early 20th century is essential for an understanding of the process of the institutionalisation of marine biology in Portugal. During the First Republic, the first national biological stations were set up: the Foz Maritime Zoology Station in Porto, and the Vasco da Gama Aquarium in Lisbon. There is a need for deepening our knowledge about these institutions, as spaces for the production, circulation and appropriation of scientific knowledge, which operated within complex institutional contexts, either dependent on laboratories and university research institutes or directly on the state, thus providing a greater understanding and placing them in the context of educational reform, scientific institutionalisation, disciplinary specialisation, administrative centralisation, and the development of policies for science and the sea. A case study is carried out of the Foz Station, which played an important role in achieving the strategic objectives of the Zoology Institute of the University of Porto, providing an understanding of the process of the institutionalisation of marine biology in a university context: its connection with teaching, research, the economy and society.



Ethnographic objects – A pretext for the discussion on cultural interaction among peoples. Ethnographic Museum of Praia – Cape-Verde Republic.

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Our communication proposes a discussion on issues related to cultural interaction between peoples (Cape-Verdeans, Guineans, Saotomeans, Portugueses, Americans, etc.) established by the Atlantic Ocean. The starting point for the debate will be some artefacts that are part of the collection of the Ethnographic Museum of Praia (Museu Etnográfico da Praia).

The Museum principal goal is to incorporate, conserve, study, interpret and disseminate the habits and customs of the Cape-Verdean people, through the artefacts that reflect the ethnic and cultural miscegenation, features of the Cape-Verdean people. Therefore, the Ethnographic Museum of Praia seeks to preserve, enhance, promote and disseminate, through different means, the Cape-Verdean culture. This is a key element to the nation, due to the diversity of characteristics that were incorporated over time, turning it into a unique miscellaneous of cultural values, very interesting and rare in the world. The fascinating about the Cape-Verdean culture is this diversity of elements that blend and converge into a single identity.

The Ethnographic Museum of Praia can be classified typologically, by nature and characteristics of the collection, as a disciplinary museum, in which the scientific field is the Anthropology (Ethnography and Ethnology). It is the type of museum that has as its purpose and object, the study and knowledge of humans in its multiple social and cultural facets. Thus, during the entire process of constitution of its collection, a series of principles were considered, so that the final result would reflect, as faithfully as possible, the characteristics of the Cape-Verdean, in the relationship of people with the surrounding environment.

Despite not having in its collection objects with associated memories to the origin of the Cape-Verdean nation, that is, artefacts of the first creoles who originated the Cape-Verdean people, the Ethnographic Museum of Praia possess objects that are part of our material culture, such as objects that reflect European and African habits and customs, objects brought by Cape-Verdean emigrants from the United States of America, and also from the Democratic Republic of Sao Tome and Principe and from Guinea-Bissau. And all of this refer us to distant geographies that have reached us, most probably, through the oceans.



The Fishing Museum – A project under construction

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The sea has always had a direct connection with the settlement of the Cape Verde Islands and the evolution of the Cape Verdean society. If in the first phase this vast sea was the gateway to the islands and a strategic corridor on the trade routes, the confluence of peoples and connections with the New World, in a second phase, assumed to be an exit door of the Cape Verdeans' looking for new horizons and in the pursuit of ways of sustenance.

Fishing in Cape Verde is one of the most important economic sectors, alongside with agriculture and livestock. The activity, however, progressed with the increasing need to consume and sophisticate the means of capture, passing from a pure and simple fishing craft into a large whale catch and subsequent industrialization of the fish canning process.

The fishing activity in the seas of Cape Verde has always been linked to various phenomena, causing fishing communities, ports cities and their people to develop mechanisms for capturing, conserving and marketing fish, as well as traditional ways of relating to the sea without dry his resources. To perpetuate the practices, memories and representations around fishing, comes the concept or idea of the creation of the project “Fishing Museum”, whose objective is to provide the country with an institution of cultural and pedagogical character that guarantees the preservation, conservation and the dissemination of fish production as a national heritage that marks the economic and cultural life of Cape-Verdean man.

Based on the importance of memories, knowledge and traditional techniques concerning fishing and their contribution to the redefinition of the cultural identity of the country, it was understood that these should be safeguarded and preserved in their original context or in the islands where they have their origin or have a greater expressiveness. In this sense, the project “Fishing Museum” arises to fill this shortage in the field of safeguarding the fishery heritage, collective memory and traditional know-how that still constitute the source of income for most Cape Verdean families.



Museums of Maritime Theme in Cape Verde: The centralization of the Sea on the expositions (Museum of the Sea, Museum of Archaeology and Fishing Museum)

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From the very beginning it was realized that Cape Verde had/has a privileged location in the Atlantic Ocean. This made the islands an almost obligatory crossing point for navigators and ships from everywhere, ensuring a logistical support base for the Atlantic navigation. Therefore, the history of this country is closely linked to the Sea and the evolution of trade routes that from the fifteenth century, begin to be delineated in this ocean.

In the archipelago, the "Sea" has a central role and is considered a structuring element in the development of the islands, since the Portuguese Discoveries to the present day, leaving an important cultural material and immaterial legacy in the country and in our territorial waters, needing action to safeguard it.

In this context arise the maritime museums of maritime in Cape Verde, highlighting the Museum of the Sea, Museum of Archaeology and the Fishing Museum as spaces to safeguard the cultural and natural heritage of the Seas.

These spaces for safeguarding the cultural heritage have in common the centrality of the sea in their exhibitions, adding the multidisciplinary characteristics of maritime-themed museums, and the richness of the country's underwater archaeological heritage, associated with European expansion and trade; the Sea in the development of port cities (the case of Porto Grande of Mindelo City, São Vicente Island); elements of Cape Verde's intangible heritage, such as emigration associated with whale fishing, poetry/literature associated with music, marine biodiversity of Cape Verde, among others.

As a final balance, the maritime-themed museums in Cape Verde reflect the important historical legacy that our seas have left to the country in its various dimensions.



São Tomé and Príncipe: an underwater wonder

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ONG MARAPA, São Tomé and Príncipe

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São Tomé and Príncipe has immeasurable natural wealth, extremely fertile land and a sea full of life, a true hotspot of marine biodiversity. In addition to this biodiversity, São Tomé and Príncipe's marine ecosystems are essential for the livelihoods of the local communities and vitally important for the future generations. The coastal ecosystems are responsible for much of the productivity of fishery resources and coral reefs are home to a rich marine biodiversity. The waters of São Tomé and Príncipe are also an important sanctuary for sea turtles. Five of the seven species in the world, use our beaches to spawn, and the sea to feed and rest. Also present in our waters are a wide variety of cetaceans, such as various species of dolphins, whales, orcas and sperm whales.

A need to preserve this ecosystem led to the first marine conservation efforts in the 1990's by MARAPA, a pioneer organization for the conservation of the marine and coastal environment at the time. Currently, several national and international organizations have contributed greatly to preserve the marine and coastal environment.

The conservation of "flag species" as marine turtles and marine mammals, has greatly contributed to the preservation of the balance of marine ecosystems that provide numerous services to coastal communities regarding food accessibility and income provider, linked to the exploitation of fishing resources. But, for the conservation to be effective and lasting, it is necessary to involve the local communities. Inform, educate, raise awareness, change their mindsets, improve their living conditions and generate alternative and legal economic activities, thus creating a resilient safety net, in order to improve the conservation status of marine life in São Tomé and Príncipe.



Lost in translation? Using Digital Humanities frameworks towards data management in interdisciplinary research

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The transmission of analogous materials to a digital platform is by no means a simple push of a button. Data considerations must be catered for from the outset of a research project to ensure a transparent model from which academics and scientists may extract useful structured information, and when dealing with historical data this may invariably throw these initial structures due to a myriad of reasons; inconsistencies in data accuracy, errors of translation, or lacunae in the text. It also cannot be ignored that as the research environment grows and the world shrinks we need to re-consider how we make data accessible as well as inclusive. Facing these challenges is an especially important factor in the pursuit of creating universally publishable datasets that adhere to scientific and humanities metadata standards. How data is then in turn disseminated to the wider public is another vital element for consideration, particularly in a global context, and this calls for creative solutions to far-reaching problems. It is at this juncture that the Digital Humanities give us a framework for discussion. Does simply creating a searchable database impact research or aid academics and how can we enhance the user experience? What are the failings or trappings of data management in this context and where is the intersection between the categorisation and dissemination of scientific and humanities data? This presentation proposes an investigation framed directly within in the CONCHA project using work completed in WP 7 as a case study.



Sea animals in the Portuguese press

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An analysis of the recent Portuguese press coverage of sea subjects shows that the new narratives still follow the old ones: the sea it still seen as a source of wealth and as a place of danger for the human kind. Nevertheless, a "new" narrative is gaining ground, since scientific discourse tell us that the human kind also menaces the marine environment, including sea animals. This "new" framework implicates relevant social phenomena, and the way the press covers such subjects. The media study of three polemic cases of 2018 (the Oil Drill Prospection, the Sardine Quotas and the Sado Dredging) can give us a present-day insight on how humans interact with sea animals and what is the role of science and science communication for this process.



The historical encounter between humans and sea animals

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The encounter is a dialectic process that involves a discourse between two parts, even in the case of encounters between humans and non-humans from the maritime world. This process can also be explained as a partnership, a relationship or an interaction, and in the other extreme of this conversation as a confront, a dominance or an appropriation. Historically, as far back as the Antiquity - either talking about sharks, large whales, orcas, remoras, cormorants, seals, manatees or sea turtles – this is a one-way interaction of power and control where human perspectives of the sea world and its needs for foodstuff or labour are the central part. Typical examples from the medieval and early modern Europe and Atlantic geographies are the use of marine animals as a food resource or a raw material to produce objects and instruments. And marine animals have been – and some still are – used as labour in maritime activities, mostly in traditional and indigenous practices of fishing; many examples can be explored in the context of 16th, 17th and 18th centuries in the African and American colonial spaces. But within this context, we can also find examples from the other side of the spectrum; these are the cases of cooperation between humans and sea animals where both parts are active agents, and both benefit from the interaction. Nevertheless, what documental accounts available for historians of the environment and environmental humanities' scholars to address can provide, almost entirely, is the viewpoint of humans about the animals. Some exceptions however can be found when addressing late 19th and early 20th century literature of the maritime world. Authors using the animals not just as subjects but as main role actors in the writing of their life stories offer us a privileged view of the world beneath the ocean's surface. These stories also allow us addressing their agency beyond the typical top-down encounter between humans and sea animals. All together, I expect to present a long-term overview of the historical encounter between humans and sea animals.

