



Hacettepe University Graduate School of Social Sciences

Department of American Culture and Literature

**AN AFFECTIVE ECOCRITICAL APPROACH TO CARL SAFINA'S  
MARINE NARRATIVES: *SONG FOR THE BLUE OCEAN, VOYAGE OF  
THE TURTLE, AND A SEA IN FLAMES***

İclal TÜRKER

Master's Thesis

Ankara, 2024



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## ACCEPTANCE AND APPROVAL

The jury finds that İclal TÜRKER has on the date of 04/06/2024 successfully passed the defense examination and approves her master's thesis titled "An Affective Ecocritical Approach to Carl Safina's Marine Narratives: Song for the Blue Ocean, Voyage of the Turtle, and A Sea in Flames."

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## ETİK BEYAN

Bu alıřmadaki bütn bilgi ve belgeleri akademik kurallar erevesinde elde ettiđimi, grsel, iřitsel ve yazılı tm bilgi ve sonuları bilimsel ahlak kurallarına uygun olarak sunduđumu, kullandıđım verilerde herhangi bir tahrifat yapmadıđımı, yararlandıđım kaynaklara bilimsel normlara uygun olarak atıfta bulunduđumu, tezimin kaynak gsterilen durumlar dıřında zgn olduđunu, **Prof. Dr. Ufuk ZDAĐ** danıřmanlıđında tarafımdan retildiđini ve Hacettepe niversitesi Sosyal Bilimler Enstits Tez Yazım Ynergesine gre yazıldıđını beyan ederim.

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## ABSTRACT

TÜRKER, İclal. *An Affective Ecocritical Approach to Carl Safina's Marine Narratives: Song for the Blue Ocean, Voyage of the Turtle, and A Sea in Flames*. Master's Thesis, Ankara, 2024.

Since its inception, the study of literature and the environment has focused on the key connection between nature, emotions, and narratives, particularly how environmental narratives evoke feelings about the natural world. Affective ecocriticism, within the broader field of ecocriticism, studies the impact of emotions in environmental narratives. This thesis undertakes a comprehensive examination of the intricate relationship between human emotions, marine narratives, and man's engagement with the natural world, particularly focusing on how emotions, as elicited by narratives, shape humans' understanding of the environment. Central to this exploration are Carl Safina's marine narratives *Song for the Blue Ocean* (1999) *Voyage of the Turtle* (2006), and *A Sea in Flames* (2011), which provide rich portrayals of the marine environment and human-nature interactions. Through Safina's lens, this thesis delves into the concept of affective ecologies, emphasizing the emotional resonance of environmental narratives and their potential to influence attitudes and behaviors toward conservation. Drawing upon affect studies within the field of ecocriticism, this thesis undertakes a detailed approach to dissect Safina's narratives, examining how emotions are intricately woven with marine narratives, shaping readers' perceptions and fostering a deeper connection to nature. Through this exploration, this thesis aims to highlight the transformative power of American environmental and affective narratives in raising awareness and catalyzing action towards environmental conservation.

### Key Words

Affective Ecologies, Affective Ecocriticism, Marine Narratives, Oceans, Marine Animals, Empathy, Carl Safina



## ÖZET

TÜRKER, İclal. *Carl Safina'nın Deniz Anlatılarına Afektif Çevreci Eleştiri Yaklaşımı: Song for the Blue Ocean, Voyage of the Turtle ve A Sea in Flames*. Yüksek Lisans Tezi, Ankara, 2024.

Başlangıcından günümüze, edebiyat ve çevre çalışmaları doğa, duygular ve anlatılar arasındaki kilit bağlantıya, özellikle de çevresel anlatıların doğal dünya hakkındaki duyguları nasıl uyandırdığına odaklanmıştır. Duygulanım ekoeleştiri, daha geniş bir alan olan ekoeleştiri içinde, çevresel anlatılarda duyguların etkisini inceler. Bu tez, insan duyguları, deniz anlatıları ve insanların doğal dünyayla olan ilişkisi arasındaki karmaşık ilişkiyi kapsamlı bir şekilde incelemekte, özellikle de anlatılar tarafından ortaya çıkarılan duyguların çevre anlayışımızı nasıl şekillendirdiğine odaklanmaktadır. Bu araştırmanın merkezinde Carl Safina'nın *Song for the Blue Ocean* (1999), *Voyage of the Turtle* (2006) ve *A Sea in Flames* (2011) adlı deniz anlatıları yer almaktadır ve bu anlatılar, deniz çevresinin ve insan-doğa etkileşimlerinin derin tasvirlerini sunmaktadır. Bu tez, Safina'nın merceği aracılığıyla duygulanım ekolojisi kavramını inceleyerek çevresel anlatıların duygusal rezonansını ve korumaya yönelik tutum ve davranışları etkileme potansiyellerini vurgulamaktadır. Çevreci eleştiriyle yakın bir ilişki içinde olan ve duygulanım çalışmalarına dayanan bu tez, Safina'nın anlatılarını incelemek için detaylı bir yaklaşımda bulunup duyguların deniz anlatılarıyla nasıl iç içe geçtiğini, okurların algılarını nasıl şekillendirdiğini ve doğayla daha derin bir bağ kurmalarını nasıl teşvik ettiğini incelemektedir. Bu inceleme sayesinde tez, Amerikan çevresel ve duygusal anlatıların farkındalık yaratma ve çevrenin korunmasına yönelik eylemi kolaylaştırmadaki dönüştürücü gücünü aydınlatmayı amaçlamaktadır.

### **Anahtar Sözcükler**

Duygulanım Ekolojisi, Çevreci Eleştiri, Deniz Anlatıları, Okyanuslar, Deniz Canlıları, Empati, Carl Safina

## TABLE OF CONTENTS

ACCEPTANCE AND APPROVAL.....	i
YAYIMLAMA VE FİKRİ MÜLKİYET BEYANLARI.....	ii
ETİK BEYAN.....	iii
ACKNOWLEDGEMENTS.....	iv
ABSTRACT.....	v
ÖZET.....	vi
TABLE OF CONTENTS.....	vii
INTRODUCTION.....	1
<b>CHAPTER I: TOPOPHILIA AND BIOPHILIA: <i>SONG FOR THE BLUE</i></b>	
<b><i>OCEAN</i></b> .....	26
<b>1.1. TOPOPHILIA, AFFECT, AND A NEW OCEAN NARRATIVE:</b>	
<b>SIGHTS AND SOUNDS</b> .....	27
<b>1.2. BIOPHILIA AND RECONNECTING WITH THE OCEANS</b> .....	35
<b>1.3. NARRATIVES OF HUMAN DISCONNECTION FROM THE</b>	
<b>OCEANS</b> .....	42
<b>CHAPTER II: FEELING WITH MARINE ANIMALS: AFFECT, AND <i>VOYAGE</i></b>	
<b><i>OF THE TURTLE</i></b> .....	51
<b>2.1. NARRATIVES OF SEA ANIMAL BEHAVIOR AND EMPATHY</b> .....	53
<b>2.2. THE SUFFERING OF SEA TURTLES, IMAGINING THE PAIN,</b>	
<b>AND AFFECT</b> .....	62
<b>2.3. NARRATIVES OF SEA TURTLE CONSERVATION</b> .....	68
<b>CHAPTER III: EXPERIENCING THE DISASTER: <i>A SEA IN FLAMES</i></b> .....	74

<b>3.1. DEEPWATER HORIZON OIL SPILL AND EMOTIONAL POWER OF SCIENTIFIC DISCOURSE.....</b>	<b>76</b>
<b>3.2. SENSUAL PERCEPTIONS, HABITAT LOSS, MARINE ANIMALS, AND AFFECT.....</b>	<b>84</b>
<b>3.3. NARRATIVES OF OCEAN RECOVERY: RESTORATION AND CONSERVATION OF THE OCEANS.....</b>	<b>89</b>
<b>CONCLUSION.....</b>	<b>96</b>
<b>BIBLIOGRAPHY.....</b>	<b>102</b>
<b>APPENDIX1. ORIGINALITY REPORT.....</b>	<b>118</b>
<b>APPENDIX2. ETHICS BOARD WAIVER FORM .....</b>	<b>120</b>

## INTRODUCTION

*For each of us, then, the challenge and opportunity  
is to cherish all life as the gift it is, envision it  
whole, seek to know it truly, and undertake—with  
our minds, hearts, and hands—to restore its  
abundance.*

Carl Safina, *Song for the Blue Ocean*, 440

Since the 1990s, there has been a consistent fascination with depicting natural landscapes and human/nature interactions in literary and cultural texts. The environmental turn in the American profession spurred the study of a wide array of fictional and nonfictional works exploring the evolving human-nature dynamic. Early in the 1990s, research on the relationship between literature and the natural environment gave rise to the area of "ecocriticism," a broad movement that centers on the growing environmental issues. Lawrence Buell defines environmental literary criticism as "the critical turn in cultural and literary studies that has emerged in recent decades to explore the ways in which literature both reflects and shapes human attitudes toward the environment" (Buell, *The Environmental Imagination* 14). Today, ecocriticism offers a broad framework for scholars of literature to delve into global ecological challenges through literary works, cultural artifacts, and the physical environment.

While scholars examine the environmental crises in literary and cultural texts, the crucial role of emotions and cognition<sup>1</sup> is often overlooked. More recently, affective ecocriticism that has arisen within the broader field of ecocriticism, as a sub-branch, "imagines a more affective, and consequently a more effective, ecocriticism, as well as a more environmentally attuned affect studies" (Bladow and Ladino 3). Affect seeks to comprehend the impact of emotions on ecological interactions and the reciprocal influence between the two. Additionally, the aim is to investigate how emotions affect

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<sup>1</sup> Cognition is defined as "the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses" ("Cognition").

attitudes and behaviors towards nature. This interdisciplinary approach utilizes knowledge from different fields, such as environmental psychology, to analyze how emotions influence the perception of humans and their interaction with nature. Furthermore, it refers to the analysis of the interaction between emotions and affective encounters with the surrounding environmental contexts, landscapes, and ecological systems depicted in literary and cultural works. This method places significant emphasis on the close connection between the emotions of human beings as well as the natural environment, underscoring the influence of settings on emotional reactions. In her article “Affect, Emotion, and Ecocriticism,” Alexa Weik von Mossner describes affective ecocriticism as “a highly interdisciplinary endeavor that seeks to better understand our manifold emotional engagements with cultural texts and the environment” (133). The aim is to comprehend the emotional dimension of these texts and their capacity to impact the implied reader, evoking emotions and altering humans’ perspective on nature. Affective ecocriticism highlights the significance of environmental texts, their ability to influence human emotions, and how this information is perceived in the human mind.

Antonio Damasio, a neuroscientist, famously argues that cognition and emotion are intertwined, just as perception and awareness are not confined to the mind or nervous system alone but involve the entire body’s interaction with its surroundings (Damasio, *Descartes’ Error* 17). Humans can experience a range of emotions through natural environments, making environmental narratives a powerful medium for conveying these experiences. Affective ecologies explore how emotions, environments, and experiences are interconnected, emphasizing how feelings influence and are influenced by human interactions with the natural world. Emotions like awe, fear, or nostalgia towards nature profoundly shape individuals’ engagement with environmental issues and how they communicate their perspectives through narratives.

This thesis will delve into the study of affective ecologies in Carl Safina’s three marine narratives *Song for the Blue Ocean* (1999), *Voyage of the Turtle* (2006), and *A Sea in Flames* (2011). Safina emphasizes the deep interconnection between humans and the marine environment, highlighting the adverse consequences of humans’ disrupted relationship with nature, while also recounting his personal encounters in the marine

environment. His marine narratives primarily focus on the exploitation and injustice toward marine animals, which stem from the fractured relationship between humans and nature. As humans grow increasingly detached from the ocean, ecological crises intensify, threatening the survival of various species on Earth. This disconnection stems from a belief in human superiority over all other life forms, leading to an exploitative attitude towards the environment. This estrangement from nature fosters a self-centered perspective, causing environmental degradation and gradually constricting the world's ecological diversity. Safina's marine narratives indicate that as humans' emotional attachment to the marine environment weakens, the ability to empathize with its plight decreases, leading to negligence and exploitation. Restoring an emotional connection with the natural environment is essential for cultivating a sense of guardianship, ultimately advancing a more sustainable and harmonious coexistence.

Through the perspective of affective ecocriticism, environmental narratives utilize the power of emotion to strengthen implied readers' bonds with the natural world and promote ecological awareness and action. By incorporating vivid descriptions, personal stories, and emotive language, these narratives evoke emotions that bring readers closer to the experiences of more than human creatures and ecosystems. In his marine narratives, Safina poetically depicts nature's beauty by using evocative imagery and deep emotional resonance. He offers his perspective on the intricate connection between people and the aquatic world. As humans seek a more harmonious coexistence with nature, Safina highlights the troubled, primarily human-caused problems affecting the marine world. He focuses on the sights and sounds of the oceans and coastal areas to create an emotionally resonant narrative that inspires hope for repairing the human-nature disconnection. Safina's emotions permeate every page, reflecting his own experiences of joy, driven by hope for the natural world's future, and sorrow, stemming from the loss of animal habitats and the myriad issues facing the oceans. What is needed is a critical analysis prioritizing feelings and emotions by ecocritics "who feel kinship with nature and are determined to transfer, through their writing, teaching endeavors, and activities, this life-concern, as well as the issues they feel compelled to speak about, to as many people as possible," and respond to the "needs of the earth" (Özdağ, "Century of Restoring the Earth" 131). While ecocritics have diligently expressed their concerns and compassion for nature through

literary studies, there has been a noteworthy lack of understanding of how these expressions influence readers' emotions and feelings and could alter their opinions towards nature.

Prominent environmental writers including Rachel Carson, Aldo Leopold, and Henry David Thoreau have all utilized affect in their writing. They have inspired and encouraged readers with their works' passionate and emotional environmental narrative. Aldo Leopold's *A Sand County Almanac* (1949) fosters environmental ethics of nature and wildlife preservation, while Rachel Carson's *Silent Spring* (1962) exposes the devastating ecological impacts of pesticides, causing a nationwide outrage that helps to initiate the American environmental movement and extend its influence throughout the world (Weik von Mossner, *Affective Ecologies* 8). Similar to the aforementioned writers, Carl Safina, a contemporary American ecologist, takes the implied reader on an emotional and educating journey with incisive narration and scientific facts, inspiring the reader to form a deeper connection with the more-than-human world. Through his narratives, *Song for the Blue Ocean*, *Voyage of the Turtle*, and *A Sea in Flames*, Safina prompts readers to reflect on their emotional response toward the ocean and its inhabitants, fostering empathy, awe, and concern for marine life.

Numerous ecocritics and writers have emphasized the significance of perceptual and emotional processes, stating that these are crucial not solely in the development of environmental narratives but also in their effects on society. Lawrence Buell argues in his work *The Environmental Imagination* that for several nature writers such as Henry David Thoreau and John Muir "aesthetics was continuous with environmentalism" and that "a deeply personal love and reverence for the nonhuman led, over time, to a deeply protective feeling for nature" (Buell, *The Environmental Imagination* 137). The establishment of an emotional connection with nature does not necessarily require the narration to be pleasant. In her book *Affective Ecologies*, Weik von Mossner emphasizes that "negative and positive emotions cued by narratives" have the potential to "promote more sustainable lifestyles in the Anthropocene" (15). The primary objective of Edward Abbey's works was to stimulate individuals and foster environmental awareness through sharing clear and alarming insights about the state of the natural world. In his book *Desert*

*Solitaire*, Abbey comments on “the power of the odd and unexpected to startle the senses and surprise the mind out of their ruts of habit, to compel us into a reawakened awareness of the wonderful – that which is full of wonder” (41). Abbey’s intention was not simply to depict the awe-inspiring impacts of nature and convey its beauty to the readers; rather, he aimed to “alarm and disorient his readers” by stating facts to create awareness (Slovic, *Aestheticism and Awareness* 55). As Slovic argues, “the emotions of fear, disorientation, and surprise are central to the heightening of environmental awareness” (55). Similar to such objectives, Safina aims to raise awareness by providing negative examples. This time, however, by scientifically proving them. In *A Sea in Flames*, Safina forces the reader to confront nature after one of history’s biggest and most disastrous oil blowouts, known as the Deepwater Horizon oil spill. Furthermore, he identifies significant periods in history when devastating incidents occurred, particularly in the marine environment, that many people are unaware of, and thus do not know how deeply it affected the environment as a whole. Additionally, his objective is to foster consciousness<sup>2</sup> in the reader by articulating the necessary modifications to avoid future catastrophes. He explicitly expresses his opinion by asserting that “we need to phase out our dependence on oil, coal, and gas” (*A Sea in Flames* 327) in order to prevent further oil catastrophes and protect the marine environment. These literary works are just a few examples of affective ecologies, and they are written to create awareness and rebuild humans’ relationship with nature.

With the growing number of books and articles on affective ecologies, this thesis aims to explore the sensory and affective experiences of the author and how they create affect on the reader. The texts under focus for this thesis will be Safina’s *Song for the Blue Ocean* (1998), *Voyage of the Turtle* (2006), and *A Sea in Flames* (2011), and the study will explore the marine world and its interaction with humans in terms of affect. Drawing on affect studies within the field of ecocriticism, this study investigates how marine

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<sup>2</sup> Carl Safina describes consciousness as “experiencing sensations.” See Safina, Carl “Beyond Words: What Animals Think and Feel,” YouTube Video, September 19, 2015, Talks at Google 13:34 to 13:37, <https://www.youtube.com/watch?v=SR4ewPdI42Q>



narratives elicit and influence emotional engagement with the ocean and its inhabitants through the persuasive power of environmental narratives.

Safina's three marine narratives on the oceans attempt to engage the reader and encourage them to take action for environmental conservation and restoration by evoking both pleasant and unpleasant feelings. Safina employs several narrative techniques and strategies in his books to be more persuasive and elicit emotional engagement with readers in order to foster a stronger connection among the human and non-human world. The depicted narrative strategies encompass the use of persuasive language, the dissemination of scientific information about the environment, and the creation of a storytelling atmosphere. Employing language that is both evocative and informative, along with acknowledging the struggles faced by marine animals and delving into their emotional experiences, constitutes a crucial aspect of eliciting emotional responses in Safina's narratives.

Safina and many other writers such as Edward Abbey and John Muir aim to foster a stronger bond between their readers and nature, as well as to help them recognize their interconnectedness with nature, by emotionally involving them in the narrative through various strategies. As Weik von Mossner argues, the urging in Aldo Leopold's *A Sand County Almanac*, the probing in Thoreau's *Walden*, and the dramatization in Carson's *Silent Spring* are "all part of a repertoire of rhetorical and narrative techniques" aimed at engaging readers sensually as well as emotionally, and moving them to take steps in environmental activities (*Affective Ecologies* 8). On the other hand, Safina offers readers "a plaintive, sensitive, caring, intelligent, indignant paean to his beloved waters and their threatened habitats" (Ellis). These works and the feelings they elicit are fundamental examples and goals of creating affect and a more ecologically conscious affect research (Bladow and Ladino 3).

The significance of affect and the importance of connecting with nature stems from the anthropocentric belief that humans alone have the cognitive ability to define and assess moral value, and hence are superior to all other living creatures in the universe. The clash between humans and nature gives rise to ecological crises and disasters. However,

civilization is responsible for not just these crises but also social crises resulting from conflicts among individuals, as well as spiritual crises stemming from conflicts within oneself (Asenath 1285). The unpredictable and inconsistent relationship between humans and nature is today the main cause of environmental catastrophes. These outcomes stem from the deterioration of the connection between humans and nature (1286). Consequently, the biophilia hypothesis has emerged to educate and enlighten individuals about the state of nature and explore the weakened bond between humans and nature, intending to enhance the connection for a more sustainable future and consciousness. Biophilia is the belief that man's interest and communion with the natural world stems from an underlying, biologically driven need to engage with diverse forms of life such as animals and plants. The term biophilia was coined by psychoanalyst Erich Fromm in 1973, who described it as "the passionate love of life and of all that is alive; it is the wish to further growth, whether in a person, a plant, an idea, or a social group" (Fromm 406). American biologist and ecologist Edward O. Wilson later used the term in his work *Biophilia*. Wilson describes biophilia as "the innate tendency to focus on life and lifelike processes" (Wilson 9). He further argues that "our existence depends on this propensity, our spirit is woven from it, hope rises on its currents" (5).

In light of the increasing frequency of ecological disasters in recent years, acquiring knowledge about conservation and restoration is imperative. The essence of achieving a fulfilling and sustainable life lies in rectifying the harm inflicted by human activities and showing gratitude towards the natural world. Thus, human beings must recognize that their sense of belonging extends beyond the human race to encompass the intricate ecosystems that sustain life. The biophilia hypothesis and affective ecologies inform humans that they should gradually rediscover their ecological selves, which are part of their deepest selves, and become aware of their responsibility towards themselves and all living beings. Without a deep understanding of every human being's innate self, it is challenging to truly appreciate the significance of the environment. In addition, a healthy environment is crucial for the aesthetic and spiritual satisfaction of people.

Research confirms Fromm's and Wilson's biophilia hypothesis revealing that nature is essential in human existence for healing the body, mind, and soul. According to the

Human Animal Bond Research Institute (HABRI), the human-animal bond is “a mutually beneficial and dynamic relationship between people and animals that is influenced by behaviors that are essential to the health and well-being of both” humans and the more than human world. This approach is not only true for human beings’ connection with animals but also to their relationship with nature as a whole as enhancing the connection with nature will result in improved mental and physical well-being. Roger S. Ulrich suggests that a hospital window providing a view of nature has the potential to impact a patient's mental well-being and, consequently, their recovery (420). Furthermore, immersion in nature preserves boosted positive affect. These prove that although biophilia argues that the human-nature relationship is innate, it is rather the ability to appreciate the biological gifts of the environment (Simaika 904) which could be achieved by solidifying an awareness through contact with nature to re-establish nature connectedness. Physical encounters with the natural world can impact one’s understanding of the environment and favorable attitudes toward it. Lumber argues that direct interaction with nature and emotional engagement and contemplation of meaning correlate with a psychological measure of nature-relatedness (3). Even the tranquillity and peace that comes from being close to nature influences human psychology, bringing us one step closer to reconnecting with nature.

In the early stages of ecocriticism, concepts like E. O. Wilson’s “biophilia” and Yi-Fu Tuan’s “topophilia” became influential, providing convenient terms and interdisciplinary viewpoints to describe positive emotions associated with specific locations, commonly referred to as the “sense of place” (Bladow and Ladino 8). The Topophilia Hypothesis, proposed by Yi-Fu Tuan, extends beyond the concept of biophilia underlining the emotional bond between individuals and specific places or settings. It incorporates both biological inclinations and cultural influences, highlighting the multidimensional nature of humans’ connection to nature. Tuan writes that topophilia is “the affective bond between people and place or setting” (4). This hypothesis expands on existing scholarship to propose a multidisciplinary understanding of how biological and cultural factors may have interacted over time. It suggests that through a combination of genetic predispositions and cultural learning, humans developed adaptive mechanisms for forming strong attachments to specific places in the natural world (Beery et. al 8837).

Attachments to specific locations can stem from a range of factors. Individuals may form emotional bonds with a place based on the feelings it evokes, its cultural significance, and personal memories. Safina emphasizes his own childhood memories of the marine environment, sharing these recollections with his readers. He highlights the deep emotional impact the marine world has had on him and his profound connection to it. He intends to evoke similar emotions in the readers, transporting them to moments of profound encounters that he experienced, even though he has never been to the specific location before:

Because I had not been there before, I did not have the same visceral reaction as they, but I hoped I would never feel quite so bad about the waters where I grew up as they were feeling here. And I thought back to seeing sharks at the surface of a slick summer sea, of fishing for bluefin tuna with my father and uncles and closest friends, when the world and I were younger. All these scenes were playing in my mind as I stood on that idyllic-looking Jamaican beach surrounded by jungle greenery, looking at the faces of those who once knew these reefs. I thought of the future and tried to divine the prognosis. (*Song for the Blue Ocean* 527)

Despite his emotional distance from the current situation, Safina's reflections prompted him to consider the future of marine ecosystems and the necessity of conservation efforts to safeguard them for future generations. Additionally, even though he had never been to this particular location before, the setting evoked memories of the sea for him. As readers observe Safina's emotional response to the marine environment, they might experience their own emotional awakenings, encouraging them to reflect on their personal encounters with marine settings.

Drawing on the insights of theorists like Silvan Tomkins and Brian Massumi, the concept of affect is explored to understand its essence and significance. Tomkins emphasizes the integral role of affect in human experience, stating that "Reason without affect would be impotent, affect without reason would be blind" (Tomkins 112). This viewpoint underscores the necessity of integrating emotional responses with rational thought to achieve human freedom and understanding. On the other hand, Massumi builds on this foundation by framing affect as "a change in capacity," (Massumi, *Politics of Affect* 4) a

concept rooted in Spinoza's philosophy. According to Massumi, affect not only encompasses emotional states but also signifies a transformation in a person's ability to act and perceive the world surrounding them. This dynamic understanding of affect highlights its importance beyond mere emotional reactions; it fosters empathy and enhances our sensitivity to the experiences of others, including animals, who share similar emotional capacities.

Considering all of these perspectives, affect encompasses more than just eliciting positive emotions; it also seeks to cultivate empathy and compassion by conveying that animals, similar to humans, experience emotions. This is often achieved by presenting uncomfortable truths about the environment, a narrative strategy many writers employ to immerse readers in the story and motivate them to take action for environmental conservation. Many environmental writers prefer to focus on the negative aspect, such as environmental disasters to evoke lost feelings towards nature, because, as Brandi Morris notes, while people mostly prefer the pleasure of positive emotional valence, it seems that emotions that are linked with negative valences, such as worry, drive risk management and are better at getting us out of our proverbial chairs to do something and take action about an issue (Morris et. al 22).

Lawrence Buell employs the term "ecoglobalist affect" to describe a specific emotional or psychological state arising from the awareness of global ecosystems' interconnectedness. In Buell's words, ecoglobalist affect means "an emotion-laden preoccupation with a finite, near-at-hand, physical environment defined, at least in part, by an imagined inextricable linkage of some sort between that specific site and context of planetary reach" (Buell, *Shades of the Planet* 232). He further states that "either the feel of the near-at-hand or the sense of its connection to the remote may be experienced as either consoling or painful or both." When individuals feel sorrow or mourn the decline of biodiversity or the destruction of natural landscapes caused by human actions like habitat destruction, species extinction, or pollution, they may encounter ecoglobalist affect. This grief becomes more intense as they realize how ecosystems are interconnected, understanding that each loss chips away at the Earth's ecological balance. Carl Safina's marine narratives show the impact of ecoglobalist affect. Despite Safina's

personal experience of loss and grief, he is determined to effectively convey his message about the deterioration of the marine ecosystem to his readers. He mourns, for instance, the extinction of salmon species, recognizing them as living creatures similar to humans, whose right to existence has been usurped by human activities:

Pacific salmon have disappeared from about 40 percent of their breeding range in Washington, Oregon, Idaho, and California. In this region, salmon are either extinct, endangered, or threatened in two-thirds of the area they occupied ten decades ago. Extinction is an unusual form of death, because while most death adds a spoke to the wheel of life, extinction carries a peculiar finality—an end of lineages, a preclusion of futures. (*Song for the Blue Ocean* 148)

Safina uses descriptive language to convey the seriousness of the issue, including the loss of Pacific salmon from their breeding grounds and the degree of their decline in the region. This vivid imagery allows readers to visualize the loss and destruction of natural habitats, eliciting feelings of sadness, empathy, and concern. Furthermore, this narrative technique could inspire readers to take action toward environmental conservation.

In order to urge the reader to take action, the brain must first acknowledge the need and generate an instance of feeling (Barrett 46). According to the studies of Morris et al., the findings convey that negative end valence in environmental narratives is important in facilitating affective engagement and the need for taking action (32). Otherwise, it is impossible to recognize a situation as severe enough to warrant action, and we will continue to ignore the issues. Because the situation is portrayed as non-urgent in the human mind, many of us tend to ignore the issue. Furthermore, in order to truly comprehend the role people seem to play in the degradation of nature, humans' own behavior toward the environment as individuals must be recognized. In the article, "The Hopefulness of Ecocriticism: Reflections on a Scholarly State of Mind," Slovic emphasizes the importance of addressing the darkness of human nature and engaging in self-criticism to assess our actions and our influence on the environment:

Few ecocritics would deny the importance of exploring and critiquing the harmful tendencies in individual human psychology and in social systems. In fact, the extent

to which such analysis might inspire reform of individual lives and broader systems and policies should certainly be regarded, I think, as a hopeful aspect of the discipline—it is important to recognize the darkness in our own nature in order to prod ourselves toward improvement, toward change. And yet, I would also argue, that inspiration itself is essential to the effectiveness, the sense of mission, that has resulted in the rapid growth of ecocriticism around the world during the past three decades. Ecocriticism’s potential to offer trenchant social critique is a hopeful sign.

(4)

As Slovic argues, it is critical to acknowledge our involvement in nature and the darkness in our own nature before blaming external factors for nature’s degradation. Supporting Slovic’s argument, Edward Abbey seeks to evoke a sense of urgency, empathy, and, most significantly, guilt in his book *The Monkey Wrench Gang*. Abbey accomplishes this by highlighting the current state of the planet and the potential consequences of the loss of wilderness. He argues: “The wilderness once offered men a plausible way of life...Now it functions as a psychiatric refuge. Soon there will be no wilderness...Soon there will be no place to go. Then the madness becomes universal” (203). In *The Cambridge Companion to Literature and the Environment*, Leo Mellor argues that Abbey’s writing structure is crucial - in both senses - against such hopelessness; it is ripsnorting with force as it marshals short sentences with lyric cries and vitriol with moments of transcendence (108).

Because environmental narratives are one of the most potent approaches for stimulating empathy and emotions in humans, many writers and ecocritics, including Abbey, use them to transmit a specific environmental message and evoke lost experiences. Ecocriticism has placed high importance on environmental narratives’ capacity impact the attitudes and behaviors of implied readers since its debut in the early 1990s. In this context, many ecocritics have focused on perceptual and emotional processes, stating that they are critical not just in the creation of environmental narratives but at the same time in their societal effects. Ecocritic Jennifer Ladino distinguishes affect, which “precedes or eludes cognition and discourse, and can transcend the individual body, from emotion, a more personal, subjective experience that can be treated as consciously interpreted or narrated affect” (134). Environmental narratives possess the power to evoke empathy,

motivate action, and foster a more profound sense of connection and responsibility towards the natural world. In addition, these narratives often explore universal themes such as beauty, loss, and resilience, which profoundly connect with readers on a personal level. This prompts the reader to envision a collective encounter that could have been approached in an alternative manner, so evoking a sense of empathy.<sup>3</sup>

Emotionally charged literature, according to psychologists and philosophers, can influence readers' morality in ways that go beyond the reading experience itself. Martha Nussbaum, American philosopher, argues in her book *Cultivating Humanity* that literary texts have the power to "wrest from our frequently obtuse and blunted imaginations an acknowledgment of those who are other than ourselves, both in concrete circumstances and even in thought and emotion" (111). Such wresting has the potential to induce substantial alterations in human behavior, a goal that nature writers want to accomplish through their storytelling. While this particular emotional impact is commonly associated with works of fiction, non-fiction narratives have the potential to be more impactful due to the narrator's tendency to primarily convey their personal encounters in the natural world to the reader.

An environmental narrative can reach significant success and evoke emotional responses from readers, as they are exposed to natural surroundings in the book and gain an understanding of the concept of "wilderness." Because it is emotionally distressing to witness the suffering of a living being, many of us feel compelled to ignore it when we read of animal suffering. While everyone's response to this might be different, protecting the animal surely is something everyone would feel compelled to do. The narration is essential for provoking thought in any form of work, including books, films, and documentaries. The narrated affect, as mentioned above, can be interpreted as

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<sup>3</sup> Carl Safina describes empathy as the "ability to feel with another." See Safina, Carl "Beyond Words: What Animals Think and Feel," YouTube Video, September 19, 2015, Talks at Google 13:34 to 13:37, <https://www.youtube.com/watch?v=SR4ewPdI42Q>



“storyworld”<sup>4</sup> or “engaging in thinking.” Although the terms narrative and tale are sometimes used interchangeably, stories are a subset of these narratives: all stories can be considered to be narratives, but not all of these narratives are effective stories (Dalkir 65).

Many writers tend to be critical and have specific criteria for what constitutes an affective environmental narrative, often associating it with fictional works like ecological-disaster novels or cli-fi films. Nonfiction works are seldom considered as having the potential to deeply affect readers or to be seen as compelling narratives. Yet, while discussing impact and storytelling, it is critical to emphasize the word “transportation.”<sup>5</sup> When readers transport themselves from their present environments and connections into the world of the narrative, they are engaging in an immersive and ultimately environmental process that involves creating mental models of the narrative's worlds. This is how a book is effective, as seen from the perspective of the affective ecocritic framework (Gaard 225). Because non-fiction narratives provide the readers with real-life facts and environmental information, “it is possible that the emotional effects of a fictional story may disappear more quickly than those of a factual story” (Green et. al 54). The following lines of Safina’s book *Song for the Blue Ocean* immediately draw the readers’ attention and invite them to visualize the migration of the giant bluefin tuna by providing an environmental process:

Imagine, then, their movements. Imagine the giants in winter, finding their mates and exerting their passions in the warm and sunny Gulf of Mexico, chasing the flying fish like thunder in the tropics. Imagine their surviving children of several years ago swimming hidden in the Gulf Stream far to the north and east. While winter gales rage overhead and whip the sea surface into foaming mountains embedded in fog before driven snow, the young bluefins course the warm vein of the Gulf Stream, trailing the scent of their prey schools, bathed by the very same water that bathed their spawning parents weeks earlier at the Gulf Stream’s source. (63)

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<sup>4</sup> Narratologists employ similar terminology to describe the subjective experience of storyworld travel. Wolfgang Iser calls it being in the middle of things in *The Act of Reading*. Other scholars call it absorption. See Weik von Mossner, Alexa. *Affective Ecologies: Empathy, Emotion and Environmental Narrative*. The Ohio State University Press, 2017.

<sup>5</sup> Psychologists Melanie Green and Timothy Brock define transportation as “an integrative melding of attention, imagery, and feelings.” See Weik von Mossner, Alexa. *Affective Ecologies: Empathy, Emotion and Environmental Narrative*. The Ohio State University Press, 2017.

Safina forces readers to envision the lives and families of the aquatic creatures to transport them to the described location, even if they have never seen it before. Affective writing and environmental storytelling are two distinct forms of writing that not only elicit emotions such as empathy and tranquility but also create mental imagery in readers. Moreover, Safina's context provides the reader with additional knowledge about the bluefin tuna that was previously not available to us. Additionally, an increasing body of research suggests that involvement with emotional environmental narratives can more successfully inspire prosocial actions (Barraza 139), aligning with the objectives of many writers in this field. A growing number of individuals are joining environmental organizations and engaging in volunteer work, or they have a heightened awareness of the significance of environmental conservation due to compelling narratives that deeply resonate with people. Morris suggests that "narratives structured as stories facilitate experiential processing, heightening affective engagement and emotional arousal, which serve as an impetus for action-taking" (19). As Morris underlines, for the reader to take action for environmental conservation and restoration, the narrative has to be engaging, motivating, and informative.

The seriousness of the major environmental crises necessitates a worldwide response from mankind that is timely and appropriate to safeguard nature. Nevertheless, despite our increasing knowledge of nature and environmental issues, several trends suggest that many people ignore this wisdom and are separated physically and psychologically from nature, which means that only a minority of people are truly motivated to take action against these crises. For the vast majority of people, a strictly rational and cognitive approach to serious environmental issues is frequently insufficient to drive them to take preventative or corrective action. As a result, several environmental writers have warned of the need to include scientific and affective language when discussing conservation, environmental education, and sustainability (Wilson 26).

The degradation of the environment is closely tied to the absence of fundamental environmental values and understanding, which are essential for fostering ethical decision-making in the long term (Özdağ, "The Turning of the Tide" 147). Without a solid foundation of environmental values, individuals may struggle to make informed and

responsible choices that prioritize the well-being of the planet. As a result, many of us see environmental concerns as insignificant, believing that they have little bearing on us as individuals. While an understanding of environmental issues is crucial for engaging with environmental narratives, knowing scientific facts about these issues serves several important purposes such as forming a solution-oriented thinking and inspiration for action. In his book *Song for the Blue Ocean*, Carl Safina argues that “A painting is nothing more than light reflected from the surface of a pigment-covered canvas. But a great painter can make you see the depth, make you feel the underlying emotion, make you sense the larger world. That, too, is the power of science: to sense and convey the depth and dimensionality of nature, to glance at the surface and to divine the shape of the universe around us” (437), which is why Safina uses specific scientific examples to convey his message about the marine crises by scientifically proving it.

In the first chapter of *A Sea in Flames*, Safina gives sharp and short examples of real-life disasters, starting from the year 1967, to convey his message more accurately. Safina refers to this section as “Déjà Vu, to Name a Few.” On June 3, 1979, the Mexican drilling rig Ixtoc I, blew out and blew up in around 160 feet of water, creating an explosion and a firestorm. After it sank, it spilled approximately 140 million gallons of crude oil into the Gulf of Mexico, making it the world’s greatest oil disaster up to that point (58). The disaster impacted not just the oceans and marine species, but also humans and the entire ecosystem. Furthermore, Safina not only provides specific examples of historical disasters but also focuses on the main reasons why the largest oil blowout in history, known as Beginning on April 20, 2010, off the coast of the United States in the Gulf of Mexico on the BP-operated Macondo Prospect, “The Deepwater Horizon Oil Blowout” started first with thorough yet reasonable scientific data. Safina compares BP’s operation to a high-risk pregnancy by stating that “a high-risk pregnancy is one running a higher than normal risk for complications. A woman with a high-risk pregnancy needs closer monitoring, more visits with her primary health-care provider, and more careful tests to monitor the situation. If BP can be called the birth parent, this well was a high-risk pregnancy” (*A Sea in Flames* 21). This type of writing simplifies complex scientific terms, making it more accessible to those who may not have a deep understanding of scientific concepts. Given that many people are unaware of the historical environmental

degradation, this kind of information and writing aims to educate individuals about potential harm to the environment and its consequences.

Sylvia Earle, a well-known American marine biologist, and author, is another significant writer who uses science to create affect. In her book *The World is Blue*, Earle states that over 14 billion pounds of waste are intentionally thrown into the sea each year as reflected in a report published by the National Academy of Sciences (38). Earle argues that “[s]pecies have been disappearing from ocean ecosystems and this trend has recently been accelerating. If the long-term trend continues, all fish and seafood species are projected to collapse within [her] lifetime—by 2048” (45). As Sylvia Earle discusses at length, the garbage that is put into the water does not just disappear. It continues to affect marine species since the pollution they consume is not restricted to rubbish. Regarding the harmful effects on marine animals in the Atlantic Ocean, especially on sea turtles, Carl Safina states in his book *Voyage of the Turtle* that many turtles consume plastic because they mistake it for food. According to one research, over half of adult Leatherback turtles were found to have plastic in their stomachs. 70 percent of Leatherbacks discovered dead and autopsied at Juno’s Marinelife Center, had digestive tracts clogged by items like Mylar balloons and rubbish bags. Some turtles came ashore with a sheet of plastic protruding from them. As a result, they could only lay eggs when someone pushed and tugged them and finally dragged a garbage bag out (66). The words used by these writers help readers appreciate the visceral depth of nature’s vitality, and the knowledge they provide creates urgency around marine conservation. The information provided indicates that there is a considerable amount yet to be explored and understood. Improved comprehension of ongoing environmental issues is essential for effective participation in environmental restoration efforts. While challenging to digest, the alarming facts presented in these narratives foster emotions in readers. Moreover, this knowledge instills a sense of urgency regarding marine conservation efforts. The information highlights the vast scope of our environmental challenges, emphasizing the need for further investigation and understanding. Only by comprehending the present condition of the environment can we effectively contribute to environmental restoration endeavors.

Aside from Safina and Earle, John Muir is another nature writer and ecocritic who relies on science to better portray his message. For much of his book *The Mountains of*

*California*, Muir piles on information about the Sierra Nevada with an abundance of descriptive detail. Simultaneously, he attempts to inculcate in his readers a loving idea of the natural world, which he accomplishes by raving over the inspiring beauty of the environment, urging them to emulate his awareness and ultimately forming a topophilic attachment (*Affective Ecologies* 34). This is evident in his narrative of his encounter with a storm-ravaged tree in the chapter. Muir ventures through the stormy woods for hours until he singles out the tallest Douglas Spruce from a group. Amidst the wild frenzy of the weather, he feels the trees' exhilarating dance and selects one to ascend. Muir then climbs the chosen tree and remains there until the storm passes:

Never before did I enjoy so noble an exhilaration of motion. The slender tops fairly flapped and swished in the passionate torrent, bending and swirling backward and forward, round and round, tracing indescribable combinations of vertical and horizontal curves, while I clung with muscles firm braced, like a bobo-link on a reed. In its widest sweeps my tree-top described an arc of from twenty to thirty degrees, but I felt sure of its elastic temper. My eye roved over the piney hills and dales as over fields of waving grain, and felt the light running in ripples and broad swelling undulations across the valleys from ridge to ridge, as the shining foliage was stirred by corresponding waves of air. (252)

The text has vivid visual as well as and motor imagery, enabling readers "to see and feel" the situation (Weik von Mossner, *Affective Ecologies* 35). Muir catches the attention of the reader by using emotive language and letting them live the moment for themselves. However, as Weik von Mossner states, Muir's recounting of his personal visceral and spiritual experience in the Sierra Nevada had a certain strategic aim, despite its authenticity (37). His excitement and astonishment were meant to be contagious, and "would later provide the foundation for appeals to a commitment to conservation in his readers" (Gifford qtd in Weik von Mossner 37). She further argues that "Muir's emphasis on the sensual, on the value of direct experience, on his use of the imagination, and on the need for a spiritual appreciation of scientific knowledge places his discourse in the realm of the aesthetic" (37). His depiction of nature is not restricted to visual imagery, which is why Muir's writing became popular and inspired numerous nature writers as

well as readers. Muir transports and sparks the reader's interest, allowing them to reestablish their lost relationship with nature through emotional connection.

In his book *Arctic Dreams*, Berry Lopez, like Muir, draws on his personal spiritual experience of the Arctic while demonstrating visual and motor imagery. He, like Muir, seeks to create an image in the minds of his readers while simultaneously educating them scientifically:

To grasp the movement of the sun in the Arctic is no simple task. Imagine standing precisely at the North Pole on June 21, the summer solstice. Your feet rest on a crust of snow and windblown ice. If you chip the snow away you find the sea ice, grayish white and opaque. Six or seven feet underneath is the Arctic Ocean, dark, about 29°F and about 13,000 feet deep. You are standing 440 miles from the nearest piece of land, the tiny island of Oodaaq off the coast of northern Greenland. You stand in each of the world's twenty-four time zones and north of every point on earth. On this day the sun is making a flat 360° orbit exactly 23½° above the horizon. (56)

His narrative allows the reader to imagine a scene that they may have not seen but have heard about many times before. The movement of the sun, and the feeling of the feet touching the snow allows the reader to truly experience an 'arctic dream' while also gaining information about the degree of the weather and the deepness of the Arctic Ocean. Although Muir is known to have imagined most of his narrative and did not encounter it firsthand, Lopez did. This is not to say that Muir's narrative was not successful in terms of affective narration. On the contrary, it demonstrates how a book can be effective, whether it is fiction, non-fiction, or imagined. These writers not only embrace nature as a gift, but they also write about the places in nature in appreciation. Lopez proposes that the only way to truly appreciate this region is to attempt to comprehend all of its components while also understanding that the Arctic's resistance to categorization and explanation is vital to human experience (Slovic and Hart 129). Furthermore, envisioning the places mentioned by Lopez and the numerous animals he encounters strengthens the imagination, which is one of the most essential features of humans.

Similar to Lopez, Carl Safina highlights many cases of his interactions with animals in his marine narrative, emphasizing their extraordinary abilities. Sea turtles exhibit exceptional navigational skills that allow them to go on extensive migrations over vast expanses of the ocean. Safina is unable to hide his amazement when discussing the sea turtles' motions and their abilities: "As a species, the Leatherback ranges more widely than any animal except a few of the great whales. As individuals, probably no whales range farther. How could they? Leatherbacks cross entire ocean basins, and then crawl ashore to nest. No whale can do that. And Leatherbacks dive deeper than whales. Certainly no land animal, including humans, can call so much of the world their native habitat and home" (*Voyage of the Turtle* 19).

Considering the remarkable abilities of sea turtles, which surpass those of humans, one might naturally infer that these creatures, as living beings, also possess emotions. However, Safina expresses disappointment in humans, highlighting the suffering endured by animals due to human actions. He states: "This disfiguring and wounding, so unnatural and frequent, so unjust to innocent animals, tangles my mind in their suffering" (*Voyage of the Turtle* 66). Animals endure suffering often because we fail to prioritize their lives and exhibit a lack of empathy when they are harmed. To truly understand and respect animals, it is essential to acknowledge that they are capable of experiencing emotions and sensations just like us.

Erica Fudge, an American literary scholar, highlights the central cognitive dissonance at the heart of human and more than human relationships as follows: "We live with animals, we recognize them, we even name some of them, but at the same time we use them as if they were inanimate, as if they were objects. The illogic of this relationship is one that, on a day-to-day basis, we choose to evade, even refuse to acknowledge as present" (Fudge qtd. in Weik von Mossner 109). Although the study of animal sentiments and emotions is not new, humans still have difficulties accepting that animals share the same feelings as humans. As legal scholar Gary Francione explains, "Humans and nonhumans may be different in many respects, but they are relevantly similar in that they are both sentient; they are perceptually aware and able to experience pain and pleasure" (8). Francoine's point of view leads us to question the anthropocentric thought that humans are superior

to all living beings. As Carl Safina argues in his book *Beyond Words: How Animals Think and Feel*, “Why do human egos seem so threatened by the thought that other animals think and feel? Is it because acknowledging the mind of another makes it harder to abuse them?” (325).

There are countless pictures of animals crying, and the expression on their faces says it all. As a result, it is nearly impossible to regard animals as dispassionate objects sent to Earth to improve people’s lives. Several ecocritics argue that humans make it much more difficult for animals to survive in their natural habitat since we constantly disturb them. For instance, turtles face challenges in their habitat due to humans, particularly during nesting season. The beaches are quite full, and there is very little space between the deckchairs and the sea, which confuses turtles and causes them to return and lay their eggs elsewhere. Furthermore, unnatural lighting hinders turtles from visiting the shore and confuses hatchlings. Because artificial light hurts sea turtles, as Safina emphasizes in his book *Voyage of the Turtle*, you should shield, lower, turn off, modify, or “redirect lights so they are not visible from the beach during sea turtle nesting” (47). Nevertheless, a significant number of individuals fail to acknowledge the existence of other living beings due to an excessive concern with their own comfort. Regrettably, as highlighted by numerous ecocritics and environmental writers like Bill McKibben and Rachel Carson, achieving harmonious coexistence between humans and all living things on Earth remains a significant challenge. In *The End of Nature*, McKibben contends that “nature is about to reach an end because nature can no longer be viewed as an object that exists independently from specific acts of human intervention” (McKibben 10). Meanwhile, Carson, in *The Sea Around Us*, emphasizes the critical need for collective action to address environmental challenges and mitigate their impacts.

Carl Safina employs passionate and emotional language in his books *Song for the Blue Ocean* (1999), *Voyage of the Turtle* (2006), and *A Sea in Flames* (2011) to evoke strong emotions in potential readers and highlight the urgent need for action in protecting nature. His narrative emphasizes the profound connection between humans and nature, the emotions experienced by animals, and scientific insights. Ultimately, Safina aims to inspire readers to take conservation actions by creating an “affect.” He emphasizes that



the health of the ocean is primarily dependent on us, as we are the primary cause of the deterioration of the world's most significant biological part. Safina's affective marine narratives underscore the critical need to safeguard and rejuvenate the marine environment, as all life hinges on its well-being. Despite the United States boasting a comprehensive framework of environmental agencies, protected zones, and laws geared towards conserving natural resources, it falls short. By furnishing scientific expertise and detailing animal habitats, Safina imparts extensive knowledge to readers, fostering a deeper understanding of environmental preservation.

All three works of Safina can be explored by the affect theory to examine how Safina evokes emotions and affect in the reader through his vivid descriptions of the habitats and emotions of the marine animals. Safina employs various narrative techniques to elicit empathy, awe, and a sense of connection between the reader and nature. In line with affective ecocriticism which studies how the emotions evoked by literature and other forms of cultural expression can shape our attitudes and behaviors toward the environment, Safina's literary works instill compassion, concern, and responsibility for marine animals and the habitats they live in. He encourages readers to participate in conservation activities for the protection of these creatures by appealing to their emotions as well as forming a deeper bond with nature, as we already have an innate connection with it.

Exploring affect theory in American nature writing, incorporating scientifically proven facts is highly important because "bodies can catch feelings as easily as catch fire: affect leaps from one body to another, evoking tenderness, inciting shame, igniting rage, exciting fear-in short, communicable affect can inflame nerves and muscles in a conflagration of every conceivable kind of passion" (Gregg and Seigworth 66). In recent times, the urgency to reconnect with nature has reached unprecedented levels. The fractured bond between humans and the natural world inflicts significant harm on both nature and its inhabitants. In the realm of affective narratives within nature writing, it is vital to acknowledge that nature has reached a critical juncture where the significance of preservation often goes unrecognized. While there exist numerous approaches to convey the importance of restoring and protecting the marine environment, writers like Safina

gravitate towards employing emotionally charged and scientifically substantiated narratives to inspire readers to take action.

This thesis focuses on the realm of affective marine ecologies through an examination of Carl Safina's three marine narratives: *Song for the Blue Ocean*, *Voyage of the Turtle*, and *A Sea in Flames*. With an emphasis on clarifying the complex interactions that exist between humans and the marine environment, this study examines how Safina's depictions of marine ecosystems impact readers emotionally. Central to the analysis is an exploration of the emotional bonds forged between readers and the marine world as portrayed by Safina, as well as an examination of the narrative techniques used by Safina through which emotional responses are evoked. Drawing upon Weik von Mossner's strategies in *Affective Ecologies: Empathy, Emotion, and Environmental Narrative*, this thesis employs an interdisciplinary approach that integrates insights from environmental studies, literary analysis and affect theory. By incorporating her theoretical framework of affective studies, this study seeks to illuminate the profound impact of Safina's marine narratives on shaping perceptions, attitudes, and behaviors toward nature and marine conservation.

In the first chapter of this thesis, Edward O. Wilson's biophilia theory will serve as a foundational theory that clarifies the innate relationship between humans and nature. Moreover, Yi-Fu Tuan's topophilia theory will shed light on the deep emotional connections we establish with the marine environment as a sense of place, and emphasize the importance of emotions in defining our connection with nature. This chapter goes into how these theories emphasize the importance of the human-nature bond, as well as how they apply to the marine environment. This chapter also examines the topic of human detachment from nature and the oceans. It investigates the different elements that contribute to this separation using an analytical lens, such as societal, cultural, and environmental impacts. The chapter explores ways to mend this disconnect by emphasizing emotions, aiming to raise awareness about the marine ecosystem and its inhabitants.

The second chapter of this thesis will analyze Carl Safina's *Voyage of the Turtle* by examining his narrative techniques and how he effectively generates empathy by portraying the skills and emotions of marine animals. Within the context of affective ecocriticism, this part of the thesis will explore how Safina employs strategic empathy and portrays the experiences of marine animals, particularly sea turtles, in order to evoke emotions in the reader and motivate them to take action for marine conservation. Furthermore, the current situation of the oceans and the decreasing number of sea species will be explored from a scientific standpoint. It will be claimed through affective ecologies that scientific understanding and emotional engagement are required for a renewed connection with nature. This chapter will emphasize the narrative perspective to demonstrate how portraying animal emotions in environmental narratives influences the reader.

In the third chapter of the thesis, the analysis centers on Carl Safina's marine narrative *A Sea in Flames*, which primarily focuses on the significance of the Deepwater Horizon oil spill, known as one of the most devastating ecological catastrophes in American history. This event serves as a focal point for discussions on the importance of effective ocean management in preserving the health and resilience of marine environments and securing a sustainable future. By delving into the consequences of this disaster, the chapter aims to underscore the urgent need for proactive measures to protect our oceans and mitigate the impact of anthropogenic activities on marine ecosystems. Through a comprehensive examination of the Deepwater Horizon oil spill, readers are invited to deepen their understanding of the interconnectedness between human actions and environmental degradation, emphasizing the critical role of ocean conservation efforts in safeguarding the health of our planet. Through offering insights into scientific discourse, Safina's objective is to inform readers and inspire them to take action by emotionally resonating with the disaster and its devastating impacts on humans, nature, and its inhabitants.

Examining Carl Safina's marine narratives through affective ecocriticism unveils the potential to inspire readers toward environmental conservation and motivate them to safeguard marine animals. Additionally, it demonstrates how humans can reconnect with the marine environment and nature through environmental narratives. Furthermore, the thesis explores the emotional strategies employed in these narratives, including the

strategic use of empathy and embodied simulation to create immersive environments and emotionally significant human-nature relationships (*Affective Ecologies* 190). This analysis will reveal the profound impact of marine narratives on readers, shaping their perceptions and guiding them towards reconnecting with the marine environment. It will provide insights into how affective marine narratives influence readers' perspectives, fostering a deeper understanding and appreciation of nature.

**CHAPTER I**  
**TOPOPHILIA AND BIOPHILIA: *SONG FOR THE BLUE OCEAN***

*Nature holds the key to our aesthetic, intellectual,  
cognitive, and even spiritual satisfaction.*

Edward O. Wilson *Biophilia*, 56

The marine environment has a crucial role in providing a significant source of sustenance, inspiration, and cultural value for both human beings and the entire ecosystem. In addition to its biological significance in regulating climate, providing oxygen, and biodiversity support, the marine environment has a profound impact on human well-being and our connection with nature. The sights, sounds, and rhythms of the ocean elicit strong emotional responses, cultivating a deep sense of awe, tranquility, and wonder that enhances our existence. Our affective experiences in the marine environment influence our perception of ourselves and our connection to the natural world. Affective ecologies shed light on the intricate web of emotional bonds that humans establish with the ocean, emphasizing the reciprocal relationship between our emotions and the marine environment. Furthermore, it emphasizes the significance of cultivating empathy, stewardship, and reverence for the oceans that support life on Earth, by acknowledging the deep emotional aspects of our relationship with the ocean. This approach ultimately directs our efforts toward achieving a more sustainable and harmonious coexistence with nature. This part of the thesis shows the innate relationship between human beings and nature, which has been disrupted over time. It explores the potential to restore this lost connection through the use of affective ecologies, topophilia, and biophilia theories, to foster a more sustainable future. As Safina argues, “If wildlife cannot exist there will be poor quality for human life. A better world for wildlife means a better world for human life” (Safina, *Song for the Blue Ocean* 99).

Despite our awareness of the consequences of human actions on nature, we continue to drive humanity away from nature by our attitude and behavior. One could contend that our ability to subconsciously distinguish ourselves from the rest of nature is mostly

accountable for the widespread environmental degradation. The dichotomized classification of nature and culture influences our viewpoint, creating challenges in comprehending the issues faced by individuals and potentially limiting our ability to actively engage in addressing environmental concerns (Beery 8838). Carl Safina is largely critical of the environmental costs of human indifference, and he examines these issues from both a scientific and an affective perspective. His primary critique focuses on the detachment of humans from nature, particularly the marine environment. He portrays both the cruel and awe-inspiring aspects of nature to evoke empathy and emotion in humans, aiming at encouraging their reconnection with nature. He informs the reader of the scientific facts about nature and catastrophic events that are not commonly known. Moreover, the biophilia hypothesis, explaining the strong bond between humans and the environment, suggests an inherent genetic inclination for humans to feel linked to the natural world. By focusing on a sense of place attachment, the topophilia hypothesis adds to existing theories and provides a thorough look into how biological selection and cultural learning may have worked together during human evolution to create useful ways for people to connect with nature (Beery 8838). Examining Safina's works through the lens of affective ecologies, biophilia, and topophilia theories will demonstrate how these theories originated, why they are important, and how they are reflected in Safina's marine narratives.

### **1.1. TOPOPHILIA, AFFECT, AND A NEW OCEAN NARRATIVE: SIGHTS AND SOUNDS**

Recently, there has been a major increase in interest in the social sciences and humanities in the ideas of affect and feelings. The growing gap between people and nature is one reason for this rise in interest. Many theories have been developed to showcase humans' and non-human worlds' relationships. Topophilia, which is considered to be one of the most crucial hypotheses concerning nature coined by the geographer Yi-Fu Tuan, refers to a deep emotional attachment to a specific place or environment. Tuan developed the concept in light of environmental attitudes, perceptions, and values research. He used 'topophilia' as a definition to define the human coupling of sentiment with place, and argued that it could be defined in short as "to include all of human being's affective ties

with the material environment” (Tuan 93). Topophilia can manifest as a deep connection, affection, or emotional resonance with a specific landscape, city, region, or even a particular building or natural feature. Although topophilia is depicted as the specific attachment to one’s environment, appreciation and love for natural landscapes are also known to be a part of topophilia. People frequently experience a profound connection and appreciation for natural environments such as mountains, forests, rivers, or coastlines. The beauty and peacefulness of these surroundings can create a deep feeling of connection and a need to preserve and protect them. However, the marine environment holds a special place in the human-nature connection. As stated by Tuan, a sense of place can be defined as a universal emotional connection that satisfies essential human needs (Beery 8843). Although Tuan did not explicitly propose an evolutionary theory, it is noteworthy that he did incorporate evolutionary explanations for place associations in his research:

Human agility in water is, however, a fact. The talent is not widely shared among the primates...Could it be that our earliest home was a sort of Eden located near a lake or sea? Consider Carl Sauer’s sketch of the advantages of the seashore: No other setting is as attractive for the beginning of humanity. The sea, in particular the tidal shore, presented the best opportunity to eat, settle, increase, and learn. It afforded diversity and abundance of provisions, continuous and inexhaustible. (Tuan 115)

Topophilia can be defined as “an innate bias to bond with local place, including both living and non-living components” (Tuan 26). This connection is considered adaptive since it facilitates the development of comprehensive knowledge specific to the habitat. This concept does not imply that humans possess an inherent inclination to value life elements of the environment, but rather a natural tendency to establish emotional connections with locations, “either living or non-living” (Beery 8843).

Tuan defines location as having two diametrically opposed dimensions: place and space. “Place is... a reality that can be clarified and understood through the perspectives of people who have given it meaning,” Tuan writes, adding that “the study of space, from the humanistic perspective, is thus the study of a people’s spatial feelings and ideas in the stream of experience” (388). Topophilia is frequently linked with concepts such as morality, imagination, memory, and encounter. Topophilia, defined as the “affective bond

between people and place” (12), is a relation of affection. Various aspects such as upbringing, cultural background, personal experiences, and environmental aesthetics can significantly impact this bond of affection. An individual may develop a deep emotional bond with their hometown due to childhood memories and a sense of belonging to the community. Some people may develop a deep bond with natural surroundings, finding solace and inspiration. Both of these could be described as topophilic attachment, where the place holds considerable importance for the individual. Individuals often develop a sense of attachment to their surroundings due to a combination of natural appreciation and memories, which might vary in significance from person to person.

Carl Safina places significant importance on the ocean environment and consistently conveys his emotional connection to it in his narrative. As he travels across the ocean alongside fishermen, several marine biologists, and researchers, he aims to showcase the beauty and significance of the oceans, while also emphasizing the urgent necessity for proactive efforts. Safina vividly describes the oceans, allowing readers to mentally imagine the natural surroundings of the marine environment. While traveling on the surface of the ocean, he is unable to hide his awe and emotional reaction as he observes the marine creatures and their movements. “The place is alive!” (28) he says in his narrative *Song for the Blue Ocean*, and depicts the sights, and sounds of the ocean, allowing readers to have a sensory experience and engage themselves in it:

For two hours, my drifting boat rode a soft swell, the sea heaving and subsiding as though breathing, and I rising and falling gently as though resting my head on my lover’s chest. During that time the only thing I noticed was that the sun had purged the atmosphere of excess moisture, had sharpened the outline between sea and sky. The sky now seemed a circular curtain around the rim of not planet Earth but planet Ocean. (*Song for the Blue Ocean* 7)

Safina’s poetic description in his narrative evokes a profound sense of emotion in the reader. Everything in nature, including the ocean, appears to be moving and alive. It is as though Safina has become one with all the natural elements, experiencing a profound connection with the marine environment. His portrayal of the sights and sounds of the marine environment evokes an intense sense of emotion in the reader as if they are



physically present in the location being described. Safina places significant emphasis and importance on the ocean. Furthermore, he attempts to instill in his readers a love of the natural world by raving about the immense beauty of the land and challenging them to emulate his own awareness and topophilic devotion.

Safina portrays his thoughts on the ocean and nature, employing lyrical imagery and storytelling techniques. He vividly describes the residence of a chief and the expansive views from his house in his narrative. The house offers a beautiful view of the lagoon and reef edge. One can observe the powerful waves that kept Lyle, a research collaborator, ashore, striking the reef with a series of pristine white breakers, snaggle-toothed and wild. “But the lagoon in the island’s lee is calm as a clam. The scene is heartbreakingly beautiful, almost hypnotically relaxing, an altogether convincing rendering of the Isles of the Blessed—a spitting image of Paradise” (*Song for the Blue Ocean* 369). The third chapter of Safina’s book, as seen in many other parts, portrays the image and Safina’s attachment to the marine environment. Although this isn’t fully about his hometown or a place that brings back emotions for him, the marine environment is something that Safina and many other environmentalists cherish. Safina has developed a strong attachment to the place due to the experiences and memories related to it. Safina considers the lagoon to be “heartbreakingly beautiful” and is fascinated by the environment. Although Safina’s writing may appear excessively passionate, he effectively conveys his emotions to the reader.

The author’s vivid depictions evoke profound emotions towards the natural world, especially among readers who lack familiarity with the specific location being portrayed. Providing the reader with firsthand experience and vivid descriptions of the location elicits an emotional reaction and cultivates a deep fondness for the seaside surroundings. Describing the material features and sensual feel of a natural environment in a manner that allows implied readers to vividly perceive these is challenging. However, nature writers demonstrate that having a deep understanding and strong emotional connection to the environment is crucial for achieving this. Tuan defines topophilia as something that is “vivid and concrete” (Tuan 4), and this attachment to place inspires the literary creativity of nature writers, regardless of the specific location they explore, such as

woodlands, mountains, or oceans (*Affective Ecologies* 29). In non-fiction environmental narratives, the task is “to put those memories into words in a way that will allow readers to simulate it in vivid and emotionally engaging ways” (29). These engaging methods can be both cultural and emotional. While remembering pleasant events in a certain location can make someone positively emotional, recalling negative experiences with a location or environment can evoke ambition and sadness, which makes the reader want to take action to restore and conserve nature. Safina primarily focuses on the troubling aspects of nature’s current condition but also mentions numerous pleasant occurrences in his work. He associates Ogunquit Beach in South Portland with familiar memories:

It’s dark by the time I get to the restaurant, and I park in an unlit lot a couple of blocks away. Closing the car door, I look up at the full September moon and imagine being out on my beloved home waters off Montauk, hunting striped bass under this magnificent night sky of early autumn. Struck by a sudden unexpected twinge of homesickness, I walk swiftly down the street to the light and noise of Barnacle Billy’s. (*Song for the Blue Ocean* 38)

His marine narratives demonstrate his deep emotional connection to America’s oceans, beaches, and other coastal areas. Safina not only provides an image of the environment but also delves into the concepts of imagination and envisioning oneself in a place that holds personal significance. While Ogunquit Beach, which is located near Portland, may be unfamiliar to some readers, the author’s feelings strongly resonate with them. Emotions are conveyed despite the inability to fully articulate the event. Based on Safina’s statements, it can be concluded that the ocean evokes a sense of familiarity and nostalgia for him. However, few people can recollect memories or experience intense emotions while in contact with nature. Environmental narratives are powerful when the reader can identify with the specified environment and recall their own experiences. Only then can a narrative have an impact and transform people’s views towards nature. Readers, as Richard Gerrig depicts, engage in acts of simulation in which “they must use their own experiences of the world to bridge the gaps in texts” and must invest their own feelings in order to “give substance to the psychological lives of characters” (Gerrig qtd in Weik von Mossner 20). According to Weik von Mossner, the reader must accept the writer’s invitation by “focusing your attention on the words of the text” (20) while

connecting the lines to their personal experiences with the place or the environment (*Affective Ecologies* 20). However, if the text does not allow the reader to recall their memories or familiar experiences, the narrative can neither be described as “affective,” nor would it be effective in evoking environmental consciousness.

As mentioned above, an effective narrative can change the way a person feels about the environment and possibly lead to a stronger connection with nature. As American oceanographer Sylvia Earle puts it, “we are now facing paradise lost” (36) as a result of human activity, which is why countless environmental writers and ecocritics are concerned with educating people about the world’s current state. Safina, with the hope of transporting the reader into the natural world and leading them to environmental consciousness, imagines tropical paradise and indirectly forces the reader to think about the images:

Even if you have never visited tropical shores, you have your images. What images come to mind in your tropical paradise? Palm trees, surely. Bright, faintly pinkish coral-sand beaches. Waters glistening all hues of blue. Jungles tangling volcanic slopes. Towering clouds reflecting the turquoise tint of lagoons. Coral gardens blooming multicolored fishes like fantasy flowers. (*Song for the Blue Ocean* 307)

A specific location in nature can be envisioned, even when the location has never been visited. Although the word ‘paradise’ can have different meanings for each individual, the images that come to mind usually remain the same. Safina forces the readers to imagine a tropical paradise and what features it might have. He then starts listing the words that come to him one by one. While Safina informs the reader about the beauty of nature, he also hopes to inculcate this sense in the reader so that many more people will be more active in protecting nature and therefore, care for nature’s health. Throughout the book, Safina instills the idea that paradise in nature is not what it is supposed to be like anymore as it is ill-treated, mostly by human beings. Safina’s words lead the readers to think relationally through the lens of affect. This sort of thinking allows us to both decentre and reimagine the human, viewing human nature as emergent rather than fixed and unchangeable (Singh 3). This perspective encourages us to consider fluid subjectivities that develop from active contact with the world (Ruddick 135).

As previously stated, Safina compels the reader to reimagine our world by emphasizing the significance of being in intimate contact with nature and appreciating what nature presents to us. Reading about a person's movements and behaviors concerning nature can be highly effective in persuading the reader to modify their perspective on the more than human world. It is remarkable how reading about this might change a person's perspective and possibly compel them to take action in terms of restoration and conservation. As Weik von Mossner underlines in *Affective Ecologies*, "such 'feeling with' another person is what we call empathy, and for many researchers, our capacity for an empathic response lies at the heart of intersubjectivity" (23). Because the reader recognizes the movement as well as the sentiments of the character or person in the book, they are more likely to create a stronger connection and relate that experience to their own. When Safina describes how delighted he is to be at the sea and how this particular environment makes him feel, the reader immediately begins to recall their own memories and forms a stronger connection with the surroundings. Although the experiences differ, specific circumstances bring memories to the surface.

When studying the topophilia theory, it is essential to consider the concept of the 'narrative world'. It is usually believed that the narrative world can only be discussed in fiction, yet this is not necessarily true. Narrative nonfiction immerses readers in vast settings and personal experiences, creating the illusion of reading fiction. A non-fiction nature writing's narrative succeeds by captivating the reader's emotions through an engaging plot that maintains the reader's attention and evokes specific emotions. According to Weik von Mossner, "the vivid description of a protagonist's sensations will help readers imagine what it is like to experience that alternative world" (*Affective Ecologies* 27). The alternate world indicates that the story is fictional. However, it is beneficial for gaining insight into the narrative techniques used in writings about nature, which frequently depict environmental encounters from a first-person viewpoint. Safina's marine narrative *Song for the Blue Ocean* is invariably imbued with a sense of urgency and serenity that he feels when in contact with the ocean. His encounter with nature, particularly the ocean, and what he experiences there to conserve the ecosystems is encouraging as he beautifully depicts his journey. He emphasizes that he constantly dreams about the ocean and marine animals, even while he is in contact with them: "Dawn

is spreading a breathless crystal silence over mirror-still waters. The soles of clouds reflect the great lagoon's turquoise in an openhearted sky. The poet Rupert Brooke: 'It is sheer beauty, so pure that it is difficult to breathe in.' I dream each night of sharks and morning. Each morning, I awaken to a dream" (454). His portrayal of the sea setting and its creatures is not only poetic but also demonstrates his deep connection to the marine world, drawing readers into the narrative and allowing them to experience the tranquility the environment evokes.

The deep connection with the marine world for Safina seems to be a connection that is not easily going to be broken. While many factors such as the sound of the ocean, the beauty of it, and the emotions that the ocean evokes in him are considered to be crucial, his memory of the ocean is another factor. An impactful memory of Safina, which instilled in him a deep appreciation for the coastal area and its inhabitants, is a fishing trip he took with his father when he was a child:

When I was a boy, on warm spring evenings in the rich light before sunset my father would often take me down to the pebbly shore of Long Island Sound to hunt striped bass. At the shore, with the sparkling water, the coursing terns, the iridescence of a freshly caught fish, the world seemed unspeakably beautiful and—I remember this vividly—so real. It seemed so real. (*Song for the Blue Ocean* 6)

The coastal connection goes beyond mere nostalgia, involving a deeper sense of belonging and identity. For many individuals, the coast represents more than just a location; it embodies a significant aspect of their identity, holding treasured memories and customs that have been handed down through multiple generations. It demonstrates the strength of the human spirit and highlights our deep relationship with the natural world and the interconnectedness of all life.

Several environmental writers highlight the significance of nature and the marine environment in their narratives by creating an extensive and accurate representation that immerses the reader in the narrative and showcases the beauty of nature, eliciting emotions. The goal is to convey the author's emotions when interacting with the marine environment and foster a sense of connection to the aquatic environment in the reader. As

Stephen J. Gould once claimed, “we cannot live this battle to save species and environment without forging an emotional bond between ourselves and nature – for we will not fight to save what we do not love” (Gould qtd in Khan 24). Narratives, emotions, feelings, movements, acts, and practices that are inextricably related to locations are considered part of what a place is about, and more importantly, what a place becomes (Ziogas 56). As a result, Safina shows the significance of topophilia by demonstrating how the ocean is essential for all living beings to live a balanced life. Throughout the book, Safina encourages water resource conservation and protection by addressing both pleasant and unpleasant matters. However, the essential significance of restoration resides inside topophilia, as it is necessary to connect with a place before even discussing restoration.

## **1.2.BIOPHILIA AND RECONNECTING WITH THE OCEAN**

When discussing evolutionary processes in nature, topophilia and biophilia are inextricably linked because both are concerned with the health of nature and its deeper connection with humans. As first described by Erich Fromm and later by E.O. Wilson, biophilia is a trait of the human mind. Both authors agree that biophilia has a biological basis and that people and the biosphere must learn to interact harmoniously (Barbiero 1). Biophilia is a combination of two ancient Greek words: “life” (bio) and “love” (philia); which means “love of life.” Wilson used the term "biophilia" to describe the evolutionary mechanisms that enable us to develop emotional connections with the natural environment and all living creatures. The biophilia concept states that humans rely on nature for “aesthetic, intellectual, cognitive, and even spiritual meaning and satisfaction that extends far beyond the simple issues of material and physical sustenance” (Kellert and Wilson 21). Both biophilia and topophilia emphasize the significance of natural habitat and human adaptability to live harmoniously.

Biophilia is an innate desire to connect with nature and other living beings, making the exploration and study of nature an ongoing pursuit. Regardless of our numerous travels, nature offers more than we often comprehend. When we encounter natural wonders such as the ocean or animals, we ponder what other sights await us. Humans are fascinated by nature, and our bond with nature deepens as we increase our knowledge of it. Wilson

discusses the captivating impact of nature in his book *Biophilia*, and how it is challenging for individuals to resist the need to experience more of it:

Because species diversity was created prior to humanity, and because we evolved within it, we have never fathomed its limits. As a consequence, the living world is the natural domain of the most restless and paradoxical part of the human spirit. Our sense of wonder grows exponentially: the greater the knowledge, the deeper the mystery and the more we seek knowledge to create new mystery. This catalytic reaction, seemingly an inborn human trait, draws us perpetually forward in a search for new places and new life. Nature is to be mastered, but (we hope) never completely. A quiet passion burns, not for total control but for the sensation of constant advance. (10)

Wilson's defined belief in the significance of understanding nature is seen in multiple works by naturalists and environmental writers. These writers have been recognized for their passionate and insightful writing of nature. They explore nature and offer deep insights into what it has to offer, encouraging readers to approach nature similarly. Many literary works emphasize the value of connecting with the natural world, gaining knowledge of nature, and developing a relationship with nature. As Rachel Carson underlines, "The more clearly we can focus our attention on the wonders and realities of the universe about us, the less taste we shall have for destruction" (Carson, *The Sea Around Us* 89). Carson argues that increasing our understanding of the universe will lead to a better grasp of the environment, thereby reducing the need for environmental destruction.

Biophilia not only underlines the importance of the innate connection between humans and the non-human environment, but it also depicts how it is possible for human beings to feel connected to nature. In fact, according to the biophilia theory, the feeling of restoring nature and preventing further damage increases when being more in contact with the natural environment as humans have an out-of-the-world experience (Wilson 121). Imagine why humans want to be close to the ocean or buy a house close to the forest. The preferred vacation is almost always being in close contact with nature. These topophilic reliefs are desirable. This also depicts the innate tendency to seek connections

with nature, even if we do not think about it because we are connected to it from birth. In addition, it strengthens our natural bond.

Habitat selection is an innate trait that is common to both humans and animals. According to Wilson's portrayal, animals rely on their specialized anatomical and physiological features to navigate via distinct pathways and crevices (107). This is also true of humans. Some things we learn in life are easier to follow and adjust to than those we are unaware of. In order to comprehend the fundamental foundations of biophilia and its current expression in the cultural and physical environment, particularly in terms of habitat selection, it is necessary to delve into the historical context of our ancestors' nomadic hunting and gathering groups. Buildings are relatively recent to the evolutionary picture, having only existed for about 6,000 years. Nature provided the resources required for human subsistence for the overwhelming majority of human history, including water, animal and vegetable food, building materials, shelter, and fire (Wilson 110). The sun offered warmth, light, and information about the time of day. Large trees offered places to sleep at night to escape ground predators and shade from the noon light. Flowers and seasonal plants brought food, tools, and healing herbs. Rivers and watering holes were vital for sustenance, acting as sources of water for hydration and sanitation, as well as providing fish and other animal resources for nourishment. Waterways also served as a way of transportation to faraway regions (Heerwagen 40). As a result, people are more at ease in environments that do not appear to be unfamiliar to them.

As stated before, places or activities that are unfamiliar to us often frighten us. However, because we live in a highly advanced society, we are split between what is natural to us and what is not. People have grown so accustomed to it that they are not able to picture life without our technological devices. These devices have trapped us in a struggle between the opposing ideas of nature and machine, forest and city, natural and artificial. According to geographer Yi-Fu Tuan, we are always seeking a balance that is impossible to achieve in our world (Wilson 12). This raises doubts about our inherent tendencies. Nevertheless, humans must be mindful of the things that hold genuine significance to us, both in terms of our bodily well-being and our mental state. It is important to remember that we are not the exclusive benefactors of the right to exist. In the words of Gary Snyder,



“Nature is not a place to visit, it is home” (7). In brief, human beings have to preserve the natural environment at all costs since it will never lose its significance.

Safina, deeply concerned with the health of the oceans and the well-being of marine animals, depicts the healing effect of the ocean and the importance of the strengthened bond with nature and humans in his book *Song for the Blue Ocean*:

Unifying power of the oceans can actually free our spirit. Simply by offering the sea’s creatures membership in our own extended family of life we can broaden ourselves without simplifying or patronizing them. With such a mental gesture—merely a new self-concept—we may complete the approach to living on Earth that began with the land ethic. (440)

By embracing a sea ethic, similar to Leopold’s land ethic, human beings can forge a harmonious and sustainable relationship with the marine environment. It acknowledges the ocean’s intrinsic value and recognizes that responsible stewardship is essential for the well-being of both humans and the diverse ecosystems that rely on the sea. We need a sea ethic because we tend to show disrespect towards the land, while viewing the sea as even more distant from us, instead of recognizing our role within the ocean’s vital ecosystem (Safina, *Launching a Sea Ethic* 3). Safina adds that “the sea ethic will logically expand our view of wildlife and its values throughout the ocean” (*Song for the Blue Ocean* 532). So in embracing the sea ethic, we embrace the ocean’s species as kin. So far, our perception of marine life has been greatly distorted. Instead, “we have the opportunity to see them fully for the first time, as wild animals in their habitats, confronted with needs and dangers, equipped by evolution with the capacity and drive to manage, adapt, and survive” (533). As Safina adds, we need to “cherish all life as the gift it is (440)” so that we can learn to respect nature and animals and live in harmony again. Safina emphasizes the importance of respecting the marine environment and being mindful to appreciate its beauty. He focuses mainly on sea conservation because the ocean encompasses over 70 percent of the Earth’s surface. Safina highlights the need to fully appreciate the ocean due to its vast coverage on Earth, including its many aquatic organisms, which he refers to as our “extended family.” To do this, we need to start valuing the ecosystem as a whole, as we are an integral part of it.

In the 1940s, Aldo Leopold wrote about his pursuit of a long-lasting scale of values. He advocated for expanding our sense of community to include the entire living landscape, which he called the “land ethic.” Since then, Leopold’s land ethic has been one of the most influential concepts in conservation and restoration and the expansion of the land ethic to the seas and oceans has been widely discussed (*Song for the Blue Ocean* 439). Research conducted by marine biologists on certain marine ecosystems demonstrates a decrease due to human activities, supporting the need for expanding Leopold’s model (Özdağ, “For the Health of the Sea” 8). Jane Lubchenco a significant American environmental scientist and marine ecologist, proposes the adoption of an “ocean ethic” as a means to construct marine reserve networks, highlighting the imperative of preserving marine species and habitats, similar to the protection provided on land (8). This protection is necessary because of the disconnection humans have developed with the marine environment, leading to the destruction of a significant portion of our universe. Lubchenco argues that a “lack of awareness of the potential as well as management and governance challenges pose impediments” and “until these impediments are removed, ocean ecosystems will continue to be degraded and opportunities for people lost. A transition and a clear path to a thriving and vibrant relationship between humans and the ocean are urgently needed” (Lubchenco 5). We only become aware of our role in the destruction of our own environment when we get sufficient knowledge about the impact on the maritime environment and our contribution to it. In other words, the formation of a connection between humans and the ocean, including non-human entities of the ocean, requires a higher state of consciousness. Our harmful actions have caused the loss of nature’s beauty. As Edward O. Wilson underlines in his book *Biophilia*, “the inner voice murmurs *you went too far*, and disturbed the world, and gave away too much for your control of nature” (13). To acknowledge and repair the long-term damage we have caused, adopting a sea ethic is essential. If not, the oceans and seas worldwide will remain unrecovered.

Biophilia is the intrinsic desire to interact with nature. Empathy, which is an emotional state prompted by another’s emotional state or situation, is one of the most critical feelings that must be triggered in this case. Empathy is generally developed by observing others and discovering similar behaviors or experiences. Because it is a branch of research that

investigates the emotional and affective components of human-environment relationships, empathy, according to affect theory, plays a critical role in promoting a deeper awareness of and connection with the natural world. It highlights the importance of emotions, feelings, and empathy in determining our relationships with the environment as well as the well-being of both human and nonhuman entities. However, there can be intersections between the concept of place and empathy, particularly when people empathize with the experiences of others in specific places or when their emotional connections to certain environments influence their empathetic responses. We must consider the impact on individuals and the more than human elements of nature in their natural surroundings by using our imagination to guide us. By empathizing with others, we can better understand the connection between a person and their environment. Wendell Berry, renowned American writer and environmental activist, introduces a syllogism where creativity, sympathy, and affection combine to form an ideal vision:

For humans to have a responsible relationship to the world, they must imagine their place in it. To have a place, to live and belong in a place, to live from a place without destroying it, we must imagine it. By imagination we see it illuminated by its own unique character and by our love for it. By imagination we recognize with sympathy the fellow members, human and nonhuman, with whom we share our place. (Berry 14)

Although Berry was primarily addressing the topic of empathetic economy when he made this statement, it can be extended to the concept of location and having to feel compassion for those, both human and nonhuman beings, who endure difficulties in their natural habitat. While empathy for place, people, and nature is not sufficient to bring about revolutionary change, it serves as a beginning to heal the environment and demonstrate care for it, at the very least refraining from causing harm.

To comprehend the significance of nature, and hence the natural relationship between humans and the non-human world, it is critical to understand that nature, as previously stated, has a healing impact on both the body and the soul. Nature can reduce anxiety, improve pain control, and increase patient satisfaction with the procedure (Diette 943). However, simply saying or stating that nature has a healing impact and that all beings

should be united is insufficient. Science, as biophilia and topophilia theories suggest, is regarded as a key part of American environmental studies. Environmental writers such as Aldo Leopold, Sylvia Earle, John Muir, and Carl Safina have all made significant contributions to place attachment. One way is to employ scientific terms and attempt to describe the present state of the earth using scientifically proven cases to demonstrate to the reader that this is a reality and not just a thought. People are more likely to believe in things that have been proven. Otherwise, it won't lead people to consider the circumstances at hand. Safina presents numerous examples of people he meets on his journey who do not believe in the benefits of science. Although science can be complex, Safina emphasizes its importance:

A great painter can make you see the depth, make you feel the underlying emotion, make you sense the larger world. That, too, is the power of science: to sense and convey the depth and dimensionality of nature, to glance at the surface, and to divine the shape of the universe around us. (*Song for the Blue Ocean* 361)

Science, on the other hand, is likened to art by Edward O. Wilson because both attempt to see the world in new ways, comprehend what they see, and then convey that vision:

The role of science, like that of art, is to blend exact imagery with more distant meaning, the parts we already understand with those given as new into larger patterns that are coherent enough to be acceptable as truth. (Wilson 60)

Science brings us closer to the environment while simultaneously playing with our heads, causing our minds to go to places they have never been before. By providing scientifically proven arguments, we begin to comprehend the actual state of the environment, which may forever transform our perspective and attitude toward nature. It may help to restore the lost innate connection between humans and nature. To demonstrate, Safina states that the Atlantic Tuna Commission estimates that the bluefin breeding population has declined by roughly 90 percent in just fifteen years. Imagining that kind of collapse is mind-blowing, and one can't help but wonder how we got here in the first place. Restoration and conservation can be achieved through examining the impact of human activities on the environment and understanding the specific actions needed to encourage

the return of animals. As Safina states, “nothing speaks more eloquently about the possibilities for renewal than seeing the return of plentiful runs of striped bass coursing through my home waters, a spectacular success proving that tough management and respect for science really can turn depletion into abundance within a human lifetime” (*Song for the Blue Ocean* 530). This can be achieved through a greater knowledge of the universe and precise information provided to us. As Safina points out in the introduction of his book *Song for the Blue Ocean*, “this song is sung by a chorus” (534), which suggests that in order to restore what we have lost, we must embrace nature and all it has to give, as well as accept the more than human entities as part of our family.

### **1.3.NARRATIVES OF HUMAN DISCONNECTION FROM THE OCEANS**

Although there have been several studies on the issue of nature connection, which focuses on the emotional bond between humans and the natural world, there has been very little research on separation from the seas and the oceans. Many reasons contribute to this detachment, including ideological orientations, political relationships, sociocultural norms, and institutional systems that preclude or generate disrespect for individuals as part of nature. Rapid human population growth, urbanization, and economic inequality also jeopardize the chances for individuals to interact and form direct connections with ocean ecosystems (Kelly 123). In addition to fostering an emotional connection with the marine environment, it is critical to emphasize the urgent and growing global need for an improved understanding of the ocean and sustainable management of the marine ecosystem (Kelly 124), given that climate change, overfishing, and pollution pose an imminent threat to the ocean. It is also essential to underline that, from the person to the society, isolation can be (re)generated and experienced at all levels. Moreover, we observe that social order shapes personal identity and agency. For instance, research has shown that social bonding mediated by interactions with the ocean extends beyond the location of experience and strengthens relationships at both the personal and collective levels (McMillen et al. 775). Because the individual and social are co-constitutive, disconnection from the oceans can not be reduced to the level of the individual or

community. Therefore, disconnection can be defined as a nonlinear, cyclical process produced and experienced through individual and societal interrelationships (Beery 472).

Disconnection from the marine environment may be widespread. Nevertheless, understanding this disconnection and the potential for reconnecting is of the utmost significance for evoking emotion in the reader. Community engagement is paramount for reestablishing a connection with the natural world and human beings. As Safina describes in his narrative *Song for the Blue Ocean*, the Quincy Library Group has accomplished extraordinary things in conservation efforts. Two women stand in his admiration because “They have connection, a strong sense of place” (349) which allows them to be successful in their endeavors to restore and protect the marine environment. They recognize the significance of place and nature, as well as the fact that the condition of nature impacts not only themselves but also the entire community. Such a connection to the marine environment can facilitate not only interaction among humans but also a sense of unity with nature. Safina underlines the significance of restoring a connection with the oceans and the marine creatures:

And it is a gentle and pleasant paradox that contemplating the connective, unifying power of the oceans can actually free our spirit. Simply by offering the sea’s creatures membership in our own extended family of life we can broaden ourselves without simplifying or patronizing them. With such a mental gesture—merely a new self-concept—we may complete the approach to living on Earth that began with the land ethic. (*Song for the Blue Ocean* 532)

Understanding the significance of nature to us is essential in establishing this connection. Failure to establish it will result in the disruption of nature and a feeling of pain and loss in human beings. Without a connection, we possess the inclination to harm and destroy nature. Nevertheless, one needs to understand the importance of being a part of nature and the profound impact it has on our physical and emotional well-being.

Concurrently, the necessary behavior change required to address and alleviate environmental challenges such as climate change remains largely unrealized, and the health of natural environments, including marine environments, continues to worsen

resulting from human impact, resulting in a degraded appreciation for the diversity of life-forms that sustain human survival. Oil spills and pollution, unscrupulous commercial fishing tactics, and a general disregard for vulnerable marine ecosystems have all contributed to a slew of significant issues. Uncontrolled industrial and residential wastes are thrown into or stored in a variety of land and water-based disposal facilities located along the coasts of numerous seas and oceans. According to a research, the United States leads more to this pollution than any other country, producing almost 287 pounds of plastic per person. Overall, the United States generated 42 million metric tons of plastic waste in 2016, which is about twice as much as China and more than the whole European Union combined (Root). Undoubtedly, this will affect human life on Earth immensely. American naturalist and writer Edward O. Wilson argues that if humanity vanished, the planet would regenerate to its rich state of equilibrium that existed ten thousand years ago (55), which makes it clear that the ongoing environmental disasters are mainly human-caused.

The number of studies and research on the oceans has expanded in recent years since humans are wreaking havoc on marine environments. The state of the ecosystem is deteriorating by the day, which is why these studies are looking for new methods to engage with nature. It is vital to investigate the aspects of human/nature connectedness and detachment and to consider which causes recreate them. One of the reasons for the detachment from nature is Anthropocentrism. It is well recognized that the anthropocentric belief that humans are superior to all other living beings is extremely damaging to Earth's natural balance. Anthropocentrism is frequently misinterpreted as a critique of all humanity. However, if taken to an extreme, it can be harmful to others. In the end, we often insult and destroy nature because we believe we are the only ones who matter. As Safina depicts in his book *Song for the Blue Ocean*, "it is said that humans are defined and distinguished from other animals by our ability to use tools and language, but often I wonder if the most uniquely human trait is our ability to deceive ourselves" (151). We are deceiving ourselves because, without nature, there is no life.

One of the several explanations for why numerous individuals are trapped in the Anthropocene is that we know very little about the marine environment. In short, we need to be thoroughly informed about nature because something not familiar to us is difficult

to value. This ignorance prevents us from efficiently recovering what we have harmed in nature and comprehending the conservation ethic. According to Edward O. Wilson, knowledge has stages in conservation as well. However, the two stages at which questions become ethical are when people do not know, and know everything about it. Humans need greater information about nature to preserve it, and this is the future of conservation:

When very little is known about an important subject, the questions people raise are almost invariably ethical. Then as knowledge grows, they become more concerned with information and amoral, in other words more narrowly intellectual. Finally, as understanding becomes sufficiently complete, the questions turn ethical again. Environmentalism is now passing from the first to the second phase, and there is reason to hope that it will proceed directly on to the third. The future of the conservation movement depends on such an advance in moral reasoning. (Wilson 119)

Wilson goes on to clarify by saying, “The goal is to join emotion with rational analysis of emotion in order to create a deeper and more enduring conservation ethic” (119). Although we have a general awareness of the planet’s current challenge, we need more precise data to begin caring for our environment since humans are unable to care for something without reason. This information does not have to be positive. In fact, unfavorable environmental facts serve as a wake-up call and are more “affective” in terms of triggering feelings such as compassion, remorse, and empathy.

In support of Wilson’s viewpoint, Safina gives thorough and scientifically confirmed information to confront the reader with reality, especially regarding the marine environment. Safina underlines the major challenges and harmful repercussions of human activities on the oceans in *Song for the Blue Ocean*. The book does, however, explore various conservation efforts as well as potential solutions to environmental challenges using scientific numbers. The potential readers are informed of a decline in the number of marine animal species. For example, the original Columbia River runs of ten to sixteen million salmon have been reduced to less than one million. Snake River chinook numbers had decreased to under two thousand by the mid-1990s, a 99.88 percent decrease (198). By providing the actual percentage of the decline, the reader better understands the



current situation and how vital it is to take action. Humans prefer to dismiss the issue unless they know the approximate numbers of the decline. As a result, science is one of the most crucial aspects of environmental conservation and restoration. Captain Joe McBride, president of the Montauk Captains and Boatmen's Association, acknowledges the importance of science in *Song for the Blue Ocean*, adding, "You gentlemen are the people we rely on for our information, and we are willing to support your science. We support better conservation" (90). Of course, better conservation cannot be achieved solely by the use of scientific terms and understanding. It is, nonetheless, seen as a crucial aspect of conservation in terms of affective bonding and reconnecting with the natural environment.

Given the specific numbers that science provides us in terms of environmental management and conservation, it is critical to recognize that this information can lead to a stronger human-nature bond by making it easier to clarify misunderstandings or misconceptions about the environment. Using facts and figures to demonstrate that environmental conditions have deteriorated is crucial for more than just scientists and biologists. It is extremely vital in environmental narratives to convey a sense of concern for nature to the reader since people require genuine proof to rely on knowledge. Jonathan Gotschall, an American literary scholar, suggests that scientific disciplines like neurology, cognitive psychology, and evolutionary biology might provide insights into the impact of narratives on readers that extend beyond the act of reading itself (Gotschall qtd in Weik von Mossner 9). In their article *Narratives Can Motivate Environmental Action*, Kelly et. al argues that: "Because narratives powerfully illustrate the tight coupling of human and natural systems, they can motivate responsive environmental policy, effectively improving social feedback to natural systems" (592). The influence that this type of scientific information has on readers creates a sense of connection with nature. Furthermore, when used in literature, these approaches can substantially enhance our comprehension of environmental situations. Thus, the combination of narratives and science can affect the readers and influence their perspectives on nature, and appreciate what nature has to offer. Science is "not to impose order, but to perceive it" (*Song for the Blue Ocean* 437). Furthermore, it encourages us "to stand back again and gain a much deeper appreciation of the magnificent beauty of the unified whole. And to wonder how it is that part of the universe—ourselves—can delve into the rest of it" (437).

Conservation actions that are based on scientific research are more likely to be successful. Science enables us to understand the underlying causes of environmental problems and develop targeted approaches that address those causes, resulting in more effective outcomes. Furthermore, Safina understands that effective conservation efforts necessitate a thorough understanding of the natural environment and the elements that influence it. Science provides the knowledge and data required to make ethical choices about how to protect and manage ecosystems and species. Nevertheless, Safina emphasizes other additional variables that enhance the bond between humans and nature, a bond that is essential for cultivating a much greater awareness and appreciation to nature and all that it has to offer. Safina's books and talks emphasize the significance of acknowledging and appreciating the intrinsic worth of marine species, while also recognizing their intelligence, emotions, and ecological functions. He frequently promotes establishing a personal and emotional connection with the seas and oceans, cultivating a feeling of kinship with the wider interconnectedness of all living beings. This may involve spending time in natural environments, observing and admiring aquatic creatures, and contemplating the consequences of human actions on the marine environment. Safina emphasizes the significance of exploration as well:

We have the opportunity to see them fully for the first time, as wild animals in their habitats, confronted with needs and dangers, equipped by evolution with the capacity and drive to manage and adapt and survive. Such a perspective frees the mind and opens doors: to a lifetime of boundless inquiry, to a wealth of enriching insights and reflection, to the chance to be more fully human, to the possibility of making a meaningful contribution. The only prerequisites for taking this path are respectfulness and an extravagant desire for exploration—both impulses that build an elevated sense of vitality and purpose. (*Song for the Blue Ocean* 440)

What is noteworthy is that only a handful of people in contemporary society have the chance, the motivation, or the desire to encounter these animals. “They are not an immediate part of their lives but are there to be encountered should people wish to travel to see them” (Marvin 2). Regrettably, there is a lack of curiosity among individuals when it comes to observing the lives of animals and exploring their natural environments. While

only some have the opportunity to explore the ocean and observe marine life personally, Safina emphasizes the importance of paying attention to the non-human entities in our surroundings. He shares numerous personal observations in his environmental narrative to convey this message to readers. By sharing personal information about his journey on the ocean and his encounter with marine creatures to show what human disconnection from nature does to the natural world, he aims to touch people's hearts because by "creating greater awareness and understanding of disconnection will be able to guide opportunities going forward for strengthening a connection to nature," in the words of Beery (470).

Ocean narratives are acknowledged as a powerful mechanism through which individuals shape their sense of self and the depth of their relationships with others, while also influencing their practical interactions with their surroundings. Safina discusses nature, and local history, and introduces real men and women to tell their experiences. He digs into the deep depths of the waters of America and reminds the reader that there are families who live and breed there, just like ours. Thinking of the aquatic environment as a shared habitat allows humans to re-establish the connection they once had with it. Safina describes the significance of the seas by stating: "We can celebrate the seas' ability to bring humanity closer together because the oceans truly do so—in many ways that we have concretely seen. And it is a gentle and pleasant paradox that contemplating the connective, unifying power of the oceans can actually free our spirit" (*Song for the Blue Ocean* 440).

Using art in environmental storytelling excites the reader by attracting their attention, as demonstrated in Safina's narratives in which he uses poetic language and artful depictions. Many environmental writers, such as Sylvia Earle, Rachel Carson, and Carl Safina, represent nature as if it were an exceptional painting, allowing the reader to enter a bright fictitious universe. Rachel Carson's Sea Trilogy, which includes her books *Under the Sea Wind*, *The Sea Around Us*, and *The Edge of the Sea*, effectively captivates readers by vividly depicting the ocean and presenting captivating narratives of the sea. Carson is exceptionally passionate about the sea and its offerings. Exploring the water is an infinite journey that the mind cannot fully grasp. According to Carson, the sea can only be

explained poetically. Carson describes the sea as breathtaking and leads us to an exquisite place:

The winds, the sea, and the moving tides are what they are. If there is wonder and beauty and majesty in them, science will discover these qualities... If there is poetry in my book about the sea, it is not because I deliberately put it there, but because no one could write truthfully about the sea and leave out the poetry.” (Carson, *The Sea Around Us* 121)

Carson implies that poetry spontaneously arises when attempting to authentically represent the essence of the water. The sea’s immensity, power, and ever-changing moods naturally possess poetic qualities that must be included in any genuine portrayal of it. Similar to Carson, Safina feels that nature’s beauty is a source of inspiration, awe, and spiritual connection for humanity, not only a subjective aesthetic quality. Blending nature’s aesthetic and healing effects leads the reader to feel more complete with the natural world, especially when the narrative is captivating. The writer’s successful use of an artistic environmental narrative approach captivates readers and invites them to contemplate the beauty of the sea environment. Furthermore, it contributes to reestablishing our connection to the marine environment by enhancing our appreciation and recognition of its importance in our lives.

Inspired by Carson, Safina also captures the magnificence of the oceans and the marine ecosystem, as well as his profound connection to it. The connection that he establishes and the emotions he experiences strengthen his bond with nature. To mend the disconnect on nature, particularly the oceans, his own connection to the oceans and his poetic depiction of it draws the reader into the story:

The vast sea seems boundless and expansive. From our commanding view the ocean stretches off like a tight azure drum around the rim of the world, and here against the center of this drum pounds the rhythm of the living. I feel utterly captivated, connected and rhapsodic; I feel that somehow a sweepingly enlightening, profound realization awaits just beyond consciousness—like a forgotten dream sensed upon waking—if I can take this scene in for a few more moments, just long enough to let myself open fully and encompass it. (*Song for the Blue Ocean* 28)

In conclusion, Safina as well as many other environmental writers such as Carson, enlighten readers of the reasons for the lost connection between humans and the non-human world as well as the disruptive results of the lost connection both for human beings and the marine environment. By employing linguistic, and scientific discourses, they try to raise awareness among readers about disturbing nature and its costs. Through vivid storytelling and personal experiences, Safina takes the readers on a journey to different coastal areas and underwater environments, exploring the challenges faced by marine life due to human activities because of the lost environmental connection. He aims to invoke a deeper connection between humans and the oceans, fostering an appreciation for nature's beauty, complexity, and importance. In addition, he hopes to inspire a sense of responsibility and commitment to conservation effort aimed at protecting the oceans and their biodiversity. This is achieved through the use of marine narratives to inform readers about nature, as narratives, in the words of Kelly, may be especially effective in "linking knowledge to action" (596). In his narrative *Song for the Blue Ocean*, Safina invites readers on a journey to gain an understanding of the marine environment and the importance of nature by offering knowledge that evokes environmental affect. These writings evoke in the reader a deep longing for a fairer and more sustainable future.

**CHAPTER II**  
**FEELING WITH MARINE ANIMALS: AFFECT, AND *VOYAGE OF THE***  
***TURTLE***

*The question is not, “Can they reason?” nor,  
“Can they talk” but “Can they suffer?”*

Jeremy Bentham “Introduction to the  
Principles of Morals and Legislation”, 283

In the opening section of Safina’s marine narrative *Song for the Blue Ocean*, it is seen that turtles have a long-standing history intertwined with humans. Safina’s poetic language takes the reader on an educational journey, illuminating the interconnected relationship between humans and sea turtles and showcasing these animals’ remarkable abilities. The turtles’ ability to navigate the vast expanse of the sea emphasizes their integral role in the ecological balance of marine ecosystems. Although it is commonly believed that animal behavior is vastly different from human behavior, Safina disagrees. Despite their limited vision, sea turtles consistently go great distances to locate the same tiny part of the nesting beach. How they do it remains one of the greatest mysteries in the animal kingdom, and unraveling this mystery has been the primary objective of generations of scientists. Sea turtles possess remarkable behavioral abilities and pursue an extensive and challenging existence among other aquatic creatures. Safina emphasizes the diverse abilities held by sea turtles and their remarkable journey by using narrative strategies to engage the reader in the narrative and foster a deeper connection with nature.

In addition to the ongoing debate about animal behavior, there are varying opinions about the emotional capabilities of animals, ranging from claims that they are incapable of feelings to the understanding that they can experience fear, grief, joy, and various other emotions. However, it is widely accepted that these emotions are not simply innate reactions. Instead, they are intricate psychological and physiological states that

profoundly influence an animal's decisions, interactions, and overall well-being. By delving into the complexities of animal emotions and their impact on ecological dynamics, writers can evoke empathy and a diverse array of emotions in readers. Through marine narratives that illuminate the emotional lives of animals and their interconnectedness with ecosystems, affective ecocriticism offers a lens through which readers can appreciate the richness of the natural world and cultivate a deeper sense of empathy towards all living beings.

Animal emotions in relation to animal well-being are typically covered at length in environmental narratives to generate empathy, pain, or disappointment in order to explain the real predicament of animals and understand their emotional state. Understanding animals' feelings through real-life events in environmental narratives can help in imagining their place in the world and what they experience on Earth. Alexa Weik von Mossner argues that the purpose is to "empathize with nonhuman animals, feeling their joy, fear, terror, and pain" (*Affective Ecologies* 106). In other words, many environmental writers who write about the feelings and emotions of animals desire to use strategic empathy to advance an argument about the need to preserve animals from slaughter, poaching, or extinction (120). These narrative techniques have been found to affect the reader, causing them to care more about environmental health and animal welfare. Moreover, these strategies seek to affect human feelings and thoughts since, after years of refusals, we now know that "Man and the higher animals... have the same senses, intuitions, and sensations" (Darwin 100). Given how many humans have failed to care about animal emotions and feelings over the years, and how little importance we place on them, it is important to focus on environmental storytelling to convey a meaningful message that can help us form a bond with the natural world beyond humans and also help in protecting wildlife.

While humans and other species differ in many ways, we also have similarities. Similar to other cognitive abilities, the ability to communicate and interact using coherent language can be observed in non-human organisms. Safina argues that "Humans are animals. Human sensations are animal sensations: inherited sensations, using inherited nervous systems" (Safina, *Beyond Words* 47). He adds that animal emotions are "the shared feelings of a shared world" (55). It is vital to acknowledge this to care for the world

around us alongside ourselves. In his marine narrative *Voyage of the Turtle*, Carl Safina emphasizes the importance of animal emotions and the rights of marine animals for establishing an affective bond between humans and the non-human world. His perspectives on these subjects assist readers to comprehend how crucial it is to realize that not only humans can experience emotions while evaluating the emotions and actions of marine animals and the relationship between animals and humans.

As we learn more about and understand animals' emotional lives, we will be better able to make well-informed choices about their welfare and the conservation of the natural world. Even though studying animal emotions is challenging and takes both scientific and cognitive knowledge, this part of the thesis will focus on why animal emotions are essential and how they might affect the reader through Safina's narrative techniques. It will also focus on the struggling events that marine animals have been going through and strategic writing and strategic empathy, which environmental writers utilize to guilt-trip the reader into caring more about the non-human world.

This second chapter will examine Safina's *Voyage of the Turtle* in relation to the imperative of eliciting empathy for marine species that share similarities with humans, hence evoking an emotional response in the reader. Recognizing that animals, like humans, possess the capacity for emotion, can prompt the reader to comprehend the exceptional skills of marine species, particularly sea turtles. This can foster a commitment to marine conservation and the preservation of sea turtles.

## **2.1. NARRATIVES OF SEA ANIMAL BEHAVIOR AND EMPATHY**

Animals, much like humans, can experience an extensive range of emotions, including joy, discomfort, and pain. Nevertheless, there is a lack of agreement among researchers and ecocritics about this thought. The question of whether animals are capable of experiencing emotions and demonstrating similar behavior to human beings remains a subject of ongoing discussion. While several researchers acknowledge the similarity between animals and humans in terms of the emotions they experience and show, others continue to reject this idea and argue that emotions are unique to humans. Recent



academic research investigating the historical connections between environments, the broader realm of non-human entities, and emotions has revealed the intricate, interconnected, and deeply embodied nature of these relationships. However, environmental historians have not extensively embraced the “affective turn,” (Bladow and Ladino 4) which emphasizes emotions as a primary focus of analysis. Safina adopts the affective approach, centering on animal emotions and behaviors to vividly convey their experiences of suffering and other emotions as they navigate environments filled with traps and obstacles, which was once their pristine habitat. Through his narrative, Safina seeks to immerse the reader in the emotional journey of these animals, to prompt a shift in their attitudes and feelings toward the non-human world.

Understanding other’s emotions is usually difficult, particularly when it comes to animals. To comprehend the expression of emotions in other species, scientists employ diverse methods and approaches, including incorporating assessments of emotions into current evaluations of animal welfare. In the past, assessments of animal welfare have frequently prioritized the general health of the animal and other tangible indicators. However, there is also a growing emphasis on the fact that affective states—that is, emotions and feelings—should be taken into account during assessments. Webster’s triangulation theory, for example, is described in the book titled *Animal Welfare: Limping Towards Eden* as involving three key types of measures (i.e. physiology, behavior, and cognition), which are also known to be the three components of animals’ emotional responses (Webster 1). Since animals are not capable of expressing themselves verbally, it is not easy to measure how and what an animal is feeling. Nevertheless, a growing number of studies demonstrate the possibility of this. These are, of course, more in-depth and complex research that are not intended to be explored in this thesis. There are, nonetheless, fundamental understandings of animal emotions.

Behaviors reveal emotional responses in marine creatures, much as they do in terrestrial animals. As mentioned above, while precisely measuring emotions in animals can be difficult, researchers frequently depend on behavioral observations and physiological responses to infer emotional states in marine species. Dolphins, for example, are well-known for their intricate social structures and close ties with other individuals. They demonstrate synchronized swimming, playful interactions, and vocalizations that indicate

social and emotional bonds within their pods. Sea turtles, on the other hand, make long-distance migrations to breeding beaches, typically crossing thousands of miles of ocean. Their homing behavior, in which they navigate back to the beach where they were born, implies that they have a profound emotional tie to their birthplace. In his book *Beyond Words: What Animals Think and Feel*, Safina describes how a dolphin was seen asking for human assistance:

A riveting amateur video shows a dolphin off Hawaii with a fishhook in its flipper, actively seeking aid from scuba divers. When the divers see what its problem is and they stop, the dolphin instantly accepts the help it had been seeking. How does a dolphin with a fishhook in its flipper decide to seek help from a human diver, a creature so alien in the history of its realm? Would it seek help from a turtle or a fish? Doubtful. Another dolphin? It seemed to understand its problem as well as we might. But can dolphins really understand that we, like them, understand—and that we have these hands? Apparently, yes. (441)

Safina provides another example that took place during the catastrophe of the Deepwater Horizon oil spill in the Gulf of Mexico in 2010. According to Jeff Wolkart, a fishing guide, a dolphin kept coming around. That brownish oil petroleum was all over its body and he was having difficulty blowing out his blowhole. Each time Wolkart moved away, the dolphin followed, approaching them and hanging right alongside, adding that the dolphin appeared to require assistance. But Wolkart could not think of anything else to do and had to leave, leaving the injured dolphin let down by humans yet again and presumably passing away (*Beyond Words* 442). These simple examples suggest otherwise to those who believe that non-human creatures are not capable of feeling and experiencing emotions. Incorporating animal emotions and behavior into the study of affective ecologies enables a more comprehensive understanding of the complex interactions shaping the emotional and ecological dynamics of natural habitats. Bringing together the realms of animal emotion and affect entails integrating various metrics encompassing behavior, cognition, and physiology. These investigations often encompass a broad spectrum of affective dimensions, incorporating elements of animal behavior within the narrative (Zablocki et. al 3).

Safina cannot hide his astonishment at how turtles have exceptional navigational skills despite limitations: “Like returning salmon, sea turtles generally breed at the place of their own origin. A creature returning to a pinpoint target after as much as three decades at sea is one of nature’s most stunning navigational and homing achievements. Somehow turtles know how to get there” (*Voyage of the Turtle* 58). This indicates that turtles have both a biological instinct and a profound emotional attachment to their nesting sites, which are essential for their survival and reproductive success. Safina’s depiction of sea turtles’ navigational abilities in the context of affective ecologies emphasizes the emotional importance of certain habitats as well as the emotional attachment of sea turtles. Contrary to the general belief, animals do exhibit behavioral similarities to human beings.

Darwin aimed to focus on similarities rather than differences between humans and other forms of life in his work *The Expression of Emotions in Man and Animals* (1872). According to Darwin, human beings as well as “higher animals have the same senses, intuitions, and sensations— similar passions, affections, and emotions, even the more complex ones, such as jealousy, suspicion, emulation, gratitude, and magnanimity; they practice deceit and are revengeful” (Darwin 100). Darwin contends that “humans and other animals share a fundamental desire to communicate, a desire to express desire through bodily gestures, facial expressions, and vocal sounds, even if those sounds are more guttural than linguistic”, emanating from the throat rather than the tongue (Azzarello 181). Given Darwin’s hypothesis and reasons, as well as how animals behave and react, it is most likely possible, if not true, that animals are essentially comparable to humans. Furthermore, considering what they are exposed to primarily as a result of human beings and how they suffer or seek assistance, as a result, makes it evident that they are capable of thinking and feeling. Therefore, it is difficult to say that emotions are only unique to humans. As Safina underlines in his book *Beyond Words: What Animals Think and Feel*, “But what is a ‘human’ emotion? When someone says you can’t attribute human emotions to animals, they forget the key leveling detail: humans are animals” (47). Sadly, we often overlook the fact that other sentient species coexist with us on Earth, who possess a wide range of abilities, including the ability to experience emotions.

Gaining insight into the emotional feelings of animals is essential for developing a connection with them and fostering empathy in readers, a goal pursued by numerous

environmental authors. Additionally, closely studying their lives and behavior from many perspectives is also significant. There has been ongoing debate regarding the challenges that animals face throughout their lives, particularly the experiences of female animals during their stage of motherhood and migration. Animals lead lives that are more challenging than generally perceived. Sea turtles, for instance, encounter a variety of challenges at various times of their lives, starting from hatching until they reach adulthood. As Safina explains in his book *Voyage of the Turtle* while watching a female sea turtle laying eggs, after the laying of the eggs is completed, the female turtle “begins pulling sand down onto her eggs with her rear flippers, covering them up. Splaying each rear flipper into a paddle the size of a tennis racquet, she presses this sand in place. She wields these flippers carefully, patting the sand with the dexterity and seeming sensitivity of a hand in a mitten” (16). After careful observation of the female turtle’s laying of the eggs, Safina starts to question: “Can she have any sense of what she’s done? What mental experience motivates her through these motions, producing eggs she will never even see, hatchlings of which she almost certainly has no inkling?” (16).

James R. Spotila also recounts a personal encounter in his book *Sea Turtles* (2004). He observed a sea turtle emerge from the sea, lay its eggs, and afterward disappear into the wild water, a sight that Spotila describes as irresistibly stirring one’s heart. He further states that “in the sand beneath us lay her off-spring, unlikely to ever meet the mother that traveled hundreds, perhaps thousands of miles to that beach to select the one spot she thought safe from predators” (2). While sea turtles may not experience emotions related to motherhood, they still possess a strong desire to ensure the safety of their eggs and actively seek out undisturbed locations for nesting. Spotila emphasizes that in order to accomplish this, they have to travel vast distances extending to thousands of miles. Through careful observation of their behavior, it becomes evident that they can experience both pain and joy. As Safina underlines in his book *Beyond Words: What Animals Think and Feel* (2015): “In science, the simplest interpretation of evidence is often the best. When animals seem joyous in joyful contexts, joy is the simplest interpretation of the evidence. Their brains are similar to ours, they make the same hormones involved in human emotions—and that’s evidence, too” (48). Observing animal behavior and their ways of expressing themselves, along with their skills, enables

people to empathize with them. Despite their inability to speak, animals display similarities to humans that foster empathy.

In addition to their protective instincts, sea turtles have a significantly higher egg-laying capacity compared to all other reptiles (*Voyage of the Turtle* 66). Nevertheless, once the eggs are laid, the adult female often refrains from engaging in any form of parental care or displaying any emotional bond with the hatchling, as previously stated. While adult sea turtles do not display emotional attachment to their hatchlings, they have evolved to maximize the chances of their offspring's survival through this reproductive strategy. The instinct is to ensure that the hatchlings have the best chance of reaching the ocean and starting their independent lives because both hatchlings and adult sea turtles face many challenges in their existence. Because sea turtles have survived for a period of one hundred million years, it is evident that they have endured numerous obstacles including poaching, pollution, and encroachment on their natural habitats. Unfortunately, there remains a significant number of people who illegally take the eggs of sea turtles, often intending to consume them. Nevertheless, our awareness regarding the details of sea turtles' egg-laying process and the subsequent navigation of juvenile turtles remains incomplete.

To evoke empathy, Safina refers to the exceptional navigational abilities of the sea turtles, making them among the most skilled creatures in this regard. They can offer worldwide positioning information and a compass direction reference from the Earth's magnetic field. For instance, loggerhead sea turtle hatchlings quickly find their way to the ocean from their nests and start a transoceanic journey swimming away from their birth beach and into the great expanse of the open sea. According to the data, hatchlings consecutively use three sets of signals to maintain orientation for their first offshore migration. Hatchlings swim toward the lower, brighter seaward horizon to find the ocean, away from the dark, rising shadows of plants and dunes on the beach. Turtles initially orient themselves seawards by swimming into waves upon entering the ocean; these waves are discernible from below as orbital movements (Lohmann, "Orientation and Open-Sea" 73). Sea turtles possess exceptional navigational abilities, which are particularly evident during extensive migrations and when females return to their birthplace to lay eggs. Consequently, they often choose to nest on the same beach where they hatched. They can

navigate back to their place of origin or their designated nesting location. As Safina underlines, “sea turtles generally breed at the place of their own origin. A creature returning to a pinpoint target after as much as three decades at sea is one of nature’s most stunning navigational and homing achievements. Somehow turtles know how to get there” (*Voyage of the Turtle* 58).

Environmental narratives which investigate the life cycle and behavior of animals are thought to be very effective because they “provide a bridge between the human and the nonhuman” (Herman qtd in Weik von Mossner 111). The readers must identify with non-human creatures and see or read for themselves what animal lives look like and that it is not far from human life. It must be noted that there are distinctions between humans and animals, but understanding that they are capable of experiencing emotions and have special skills might affect readers’ perspectives on the environment and inspire them to modify particular aspects of themselves. As stated by Weik von Mossner, narrative representations of animal awareness have a moral and ethical dimension. It not only helps humans to grasp what it is like to experience the world via a new set of senses, but it can also lead them to the conclusion that conscious, thinking, and feeling beings need to be treated with more respect (*Affective Ecologies* 111).

Environmental authors employ various approaches and techniques, including the use of empathy, to convey their message. Empathy enables us to “slip into another person’s shoes” and experience some of her sensations, thoughts, and feelings. This statement applies not just to real-life situations, but also to our interpretation and consumption of books and cinema (*Affective Ecologies* 80). Because the engagement and transportation were accomplished, there is a good possibility that the reader will be touched by the literary work and will apply the affection to real life. Although the aim is to enlighten the reader about the environment and the non-human species’ life as well as behavior, environmental authors use something called ‘strategic empathy’. Strategic empathy, as Weik von Mossner calls it, can be easily applied to literature as well as movies for the reader to empathize with the characters (93). This method is used commonly to connect readers with the experiences of animals and foster a deeper understanding of the environmental issues affecting them. Strategic empathy involves crafting narratives and stories that evoke emotional responses and encourage readers to empathize with the lives

of animals. Not only do environmental authors focus on the behavior and emotional lives of animals, but they also transport the reader to the narrative and aim to evoke the feeling of empathy for reasons such as conservation, restoration, and understanding of animals.

Safina's narrative *Voyage of the Turtle* provides a comprehensive examination of the animals, enabling readers to get insights into turtle breeding, their fears, and their emotional experiences in the natural world. This approach facilitates the reader's understanding of the animal's experience and emotions. Animals often experience challenges, obstacles, or conflicts that readers may empathize with on a human level. Survival, familial relationships, companionship, and coping with human activities such as poaching or habitat destruction are examples of these challenges. In "Wendell Berry and the Affective Turn," William Major emphasizes that "empathy is more than just 'compassion' or 'understanding'; it is feeling with someone, or perhaps with something else, as opposed to feeling for them." (Major 121). When we read books regarding the emotional journey and distress of animals, we not only experience empathy towards them but also engage in their emotional experience. In many parts of Safina's *Voyage of the Turtle*, it is underlined that many turtles die because of human beings. In one part of the narrative, Safina asks Laura whether the Turtles that he saw laying dead were killed by human beings. "She suddenly turns from the window—breaking her concentration for the first time all week—and looks at me as if I can't be serious. Then she says, "Yes—of course, killed by people" (271). This particular passage "led to a moment of intense empathetic distress combined with profound feelings of guilt" in both the reader and those who witnessed the traumatic event (*Affective Ecologies* 117). Guilt, similar to anger and fear, is a moral feeling that, according to Hoffman, can lead to many actional outcomes: "To keep from feeling guilty, a person can avoid carrying out harmful acts, or, having committed such an act, he can make reparation to the victim in the hope of undoing the damage and decreasing the feeling of guilt" (Hoffman qtd in Weik von Mossner 117). Despite the lack of visibility of Safina's facial expression during this moment, the reader can feel his emotions when he asks the question to Laura, hoping for a different response.

Safina extensively discusses his personal experiences and the suffering of animals in numerous parts of his book. He thoroughly explores these subjects as most of us possess only basic knowledge of scientific truths and animal characteristics. According to Safina,

the act of egg poaching in isolation has the potential to wipe out an entire Leatherback population. Adding fishing mortality accelerates its extinction (*Voyage of the Turtle* 375). The notion that the extinction of animals may be solely attributed to human beings is both unbelievable and tragically accurate. Due to the increased rate of poaching and other human-related activities that inflict harm to marine species and the surrounding ecosystem, Safina urges the reader to actively engage in conservation and restoration efforts. This exemplifies “authorial strategic empathizing” (*Affective Ecologies* 124) to advocate for animal rights and the conservation of the environment. The primary objective of strategic empathy in Safina’s narratives is to stimulate proactive engagement in conservation efforts. Through the cultivation of empathy and establishing a sense of connection, the author endeavors to inspire readers to actively endorse efforts to preserve biodiversity, safeguard ecosystems, and strive towards a more sustainable coexistence with the natural world.

The task of cultivating empathy within the reader is a difficult task. While this can be accomplished, it is undeniable that it requires careful attention and diligent effort. Personal narratives and individual experiences, such as Safina’s experiences in his narrative, play a crucial role in fostering empathy and cultivating positive attitudes toward the environment and marine life. However, to truly accomplish the desired outcome, firsthand experience is necessary. The impact of a narrative is limited when the reader fails to fully engage themselves in the story or relate a particular occurrence to their own experiences. These limitations can be overcome and the empathic drive can be cultivated by enhancing both actual and imaginary interactions in context. The moral field of empathy appears to be expansive and interconnected with the responsibility and inclination to take action. In other words, “it always raises questions of practical ethics” (Zaki 120). When individuals make the conscious decision to empathize with disadvantaged or “out” groups, they establish a connection to a more profound and expansive moral obligation that encompasses individuals who were previously excluded from the conventional boundaries of empathetic consideration (121). This is also true for animals, who are considered to be a vulnerable group in all parts of the world.

It can easily be understood that Safina uses stories and anecdotes from his experiences in the field to humanize the animals he writes about. Undoubtedly, everyone has



encountered a distressed animal at some point in their lifetime. Disturbing narratives regarding human treatment of animals and the prevalence of environmental difficulties frequently appear in modern news media. The ability to establish a personal connection with narratives facilitates a reconsideration of our role in the world, emphasizing the significance of conservation and restoration efforts in ensuring a sustainable future. It is essential to acknowledge the presence of alternative conservation strategies, where the active engagement of the community plays an essential role in helping the restoration process. Determining the precise number of sea turtles that are perishing or the exact state of environmental issues is a significant challenge. Gathering accurate data on the illegal exploitation of protected species is difficult. However, even approximate estimations regarding the number of deaths, factors contributing to mortality, and the temporal and spatial distribution of deceased turtles offer valuable insights for the formulation of efficient conservation approaches (Koch et al. 329).

## **2.2. THE SUFFERING OF SEA TURTLES, IMAGINING THE PAIN AND AFFECT**

Sea turtles are essential for preserving the well-being of marine ecosystems, and their significance goes beyond the oceans to the overall balance of the Earth's biosphere. Sea turtles have various significant roles, including preserving the health of coral reef ecosystems and transporting vital nutrients from the oceans to beaches. Significant changes occurred in the oceans due to the nearly complete extinction of sea turtles in numerous regions worldwide, especially around the coastlines of the United States. They are being driven towards extinction due to human-caused factors such as commercial fishing, loss of nesting habitat, and climate change. As the populations of sea turtles decrease, their capacity to fulfill crucial roles in marine ecosystems also decreases. In addition to the decrease in sea turtle populations, our seas are experiencing a state of poor health and are confronted with substantial dangers, primarily as a result of the harmful impacts of overfishing and pollution ("Why Healthy Oceans Need Sea Turtles-Oceana"). Given the decline in sea turtle populations and the longstanding difficulties experienced by the marine ecosystem, it is crucial to understand the factors that have led to its present

state. Furthermore, the question of what happens to sea turtles as a result of our negligence arises.

The degradation of the marine ecosystem and its consequential impacts on sea turtle extinction require a serious and united effort to conserve and preserve our shared world. These issues are addressed in numerous documentaries as well as narratives to enlighten humanity and lead them to participate in conservation. Several environmental writers extensively address the hardships endured by animals and the deteriorating condition of the ecosystem in their narratives. Such narratives, as Weik von Mossner underlines, “can either cue us to feel directly with the victims of injustice or indirectly, by aligning us with an outsider who learns to care about such victims” (*Affective Ecologies* 103). Although Weik von Mossner underlines this fact to be about the environmental justice of people in films and narratives, I contend that the same effect can be achieved when portraying the hardships faced by animals. Animals are living beings and deserve the right to exist in peace after all.

Marine animals are left to suffer due to numerous environmental challenges such as garbage in the ocean, pollution, and climate change. Sea turtles make up a decent amount of these suffering animals. These reptiles are recognized as ancient seafarers, having traveled the world’s oceans for millions of years. These aquatic animals are suffering in silence, primarily due to human activity. Marine turtles are confronted with a highly significant issue known as plastic contamination. Plastic pollution has a severe impact on marine life worldwide, especially in the United States, and sea turtles are among the animals to suffer the most. Sea turtles absorb plastic garbage, mistaking it for food, causing internal damage, obstructions, and even death (*Voyage of the Turtle* 66). Undoubtedly, these incredible animals are suffering from intense pain. The sole issue is their inability to express how they are feeling. In one research, nearly half of adult Leatherback turtles had plastic in their stomachs as Safina underlines in his book *Voyage of the Turtle*. 70 percent of leatherbacks found dead and autopsied at Juno’s Marinelife Center had digestive tracts clogged by items such as Mylar balloons and rubbish bags. One came ashore with a sheet of plastic emerging from her; she could only lay eggs after someone pushed and pulled and finally dragged a trash bag out of her (66). The reader is likely to be profoundly impacted by the distressing yet factual matters that sea turtles

must endure. Safina constantly updates the reader on the status of sea turtles and is invited on a lengthy, agonizing trip that is not always pleasant to read about. However, we recognize that plastic does not appear in the ocean on its own; it is the result of human activity.

Safina's affective narrative provides numerous further instances of how marine pollution, especially plastic pollution, detrimentally impacts sea turtles:

In a Japanese study, twenty-six of thirty-six Green Turtles (72 percent) had consumed plastic sheets, rope and line, foam, rubber, and/or cloth. Of fifty-four juvenile Leatherbacks in Mediterranean waters, 80 percent contained tar, paper, polystyrene foam, hooks, lines, or net fragments. Other studies returned similar results, because the sea is the great mixer. Of fifty hatchlings captured at sea off Florida, a third had eaten plastics and synthetic fibers. Turtles can absorb toxins from plastics. Eating plastic and latex (as from balloons mistaken for jellyfish) also interferes with the absorption of real food. Other effects can be subtler. (*Voyage of the Turtle* 133)

Pollution in nature not only causes pain to these species but also worsens the condition of the natural environment. Plastic and other forms of marine pollution are major contributing factors to the near extinction of sea turtles. Based on a study on marine debris in the oceans, it was shown that between 31% and 56% of the analyzed marine debris on the east coast of the USA has the potential to be consumed by marine species (Santos 822). Furthermore, in research about dead sea turtles found stranded on nearby beaches, it was observed that 27 out of 45 specimens (60%) had marine debris in their gastrointestinal system. The predominant materials consumed were nylon monofilaments derived from fishing activities, but rigid and soft fragments were also observed.

Considering the many environmental issues on the ocean, plastic and pollution are not the only causes of animal suffering. Overfishing is another major environmental issue that is causing the sea turtle population to decline dramatically. Throughout the book, Safina's eco-narrative emphasizes the need for sustainable fishing practices, stricter regulations, and the establishment of marine protected areas to help conserve sea turtles and other marine life. As overfishing can lead to the depletion of fish stocks, where the populations

of certain species are significantly reduced or even driven to the brink of extinction, it has become a significant issue. This not only affects the targeted species but also disrupts the balance of the marine ecosystem. Safina underlines in his narrative *Voyage of the Turtle* that “in most of the world people continue to kill adults, take eggs, and deploy fishing gear as if there will be no tomorrow” (216). Ignoring environmental issues is equivalent to dismissing our future as humans, and it also results in ignoring animal emotions. As American oceanographer and explorer Sylvia Earle writes in the blog “Can We Stop Killing Our Oceans Now, Please?” people still do not realize that “a live fish is more valuable than a dead one, and that destructive fishing techniques are wrecking biodiversity” (Earle). People who spend more time in nature close to water appreciate the value of marine animal lives and the health of the environment, which leads to the conclusion that we need to spend more time in nature in order to comprehend animal feelings, as well as their pain. Only then can destructive fishing tactics be reduced and nature can be restored. It is also critical to understand the consequences of such techniques and to be scientifically educated.

While overfishing can have several detrimental consequences for sea turtles, bycatch is one of the concerns that requires particular focus. Bycatch refers to the unintentional capture of non-target species while fishing for other species. Sea turtles are frequently trapped as bycatch in a variety of fishing gear, including trawl nets, longlines, and gillnets. Sea turtles caught in bycatch can be wounded or killed, posing a severe threat to their population and potentially leading to extinction. As reported by Safina, the US National Marine Fisheries Service calculated in 2001 that up to half of released sea turtles died from hook wounds and line damage, and that US Atlantic longlines killed 150 to 500 Leatherbacks per year (*Voyage of the Turtle* 194). Furthermore, many conservationists and scientists feel that increased longline fishing is to blame for the Leatherback’s suffering (272). The disfiguring and injuring, which is so unnatural and frequent, and so unjust to innocent animals is difficult to comprehend (66), as Safina says in his book *Voyage of the Turtle*. Given that sea turtles, like any other animal, suffer as a result of human negligence or greed, one would wonder why Safina incorporates so much information to explain what happens to sea animals and how they suffer as a result of human actions. Weik von Mossner points out that these kinds of “narrative strategies have also been used to invite viewers to build moral allegiance with human characters who feel

with, and fight for, nonhuman others who suffer and who do not deserve to suffer” (*Affective Ecologies* 107). Despite the fact that Weik von Mossner stated that this applies to films of narratives addressing environmental injustice, it is also suitable for Safina’s literary style and method. It is effective to discuss animal suffering and how people contribute significantly to their suffering to convey this important environmental message and inform people about real-life events. By engaging with narratives that share facts and research-based information about the degrading marine ecosystem, we gain an understanding that animals are indeed considered victims of human actions, as they are significantly impacted by human activities.

Although the reader may feel with the victim, it may additionally provoke a contrasting response. Weik von Mossner states that individuals are unlikely to endorse policy changes or modify their own lives unless they sense a personal danger and believe that they will be affected (*Affective Ecologies* 139). While environmental challenges such as climate change, overfishing, and pollution may affect some people deeply, others who are unaware of the situation or are not impacted by it are less likely to care. The same applies to animal despair, particularly that of sea turtles. Some readers may feel guilty or angry when Safina discusses the distress that these creatures experience. However, some people are unlikely to take any action to improve the situation despite their feelings, especially if they are dissatisfied. We, as humans, desire to have positive experiences in our lives and the world around us. We will be disappointed if we do not. While certain parts of *Voyage of the Turtle* depict good improvements for sea turtles, such as the use of TED Devices and the treatment of injured turtles, other parts discuss their extinction and the deterioration of the marine ecosystem. As Bladow argues, the reader’s disappointment may force them to flee and seek to avoid the situation:

We feel disappointment before we process it as such; the instant between our affective response and an intellectualized one is fleeting. Disappointment arrests us; it is both a sensation and a perceptual disruption, an experience that seems to distort regular temporality. Vitality, it arises from something outside the feeling subject: we are disappointed with something or about something. (Bladow and Ladino 258)

While some researchers argue that unpleasant feelings such as disappointment, guilt, and pain can foster a deeper connection between humans and nature by instilling a sense of responsibility regarding environmental protection, others, as highlighted by Bladow, argue that these unfavorable feelings prompt individuals to avoid confronting the situation. None of us desire to deal with unpleasant emotions as they create discomfort. Some people prefer to abstain from reading about the excruciating suffering endured by animals due to their discomfort with such content. In his book *Voyage of the Turtle*, Safina emphasizes the aesthetic appeal of nature and turtles, but his primary concentration lies in depicting the challenging journey of these animals and aims to promote consciousness of their condition. Even when Safina says that “turtles once played an important role in ocean communities. Nowadays, their scarcity is more significant” (213), the question of why these species are scarce today emerges. While we may not personally encounter the same events as Safina during his journey, we nonetheless engage as readers and empathize with the characters portrayed in the story, including the animals. While certain sections of the narrative depict positive occurrences such as community engagement and the remarkable skills of sea turtles, others portray negative events such as pollution, bycatch, and the extinction of sea turtles. Nevertheless, we remain actively engaged with the narrative, and our emotions are awakened.

We should assess the emotional effects of the various non-narrative affective experiences that we encounter on a daily basis, such as the weather, artificial surroundings, nonhuman creatures, and objects that we engage with (Bladow 3). Although we do not engage personally in the journey depicted in the narratives, we are still a part of it because the writer draws the reader into their journey with them. Furthermore, the reader learns about the animal’s sentiments and emotions as they begin to imagine themselves in their position. Given all of the facts about marine disasters and animal suffering in nature, one cannot help but wonder how such pain can be inflicted on the marine ecosystem (*Voyage of the Turtle* 66). This is the question that every reader will ask after determining whether or not animals may experience emotions similar to humans. However, a greater knowledge of narrative tactics and animal emotions is required.

### 2.3. NARRATIVES OF SEA TURTLE CONSERVATION

Environmental writers employ strategic empathy and tactical narrative techniques for a variety of reasons, including vital information about the environment and the dire situation of animals. In addition to informing the readers, environmental writers seek to instill in them a sense of animal protection and concern so that they may actively contribute to the restoration and conservation of the environment. This approach emerged in response to the critical environmental challenges that are having far-reaching consequences not only for wildlife but also for human beings. Nevertheless, many writers and scholars argue that the intensity of a crisis depicts how human beings will react. Typically, human beings are less concerned with massive crises. Scott Slovic asserted in his October 13, 2023 presentation that the lack of emotional reaction among individuals towards information regarding severe crises is intrinsically linked to their insensitivity to numerical data, particularly when it comes to the number of victims surpassing small figures. This means that our concern diminishes as the severity of a crisis increases. In their book *Affective Ecocriticism: Emotion, Embodiment, and Environment*, Bladow and Ladino argue that some people experience “compassion fatigue” or “psychic numbing” in response to an excess of data (2). Other people react with a variety of emotions such as worry, fear, and sorrow, as well as more complex responses such as “climate grief” or other “Anthropocene disorders.”

We process stories that are not entirely apart from our bodies, sentiments, and gut instincts (Bladow and Ladino 2). Psychologist Melanie Joy refers to psychic numbing as “a psychological process by which we disconnect, mentally and emotionally, from our experience” (Joy qtd in Weik von Mossner 109). Similarly, the concept of psychic numbing has been thoroughly examined by Slovic, with a specific focus on its use within the realm of environmental disasters and humanitarian crises. Paul Slovic and Scott Slovic argue in their book *Numbers and Nerves* that psychic numbing “can be defined as a diminished capacity or inclination to feel” (62). When confronted with formidable obstacles, individuals may be inclined to disengage or withdraw into a state of emotional detachment, instead of dealing with the difficult truths of the situation. However, Slovic and Slovic aim to promote consciousness of psychic numbing and its consequences, to

motivate individuals to directly address challenging matters instead of succumbing to emotions of hopelessness or indifference. They emphasize the significance of fostering empathy and compassion towards individuals, even when confronted with formidable obstacles, to overcome the situation and raise awareness in terms of conservation.

A range of risks, such as financial and economic collapse, climate change, declination of the marine ecosystem, and global warming can induce psychic numbing. Because many individuals are in search of positivity, they are against anything upsetting and seek immediate relief from the situation. Contrary to the aforementioned viewpoint, Edward O. Wilson offers an alternative perspective. According to Wilson's argument in his book, "The forests may all be cut, radiation slowly rise, and the winters grow steadily colder, but if the effects are unlikely to become decisive for a few generations, very few people will be stirred to revolt" (120). Safina's *Voyage of the Turtle* may cause the reader to feel uncomfortable as a result of the significant presence of deceased sea turtles within the narrative, combined with the scientific insights provided by Safina concerning the adverse consequences stemming from environmental disturbances. However, the effectiveness of this approach may be further improved as it can no longer be ignored. In addition, Safina aims to cultivate empathy in the reader and awaken their emotions by identifying the difficulties of the marine environment to advocate for conservation efforts.

Similar to psychic numbing, environmental writers invite the reader to imagine a situation, which in this case turns out to be about loss. The reader's imagination is stimulated, according to Weik von Mossner, when the author or the narrator spells out the names of plants and birds, only to then provide information about their absence (*Affective Ecologies* 40). Safina's narrative also includes several lifeless and struggling marine species, aiming to inform readers about the real state of animals and their continuous sufferings over an extended time. People think that all life on earth and the oceans will continue to exist forever. Nevertheless, the thought of one of them being absent rarely occurs to us. Safina states that "The end of a species comes as tranquilly as this gentle sunrise. There's no final struggle, no valorous last stand or terminal flourish. Just one final puff of breath, then mere absence." These lines encourage the reader to picture life without turtles, which evokes emotions such as sadness, grief, and loss in the reader.



Letting readers imagine a world deprived of nature induces a sense of loss that can ultimately result in psychic numbing. This may be referred to as a technique employed to evoke emotion in the reader. The question is, however, how this can be effective in increasing participation in conservation and restoration.

Since the earliest days of conservation, when people began to realize that the environment is deteriorating and is no longer in good shape, significant progress has been made. There have been numerous debates regarding the most effective methods for environmental conservation. Community engagement, strengthening wildlife monitoring programs, and translocating species threatened with extinction are among the most effective approaches to biodiversity conservation (Mawdsley et al. 1085). One of the most recent studies proposes that one of the most efficacious approaches to conservation is to invoke emotion in individuals. As previously stated, emotion can significantly influence the extent of awareness regarding the present condition of the environment and non-human species. Observing the difficulties that these creatures encounter may result in psychic numbing. However, conversely, it may inspire a greater sense of environmental concern and care. As Edward O. Wilson suggests in his book *Biophilia*, “the goal is to join emotion with the rational analysis of emotion in order to create a deeper and more enduring conservation ethic” (119). However, conversely, it may inspire a greater sense of environmental concern and care. “The objective is to combine emotion with the rational analysis of emotion in order to develop a more profound and enduring conservation ethic,” as Edward O. Wilson puts it (119). Wilson uses the fact that many individuals prefer a city with a park to a city without one as an example. Nature is undoubtedly present in every location, in every sight, in every step we take, and even in literature. As stated in the first chapter, our “innate connection” to nature exists from infancy. Therefore, it is not surprising that we experience a sense of connection.

As Safina points out, the Leatherback Turtle’s global population is thought to have dropped by 70% in the 20 years between 1980 and 2000. A fall in the Leatherback turtle population was seen over fourteen years in a particular study. The study projected that mature female Leatherbacks decreased significantly from 115,000 in 1982 to less than 35,000 by 1996 (*Voyage of the Turtle* 27). Due to the significant and rapid decrease in population, the World Conservation Union classifies the species as critically

endangered. Due to a need for more awareness of the concerning loss in sea turtle populations, individuals often exhibit an absence of attention towards engaging in conservation efforts for these species. Indeed, there exists a need for more awareness regarding the significance of sea turtles within our ecosystem. Sea turtles have a crucial role as a key component within marine ecosystems. Seagrass beds and coral reefs play a crucial role in supporting the well-being of economically significant species, including shrimp, lobster, and tuna, by contributing to their overall health and sustainability. Sea turtles are the extant representatives of a taxonomic group of reptiles that have inhabited the Earth's oceans for the past 100 million years. They also have significant cultural importance and hold considerable value in the tourism industry. Given that they serve as tangible evidence of the existence of our planet, it becomes more important to safeguard their well-being.

Similar to John Muir, Safina is surrounded by a larger network of like-minded people who share similar interests in conservation, as seen in his book *Voyage of the Turtle*. The community work that is seen in his book also intrigues the reader to learn more about what happened to sea turtles in these years and leads them to think that conservation is possible, especially through community work. In the opening section of the book *Voyage of the Turtle*, Safina presents his mission and provides readers with an overview of the experiences they can expect. He conveys that “to fully understand the Leatherback and what it means to people, I traveled with those who still worship it, those tracking it with satellites, and those whose valuation of sea turtles merely reflects their own lust and cravings” (1). Safina did not undertake the journey alone, as understanding the complicated nature of turtles requires an extensive and comprehensive gathering of information. Safina engaged in discussions with scientists, conservationists, and fishermen. The intention behind incorporating personal stories and discussing the existence of sea turtles and other non-human creatures is to elicit an emotional response and cultivate a sense of empathy among the reader. Community work is an integral component of social impact, as is showing interest in non-human species. Because “without an interest in the minds of other animals, empathy cannot exist. Without empathy, ethics cannot exist” (*Voyage of the Turtle* 348).

It is of great significance to establish connections with individuals who possess a deep concern for the present condition of nature and have devoted their lives to the pursuit of conservation through scholarly literature and study. Equally important is the exploration of these themes within the realm of narrative storytelling. While the focus on sea turtles and their conservation may not occupy a prominent position in numerous literary works, it is worth noting that American literature does indeed encompass various instances where environmental topics are studied. Several prominent authors, such as Rachel Carson, John Muir, and Aldo Leopold, have published influential literary works that have played a significant role in increasing public consciousness regarding environmental concerns, particularly those related to the protection of animal species. These literary works possess the ability to stimulate readers' consciousness regarding environmental issues and potentially motivate them to engage in efforts aimed at protecting endangered animals, such as sea turtles. One of the strategies used for achieving conservation, as previously stated, involves community engagement. Additionally, an essential step is to gain knowledge on protecting these unique creatures. *Safina* not only addresses the adverse impacts on sea turtles and the marine environment as a whole, but also provides insights to readers regarding feasible steps that individuals can undertake to contribute towards environmental conservation.

It is no surprise that “the oceans are responsible for the regulatory control of conditions on earth, including climate in both the oceans and on land” (Roff 2). Life on Earth is unimaginable in the absence of both climate regulation mechanisms and the vast water reserves found in the world’s oceans. As John Ross mentions in his book *Marine Conservation Ecology*, the current state of human civilization has advanced to a stage where its activities possess the potential to induce alterations on a global scale (Roff 2). While it is widely acknowledged that human activities are the primary causes of multiple environmental issues, humans can contribute towards environmental restoration. Consequently, conservation efforts demand additional investigation and consideration, especially within literature.

There exist simple yet highly impactful methods that individuals can use to actively participate in ensuring the future of sea turtles and reduce disturbances to their habitats. One method involves the utilization of artificial lighting. According to *Safina*, it is

recommended to employ measures such as shielding, lowering, turning off, changing, or redirecting lights to mitigate the negative impact of artificial light on sea turtles. These actions aim to ensure that lights are not visible from the beach during the nesting season of sea turtles. The concept can be considered quite straightforward (*Voyage of the Turtle* 62). Minimizing the use of artificial light is crucial in Florida's breeding areas for Loggerhead and Green Turtles due to their wide geographical distribution. Another instance is the beach chairs. The presence of tourists often has a significant disruptive impact on sea turtles, which is not unexpected. Nevertheless, the presence of beach chairs poses an additional challenge for sea turtles due to the impact of tourism. Approximately 20 percent of the beach in this location is blocked by chairs. The hotels and condos demonstrate an unwillingness to move the chairs beyond a distance of fifteen to twenty feet. The Greek Island of Zákynthos, a popular tourist destination known for its vibrant beach parties attracting a significant number of visitors each year, has come to light that resort owners have displayed a persistent reluctance to provide suitable conditions for the nesting sea turtles. This lack of accommodation has led to a legal ruling by the European Court of Justice, which has deemed Greece to be negligent in fulfilling its responsibilities towards the conservation and protection of this endangered marine species. As Safina says, "one creature has no choice and no voice; the other chooses to act deaf and say no" (*Voyage of the Turtle* 63).

Showing the current state of marine animals, rescuing turtles from their suffering, and striving to restore their natural habitat in the narrative "can help weaken viewers' empathy inhibitions toward specific species or use existing sympathies strategically in order to make a larger argument about nature conservation and sustainable development" (*Affective Ecologies* 131). This is why Safina prioritizes conservation efforts and aims to showcase the collective efforts of the community in restoring the environment and its non-human inhabitants. This can lead to the formation of a profound sense of emotion, not only with non-human beings but also with all aspects of nature. Safina demonstrates his commitment to marine conservation by providing support and taking every necessary step. This serves as an example of what can be achieved and encourages readers to participate in conservation efforts.

**CHAPTER III**  
**EXPERIENCING THE DISASTER: *A SEA IN FLAMES***

*But the sea, though changed in a sinister way, will  
continue to exist; the threat is rather to life itself.*

Rachel Carson *The Sea Around Us* 145

Marine narratives have a significant influence because they raise awareness, educate people, and promote action to protect the ocean and its inhabitants, given that the coastal environment is recognized as the most significant part of Earth's ecosystems. Additionally, they illustrate the crucial emotional bond with nature that is vital for the survival of the marine ecosystem. These narratives provide readers with a comprehensive exploration of the intricate relationships among marine life, humans, and the environment, spanning across the globe's oceans. Nevertheless, this fragile ecosystem is subjected to many environmental hazards that endanger its well-being and balance. The ocean's ecosystem is continuously threatened by many environmental issues that can have significant consequences. Moreover, environmental threats can lead to the decline or deterioration of marine species, disrupt the interconnectedness of food chains, and diminish the ability of ecosystems to withstand disturbances. However, as long as people think they will not be impacted by environmental disasters, "they are unlikely to support changes on policies or to their own lifestyles because such decisions are directly dependent on their perception of risk" (*Affective Ecologies* 139). Safina seeks to change this situation by providing an in-depth examination of the catastrophe and highlighting scientifically proven evidence of the serious outcome of the blowout. Safina underlines the fact that until we change our behavior towards the marine ecosystem, such disasters will occur frequently.

The severe changes in the marine ecosystem evoke emotions such as guilt, anxiety, and grief in the reader. Readers are asked to envision what it would be like to go through such a nightmare, what happens after such a catastrophe, and how difficult it is for the

ecosystem to recover from such a catastrophe when they read about marine narratives that center around real-life disasters. Furthermore, marine narratives that depict environmental declination raise questions about human impact on marine ecosystems and our moral obligations towards marine life.

The ‘Deepwater Horizon Oil Spill’ took place in 2010 and is considered as one of the most severe environmental disasters. The consequences are significant and persistent, affecting the ecosystem, wildlife, economy, and public health. Safina’s book, *A Sea in Flames*, exposes the extensive devastation caused by the oil leak and highlights the prolonged duration required for recovery:

Blowout. Gusher. Wild well. Across the whole region, the natural systems shudder. Months to control it. Years to get over it. Human lives changed by the hundreds of thousands. Effects that ripple across the country, the hemisphere, the world. Imperfect judgment at sea and in offices in Houston, perhaps forgivable. Inadequate safeguards, perhaps unforgivable. No amount of money enough. Beyond Payable.  
(114)

It is no surprise that this disaster affected sea creatures and humans immensely since “nearly 7 million liters of chemical dispersants were used, and for the first time, oil dispersants were used in deep-sea environments” (Barron 315). The leak resulted in substantial damage to both commercial and recreational fisheries, impacting many species such as yellowfin tuna, red snapper, amberjack, and other fish species (Burggren 236). Furthermore, the Deepwater Horizon project was already dangerous, and several warnings and failures were ignored. Safina uses a real-life incident to evoke strong feelings in the reader as they read about the terrible consequences of the oil disaster and the following restoration plans, examining the possibility of whether negative and positive emotions can promote societal transformation.

Safina’s book offers a compelling and impactful ecological viewpoint on the Deepwater Horizon oil disaster and its effects on the ecosystem of the Gulf of Mexico. He provides a profound and perceptive analysis of the ecological damage resulting from the spill, along with its implications for both humans and the ecosystem. Safina’s work explores

the emotional and ethical aspects of the oil spill's consequences from an affective ecological perspective. He investigates both the biological harm caused to marine life, coastal habitats, and ecosystems, and additionally explores the emotional responses of individuals directly impacted by the catastrophe, such as fishermen, scientists, and local people. The narrative also emphasizes the interdependence of all living organisms in the Gulf environment and emphasizes the deep feeling of grief and loss felt by both humans and non-human beings after the oil spill. Through vivid storytelling and personal narratives, he effectively portrays the challenges faced by animals and ecosystems, encouraging readers to develop empathy for the suffering marine species and the communities that depend on healthy coastal areas for their livelihood.

This part of the thesis examines the incidence of environmental catastrophes, encompassing both natural and anthropogenic causes, and underscores the significance of wise ocean management to preserve the health and resilience of marine environments and ensure a sustainable future. Moreover, its objective is to emphasize the significance of understanding the incidents occurring in the ocean, raising the readers' consciousness about the alarming prospects for the marine ecosystem, and illustrating how these narratives foster an emotional connection between the implied reader and the environment. Due to the efficacy of environmental narratives in captivating and persuading readers, Safina aims to provide a comprehensive account of the oil disaster and emphasize the importance of being attentive and safeguarding the marine environment. Safina aims to motivate individuals to take action through the "affective-inducing power" of his narrative since "reading about an activity in a narrative" is neurologically linked "to performing the activity in real life," as "understanding an activity you read about . . . requires a mental simulation of that action and its context" (Gaard 226).

### **3.1. DEEPWATER HORIZON OIL SPILL AND EMOTIONAL POWER OF SCIENTIFIC DISCOURSE**

Environmental disasters occur regularly, some caused by natural events and others by human action. Regrettably, marine catastrophes and issues frequently arise. Under the title 'Déjà Vu, To Name But A Few', Safina provides numerous examples of the most

devastating environmental disasters that have occurred in the environment of the sea. On January 28, 1969, a drilling rig six miles off the coast of Santa Barbara, California, exploded. This accident resulted in the spillage of 4 million gallons of crude oil into the Santa Barbara Channel, which contaminated beaches on the Channel Islands and the mainland coast. The sight of thousands of lifeless aquatic creatures horrified many people. The tragedy raised enormous awareness of nature's vulnerability and served as a catalyst for key environmental legislation that followed in the 1970s; it is still the third-largest U.S. marine spill (*A Sea in Flames* 68). However, the BP oil leak, commonly known as the Deepwater Horizon oil spill or the Gulf of Mexico oil spill, is still regarded as one of the worst environmental disasters in US history.

On April 20, 2010, the Deepwater Horizon mobile drilling unit exploded and sunk in the northern Gulf of Mexico, approximately 64 kilometers from mainland Louisiana in the United States. Aside from the tragic loss of 11 lives and 17 injuries, an estimated 3.19 million barrels of oil were discharged into the lake over 87 days following the first explosion. The spill contaminated more than 112,000 square kilometers of surface water and 2,100 kilometers of coastline. It also had a significant impact on a wide range of living and non-living resources in the marine ecosystem of the Gulf of Mexico. Important surface feeding, migratory, and breeding sites for protected marine species were contaminated by this widespread oiling (Wallace et al. 2) BP was the primary project operator, and Transocean owned and operated the Deepwater Horizon drilling rig. Several issues occurred even before the leak as the drilling approached deeper depths beneath the seafloor (*A Sea in Flames* 13). Unexpected geological formations, pressure anomalies, and gas influxes were among them. These challenges made maintaining control of the well difficult.

Understanding environmental issues and the consequences of such tragedies poses a formidable challenge. Nevertheless, with the provision of further facts, gaining an understanding of the catastrophe's occurrence becomes uncomplicated. The BP oil spill has been examined by many researchers, scientists, and authors, and their findings have received a great deal of attention. When we encounter or learn about a catastrophic environmental event and its devastating effects on nature, we may simultaneously feel a variety of emotions, such as fear, anger, and sorrow. These catastrophes evoke emotional



responses, specifically what has been referred to as environmental grief (Ray 301). However, these emotions can occur as a result of a catastrophe that has been encountered by the person, or we may also indirectly encounter environmental catastrophes, such as climate change or degradation of the marine environment, through various media platforms, when thinking and discussing potential future changes or through literary works. The various routes through which individuals encounter risks related to the environment can result in an extensive range of emotional reactions (Ojala et. al 37). Furthermore, emotion “may play a role in the construction of consciousness,” which is essential in enhancing the connection between humans and the natural world (Damasio 49). In the context of affective studies, such an occurrence can be seen not only in actual disastrous environmental tragedies but also in texts that portray potential future scenarios on Earth. This type of environmental narrative aims to create “affect, which (for many theorists) precedes or eludes cognition and discourse, and can transcend the individual body, from emotion, a more personal, subjective experience” (Hertweck 134).

The Deepwater Horizon Oil Blowout and other environmental disasters are linked to affect theory and affective ecocriticism. Understanding such disasters is crucial because of their impact on the natural environment and for recognizing how they might be prevented in the future. Safina employs the technique of “authorial strategic empathizing” to both prevent future disasters and evoke empathy in the reader for those who were severely impacted by the catastrophic event. This technique involves “aligning the narrative viewpoint with those experiencing injustice, or with a narrator who isn’t directly affected but who learns to care for those experiencing the injustice” (*Affective Ecologies* 83). Those who were impacted by this unfortunate event, human and non-human beings, have undeniably faced injustice, as they had to endure the consequences due to poor planning. Safina reveals the upsetting truth to show to the reader how severe the catastrophe was and how the animals suffered, as he came across numerous marine animals suffering from the oil blowout: “Twenty or so dead sea turtles wash ashore along thirty miles in Mississippi. None with oil on them, but the number’s unusual. They could have eaten oil blobs, a frequent health problem for sea turtles” (*A Sea in Flames* 80). Affective ecocritics have noted that the overwhelming narratives of climate change can cause individuals to emotionally shut down, avoiding the uncomfortable and distressing feelings that can drive significant changes (Gaard 230). By encouraging individuals to

confront and process their emotions in response to environmental issues, affective ecocriticism seeks to counteract psychic numbing and inspire meaningful action toward environmental stewardship and sustainability, which is what Safina does in many parts of his marine narrative.

Environmental writers have employed various narrative strategies since knowing our surroundings and the natural environment is crucial to forming our perception and helping us to interact with nature. While earlier environmental authors often focused on the aesthetic appeal of nature, contemporary writers draw attention to the gradual demise of nature's beauty due to detrimental practices. In his book *A Sea in Flames*, Safina portrays the distressing aftermath of the oil disaster saying that hundreds of oil-saturated pelicans were drifting in the vicinity of Grand Terre Island in Louisiana and 500 dead birds covered in tar had been discovered by people (134). He expresses his personal feelings by saying "The sight of animals struggling in oil moves me to tears more than once" (134). In addition to acknowledging the upsetting content and emphasizing the significant loss of animal lives and habitat, he also conveys his feelings allowing the reader to witness his response to the now 'gone' natural environment. Pointing out distressing information, stating the disappearance of animals that used to inhabit the region, and conveying personal emotions to the reader through environmental narratives can be highly impactful, as it forces readers to imagine a world without nature, instilling a sense of loss. We have seen and been connected with nature for our entire existence. Thinking about the absence of something that holds significant importance in our lives is distressing and evokes various emotions. Considering what affective ecologies and affective ecocriticism aim to achieve, Safina intends to delve into every detail of the Deepwater Horizon Oil Blowout and point to current marine issues by revealing the true reasons why the blowout occurred in the first place, and what consequences this blowout had on both the environment and non-human entities.

The environmental impact of the oil spill has been quite damaging. The natural world has not entirely recovered following the Deepwater Horizon oil spill. Although nature has a habit of quickly repairing itself, there has been irreversible damage to both the environment and people's lives. According to one of the last survivors of the oil spill, they discovered mats of thick floating oil after venturing into the Gulf. Nobody knew how

much oil was spewing from the well (Granatstein). However, some estimates say it is the equivalent of the Exxon Valdez<sup>4</sup> leak every four to seven days. In addition to the detrimental impact of the oil spill, the Gulf Coast states' economic prospects were bleak, as the disaster harmed many of the sectors on which citizens relied. At the height of the leak, more than a third of federal waters in the Gulf were prohibited from fishing owing to contamination concerns. An embargo on offshore drilling imposed by the Obama administration, notwithstanding a district court reversal, has resulted in an estimated 8,000-12,000 people being temporarily unemployed. Few tourists were willing to risk visiting petroleum-contaminated beaches, forcing those who rely on tourism to struggle to supplement their earnings. Nevertheless, as Safina emphasizes, while the financial consequences of the oil spill are undoubtedly major, the emotional reaction to the aesthetic appeal was significantly greater:

But the two most devastating social and economical consequences of the blowout—the region-wide tourism meltdown, the vast fisheries closures – have been, in much of the wider region, emotional responses to aesthetics and perceptions, rather than necessary responses to real dangers. That's been true even where little oil reached. Panic, blind anger, and the months-long inability to know how long the oil would continue flowing have dominated people's responses to the event, including my own. (*A Sea in Flames* 291)

Another consequence was the presence of oil, which is strongly linked to visual aesthetics due to its unappealing appearance. Oil often remains in the ocean unless it is dispersed. Because oil dissolves into the sea, it is impossible to see or measure it (*A Sea in Flames* 64). As a result of the dispersed oil, countless creatures were hurt, and their habitat was destroyed. Considering all the detrimental factors of one of the worst environmental disasters in history, the question of “whether an enduring way of life is truly endangered, or whether an endangered way of life will endure” (59) arises.

Many of our present environmental concerns, such as climate change, are too large in their “spatial and temporal dimensions and too abstract to be accessible to our senses”, as Weik von Mossner indicates in the fifth Chapter of her book *Affective Ecologies*. We cannot see, smell, or hear these issues unless they present themselves in a single event,

such as a hurricane. Graphs and statistics are one way to portray such enormous ecological changes (138). As a writer who incorporates substantial scientific information into his encounters with the marine environment and warns against the consequences of human activities, Safina emphasizes the importance of addressing the issues. As he states in his book *A Sea in Flames*, “Let’s attend to the matters to which the researchers are calling our attention. Let’s not be in denial of science, logic, and sense” (144). Denying scientific information and ignoring rational thinking only impedes advancement and worsens existing issues. In addition, scientific knowledge about nature, including the marine environment, can enhance the readers’ understanding of the natural environment and foster a sense of connectedness with the natural world. Because it is difficult for the common people to investigate the oceans as well as the marine animals in order to understand what exactly has happened to them after environmental incidents, which is the Deepwater Horizon Oil Blowout in this case, scientists and ecologists take the task and share the findings with people. However, it can be difficult to comprehend science and complex language. Therefore, scientists and writers must communicate environmental issues more straightforwardly and “try to translate into accessible narratives” (*A Sea in Flames* 138).

While there are other strategies to make such information available to the reader, environmental narratives are a common approach used by many writers and ecocritics. In their introduction of *Numbers and Nerves*, Slovic and Slovic argue, “There is a space in all people, even in the scientists and the economists whose daily currency is the worldview we call ‘quantification,’ that ‘cries out for words,’ and for images and stories, for the discourse of emotion” (5). It is also difficult to understand how oil that has been disseminated impacts the water and how long it will persist and harm marine organisms. Furthermore, it is challenging to frame it in such a way that the reader is engaged with nature and, maybe, reconnects with the environment, as described in the first chapter of this thesis.

Considering the scientific evidence and the consequences of the oil spill, it is clear that the disaster that took place in the Gulf of Mexico off the coast of the United States was among the most catastrophic in recorded history. The community “got hit with the country’s worst natural disaster; now we’re hit with the worst man-made disaster” (*A Sea*

*in Flames*, 64). Following the April 2010 disaster, several measures were used to clean up the spilled oil and limit its environmental impact. Because of the massive amount of oil discharged into the Gulf of Mexico, the cleaning process was complex and difficult. As oil began to taint Louisiana beaches in May, it was physically cleaned; nevertheless, cleaning was made more difficult because the state's geography was linked together by sensitive plant life. In June, oil reached the shores of Mississippi, Alabama, and Florida. A total of around 1,100 kilometers of beachfront were contaminated. The National Response Team, a consortium of government organizations spearheaded by the US Coast Guard and the Environmental Protection Agency (EPA), orchestrated the multifarious cleanup endeavors. BP, Transocean, and various other companies were held responsible for incurring billions of dollars in expenses (*A Sea in Flames* 116).

Safina expresses his strong displeasure towards the BP firm and the irreparable consequences of the oil leak, even though BP and Transocean were held responsible for the catastrophe. A scientist from Texas A&M University has expressed concern about the ongoing oil spill, stating that "The threat to the deep-sea habitat is already a done deal, it is happening now" (*A Sea in Flames* 81). Safina cannot help but let his anger out by saying "I'm a professional environmentalist and conservationist; I'm really angry about the recklessness that caused this, and the inanity of the response; I am deeply distressed about the potential damage to wildlife and habitats—but I find myself becoming uncomfortable with all the catastrophizing. 'A done deal' – that's not very scientific" (81). Considering the extensive damage that has already occurred and the ongoing efforts of the environment to restore itself, it is distressing to imagine the irreparable destruction of the deep sea habitat. While some people are filled with anger, others remain optimistic that nature will ultimately restore itself. This also applies to the reader. While many individuals may maintain the view that the ocean's capacity to regenerate itself and the health of the ecosystem would never revert to its initial state after the oil spill, others may recognize the distress but remain hopeful that it will ultimately recover. Nevertheless, recognizing the full extent of the damage inflicted upon the environment and species in the aftermath of the catastrophic incident is challenging, particularly when provided with additional specifics regarding the oil spill.

While each spill is different in its way, the response to the Deepwater Horizon leak presented several notably difficult problems related to oil on the shoreline. Most of the oil remained stuck for over three months, and during the initial phase of heavy oiling, numerous beaches in the Gulf of Mexico faced erosion, causing the oil to be buried as the beaches gradually built up over the months that followed. Furthermore, oil became trapped at elevated levels in the supratidal zone as a result of increased water levels and the powerful waves caused by storms in 2010 (Michel et. al 5). Before its occurrence, the seasonal forecast provided advance notice of the anticipated presence of powerful winds in the Gulf of Mexico. However, for the majority of individuals confronted with an actual case of uncontrollable chaos, particularly those who have endured hurricanes, such information raises nervousness, provokes fear, and fails to provide any clear guidance on how to handle the situation (*A Sea in Flames* 91). Despite the advance notice through seasonal forecasts or other warnings, the firsthand encounter with the environmental devastation resulting from the oil spill may have triggered traumatic memories and emotions linked to previous catastrophes. Due to the lack of control over the situation and the absence of instruction on how to control it for future disasters, nervousness was inevitable. Consequently, the oil had been buried due to powerful winds. A total number of 180,000 pits, trenches, and auger holes were used until the end of 2012 to locate and map out the buried oil for removal (Michel et. al 5).

Following the occurrence of the oil spill, attempts were made to clean up the oil contamination, but, full recovery of the impacted regions was impossible. Diverse techniques were utilized to contain and remove the oil, such as controlled burning, chemical dispersants, and mechanical skimming. In addition, measures were taken to safeguard vulnerable regions and preserve the natural habitats of species from the impact of the oil. Although a portion of the oil was successfully collected and removed, significant amounts were dispersed across the Gulf of Mexico, resulting in the pollution of water, coastlines, and marine life. Ongoing research is being conducted to examine the spill's long-term effects, which have had a lasting influence on ecosystems, wildlife, and local populations.

Safina emphasizes the restoration and conservation efforts of the ocean, which gives the reader hope, even though the Deepwater Horizon oil disaster has resulted in upsetting

facts and images of animal and human suffering as well as the destruction of the marine ecosystem. Several ecocritics and writers, including Safina, use “a number of techniques to balance negative emotions with positive ones to create a satisfying viewing experience” for the experience to be more affective (*Affective Ecologies* 158).

### **3.2.SENSUAL PERCEPTIONS HABITAT LOSS, MARINE ANIMALS, AND AFFECT**

The oil spill has caused a multitude of ecological issues. Not only in the local area of the Gulf of Mexico but also in countless other nearby regions. Hundreds of people have been profoundly affected by the oil leak, resulting in detrimental consequences for the fishing industry and the livelihoods of those depending on the marine environment. However, marine animals are the ones who were affected the most by the terrible oil leak. Contrary to common belief, countless animals died, including bird species, while those that managed to survive had to be driven from their natural habitats. Their living conditions were dreadful. Although many of these animals attempted to clean themselves from the oil, their efforts were mostly unsuccessful. Blair Witherington, a research scientist and sea turtle expert associated with the Florida Fish and Wildlife Conservation Commission, says: “We’ve seen the oil covering the turtles so thick they could barely move, could hardly lift their heads” (*A Sea in Flames* 167). Their shell can be coated with oil, disrupting their capacity to regulate body temperature, navigate, and breed. Additionally, marine creatures such as dolphins and whales also experienced skin irritations, breathing issues, and ingestion of toxic chemicals.

The northern Gulf of Mexico has populations of common bottlenose dolphins as well as other species. The survival, development, and reproduction of these dolphins rely significantly on the presence of healthy habitats (Waring et al.). Consequently, the ecology suffered detrimental effects from the oil disaster, significantly affecting them. Dolphins can perceive the existence of oil, yet they do not necessarily avoid it. During the months after the Deepwater Horizon spill, dolphins were seen in areas affected by oil, including areas with high concentrations of oil, occasionally swimming through it on the surface and with oil sticking to their skin. Dolphins, thus, could come into contact with

oil either directly at the surface or in the water column. They could also have been exposed to oil by accidentally consuming it while feeding or by ingesting prey that is polluted. In addition, dolphins inhale volatile and aerosolized petroleum-related compounds as they breathe near the air-water boundary, which makes them susceptible to harm (Schwacke et al. 94).

Barataria Bay, located in Louisiana, was one of the most severely affected bays in the northern Gulf of Mexico in terms of oil pollution. The persistent contamination of the shoreline in this bay was observed during the most recent ground observations in September 2014. In addition, the bay served as the habitat for numerous dolphin species, as well as numerous kinds of birds and sea turtles. Not just dolphins, but many other creatures in that area also suffered from respiratory problems, skin irritations, and many other health issues. The animals' feathers, fur, and bodies were covered in oil, resulting in suffocation, poisoning, and ultimately death. The early impacts were notably severe for bird species and marine mammals that directly encountered the oil slicks. In his book, Safina observes that gulls and pelicans covered in oil faced great difficulty in preserving their existence, which they were ultimately bound to lose. The parent birds “brought coatings of oil to their eggs,” which prevented oxygen from entering the shell (*A Sea in Flames* 104). Additionally, the sight of birds drenched in thick crude oil, stranded sea turtles, beaches covered in sticky substance, and marshes saturated with oil resulted in some of the most devastating photographs of the oil spill. Unfortunately, “it took hundreds of years to create” a healthy ecosystem “and it’s gone just like that” (104).

The Deepwater Horizon disaster has resulted in disturbing images of dying birds, oil-contaminated marshes and barrier islands, and emotionally affected inhabitants of the coastal areas. Nevertheless, the key image from this story isn’t even visible: enigmatic plumes of scattered oil droplets moving deeply beneath the surface. Regrettably, the situation worsens as dispersants are released into the ocean, surpassing the dire situation of marine life beyond controllable levels. The terrible effect of the dispersants has been underlined by Safina many times in his book *A Sea in Flames*:

Today’s vocabulary word: “dispersants.” Use it in a sentence: “Most oil floats, but it dissolves into the sea if you apply *dispersants*”. By April 30, BP has begun sending



dispersants down a mile-long tube from a ship. Releasing such chemicals on the deep seafloor- rather than spraying them on surface oil, has never been done before. It's a secondary toxic leak, this one intentional, sent from above to meet the oil coming from below. (54)

One of the many reasons dispersants were used to dissolve the oil was the need to hide it from people and prevent its visibility in the ocean (54). As Dr. Lubchenco points out in Safina's book, "Skimming just doesn't work in rough water. But in rough water, you can disperse, and the motion helps mix the dispersant and oil so it's not just laying on top of it" (383). While dispersants can effectively dissolve oil on the ocean's surface, they have severe adverse impacts on marine animals, which are often neglected and left vulnerable to significant injury. The toxicity of the dispersants has been assessed, as the dispersants used are 10-20 times more toxic than other solutions approved by the U.S. Environmental Protection Agency (Kelley 62).

The components of both oil and dispersants possess variable degrees of volatility, causing them to evaporate at average ambient temperatures. Consequently, they are transported into the atmosphere as vapor, which humans and other organisms can absorb. There have been reports of "raining oil" in Florida and Louisiana, possibly caused by a combination of oil and dispersants being suspended in the air as aerosols and then brought down to the ground by precipitation (Kelley 62). This had adverse effects on multiple living organisms and impacted the economic condition of many individuals. Given that this is one of the most severe oil spill catastrophes in US waters since the Exxon-Valdez spill, it is crucial to exercise extreme caution to safeguard the population, the environment, and the aquatic wildlife.

Regrettably, endangered species, which are safeguarded by law under conservation regulations, were also harmed. Sea turtles and marine mammals, such as those found in the northern Gulf of Mexico, inhabit different environments for growth and reproduction. However, they are currently confronted with multiple human-caused dangers (Reeves et. al 90). Sea turtles and marine mammals often exhibit a low growth rate, developmental delays, and long lifespan. Additionally, they do not generally reproduce every year. These features make their populations vulnerable to reductions and slow recovery when threats

are reduced (Wallace 2). Following what seemed to be a successful rebound immediately after the oil spill, particularly in 2010 and 2011, the populations of Kemp's ridley and other sea turtles experienced another decline in 2013 and 2014. This sparked concerns about the population's inability to return to their previous growth rates. Several researchers suggested or implied that the 2010 oil spill might have impacted specific life stages of the Kemp's ridley, thereby altering the age structure of the population. This disruption could create a potentially long-lasting "demographic mark," delaying recovery by reducing population momentum (Kocmoud 159).

Federal law provides protection for sea turtles and marine animal species in the USA. The Endangered Species Act designates all sea turtle species located in the Gulf of Mexico as endangered. Furthermore, the Marine Mammal Protection Act safeguards all species of marine mammals. Following the oil disaster, a total of five distinct sea turtle species have been observed in the Gulf of Mexico, among which is the critically endangered Kemp's ridley turtle. Oil contamination immediately threatened these turtles as they surfaced from the water for air, and it also impacted their habitats for nesting and feeding grounds (Wallace 2). Nesting at the primary Kemp's ridley index nesting beaches in Tamaulipas, Mexico, which account for over 95% of the species' nesting activity, decreased by approximately 35% in 2010. These alarming developments raised significant concerns for the Kemp's ridley sea turtle (Gallaway et al. 1).

Following the Deepwater Horizon oil spill, the situation worsened significantly. Over several years during and after the spill, more than 1,000 cetaceans were found stranded and dead along the northern Gulf of Mexico coastline, marking the largest unusual mortality event ever recorded in that area (Litz et al. 170). The deceased dolphins exhibited a high incidence of lung and adrenal disease, along with a notable rate of late-term pregnancy loss. In the subsequent years, researchers investigating live dolphins in Louisiana and Mississippi discovered numerous oil-related health issues that aligned with the conditions observed in the stranded dolphins. These health problems include lung disease, poor reproductive success, abnormal stress responses, and immune system dysfunction (Murawski 21). A significant number of bird species also suffered from negative impacts due to the contamination of their natural habitats, such as wetlands

and coastal areas. The oil had an impact on the feathers of birds, making it difficult for them to fly and hindering their ability to regulate body temperature. A significant number of these species under protection are still in poor condition mainly because of the oil spill.

While several animals managed to regain their normal state, others will experience a slow recovery, and some may never fully recover from the oil leakage. Regardless of the rapid pace at which the Gulf's waters, wildlife, and wetlands recover from this catastrophic event, the citizens of the Gulf region will be left with lasting scars and severe hardship for years to come (Safina 343). Not just from the oil spill, but also from all other disasters. As Safina says in his TED Talk called "The Oil Spill's Unseen Villians and Victims," although the oil spill is a catastrophe, it is crucial to acknowledge that our actions have had a significant and enduring impact on the marine ecosystem (Safina 10:33-10:35). Therefore, it is crucial to comprehend the actions we have taken that have impacted the ocean, the resulting consequences of these disasters, and their effects on both humans and all creatures living on the Earth in order to avoid further disasters. Moreover, we must acquire the ability to understand and share the feelings of those who have been adversely affected and make necessary alterations to prevent catastrophes in the future.

In her book *Political Emotions*, Martha Nussbaum, an American philosopher, contends that having "appropriate sentiments of sympathy and love" is not only important in personal relationships but may also be essential in addressing and rectifying instances of injustice and exploitation. These sentiments enable us to empathize with the suffering of both distant human beings and nonhuman entities (Nussbaum, *Political Emotions* 2). Gaining awareness of our surroundings and comprehending the positive and negative occurrences and their impact on both humans and non-human entities is essential for establishing a connection with our shared environment. As Weik von Mossner argues in the article "From Nostalgic Longing to Solastalgic Distress A Cognitive Approach to Love in the Anthropocene," "once we realize that our environment plays a central role not only in how we feel but also in our cognitive understanding of how we feel about that environment, the question that suggests itself is, what happens to our emotions when that environment changes drastically?" (52). Following catastrophic events such as the oil blowout in the Gulf of Mexico, many people's and animals' lives changed drastically. It

is those moments that bring us closer and force us to think about restoration and a better future, which is only possible with love and hard work.

### **3.3. NARRATIVES OF OCEAN RECOVERY: RESTORATION AND CONSERVATION OF THE OCEANS**

The connection between humans and nature has been a prominent theme in literature, art, and philosophy. With the escalation of environmental concerns, the conversation has now turned to a more pressing demand for action. Both animals and humans have been profoundly impacted by the Deepwater Horizon oil blowout catastrophe. They faced serious damage and a significant number were unable to fully recover from the disaster. As previously stated, numerous animal habitats have been destroyed, impacting severely endangered species protected by law, and potentially hindering their recovery. Affective ecocriticism is a perspective that allows us to examine the intellectual, moral, emotional, and affective aspects of human-nature relationships. The essence of this concept is acknowledging the emotional connections between humans and the natural environment, emphasizing the crucial need to protect and revive nature before the Earth is fully destroyed.

There is still a lot to discover regarding marine and coastal conservation following the April 2010 Deepwater Horizon disaster. Crises such as this catastrophic event offer opportunities for reflection and analysis to learn and implement conservation lessons (Wallace et al. 922). However, following the oil disaster, the United States has shown minimal advancement in adopting ecological or ethical standards for applying conservation to public policy on oil and gas development. In the impacted environments, economic interests related to oil and gas extraction take precedence over ecological and human well-being. Establishing post-crisis restoration as a primary conservation strategy hinders proactive conservation efforts and obstructs legislative advancements seen in other conservation fields for many years. This situation has resulted in an ongoing cycle of crisis and reaction that is not sustainable from both an ecological and economic standpoint (922). This kind of approach will lead to more crises, which will be impossible to prevent. To stop further catastrophes and safeguard the marine environment, it is not

only suggested that the United States acknowledge such disasters and alter its practices, but that human beings also must reconnect with the marine environment and appreciate what it has to offer.

The issue of disconnection from nature and the absence of a connection with the marine environment is widely recognized as a significant concern that increases ecological crises and hinders the effective implementation of conservation efforts. Connectedness with nature refers to a consistently stable state of consciousness that encompasses symbiotic cognitive, affective, and experiential characteristics. This state is characterized by a sustained awareness of the interconnectedness between oneself and the natural world, as demonstrated through consistent attitudes and behaviors (Zylstra et al 119). The establishment of a connection with nature has the potential to enhance conservation interaction by offering several advantages. These include utilizing a more compelling language, providing a source of hope and a means to alleviate frustration amid environmental crises, a more lasting incentive for engaging in environmentally responsible actions, and a recognized approach to addressing ambiguous concepts frequently overlooked in conservation efforts (119). While the connection with nature or reconnecting with nature implies that there is something wrong in the ecological system, it can also imply that the human-nature relationship needs to be re-established.

Edward O. Wilson, an American biologist and naturalist, has formulated significant concepts that advocate for conservation, which he refers to as the “conservation ethic.” Wilson’s conservation ethic, based on his thorough research and profound respect for the natural world, provides a detailed structure for dealing with the intricate relationship between humans and the environment. The essence of this is a deep respect for the inherent worth of biodiversity and the necessity to protect it for future generations. Wilson believes that “the goal is to join emotion with the rational analysis of emotion in order to create a deeper and more enduring conservation ethic” (Wilson 119). Conservation efforts are unlikely to be considered without a profound connection to the natural world. People typically show concern only when a crisis directly affects them. If the impacts are not expected to have a significant impact for several generations, then few individuals will be “stirred to revolt” (Wilson 120) Moreover, we typically prioritize our own surroundings, our family, and our loved ones, and contemplate if environmental

disasters may impact us. What matters most, though, is that if a disaster affects others, it will also affect us and the next generation. Hence, it is imperative to consider the well-being of future generations along with our own, as the interconnectedness of nature and its resources requires an integrated approach. Wilson emphasizes the significance of considering all components within the natural world as a means to achieve success in the field of conservation ethics in his book *Biophilia*:

It follows that the destruction of the natural world in which the brain was assembled over millions of years is a risky step. And the worst gamble of all is to let species slip into extinction wholesale, for even if the natural environment is conceded more ground later, it can never be reconstituted in its original diversity. The first rule of the tinkerer, Aldo Leopold reminds us, is to keep all the pieces. (121)

Wilson encourages people to think about nature as a whole. In addition, many people believe that nature always restores itself. As Wilson underlines, it may never be the case. Similar to Wilson's conservation ethic, Safina offers an engaging narrative, highlighting the interconnectedness of marine life and the urgent need to safeguard and restore ocean ecosystems. To emphasize the significance of marine conservation, he wants to remind readers that the Earth is not exclusively ours. As a community, we must coexist harmoniously. Nevertheless, the most important aspect that he emphasizes is the necessity to value and acknowledge nature. According to Wilson, it is necessary to 'join emotions' in order to fully appreciate the beauty of nature. If we cannot experience emotions, we will be unaware of nature's significance in our existence. As Sylvie Earle emphasizes: "We need to create places where people can see the ocean and find a sense of awe. Because if you love the sea, you will protect it" (Earle, *The World is Blue* 271). This captures Earle's perspective on the significance of cultivating a bond between people and the ocean to inspire conservation efforts. At the same time, Safina similarly shares the same objective. Experiencing the beauty and awe-inspiring ocean might result in greater awareness and dedication to protecting it. Safina suggests that providing opportunities for individuals to interact with marine habitats and establish an emotional connection with the sea makes them more likely to advocate for the ocean's preservation. Safina effectively conveys this idea to the reader through storytelling, resulting in increased reader engagement and facilitating a connection with the marine environment through his

journey and findings. This type of narrative is impactful because “a robust engagement with this genre of storytelling may help to motivate and produce a new range of ecological sensibilities: sensibilities that derive sustenance and strength from feelings of wonder and awe, humility and respect” (Deyo 209).

Although it is effective to portray the beauty and the interconnectedness of nature, Safina mainly emphasizes the deteriorating beauty and reality of the world due to an overall lack of awareness and understanding of our environment. He particularly emphasizes the impact of the oil spill in the Gulf of Mexico and numerous other catastrophes on the world’s condition. Safina recounts his encounter with the birds following the occurrence of an oil spill in his book *A Sea in Flames*: “Last spring, the first oiled bird whose image made news was a gannet that had spent its winter in the Gulf. I realized that the bird would never return to its Canadian nesting grounds, meaning the oil would create problems reaching far beyond the Gulf of Mexico” (298). Each corner of our planet is connected. Safina draws attention to the necessity for conservation efforts to acknowledge and take into account this connection. To effectively safeguard migratory species, like the gannet, an extensive plan is needed that reaches across continents and incorporates a wide range of habitats. Simply protection of nesting places or preservation of feeding grounds in isolation is insufficient. Instead, we should aim to establish interconnected networks of protected places that facilitate the flourishing of wildlife during their migratory journeys. Safina draws attention to the effects of the Deepwater Horizon oil disaster on migratory species such as gannets, underlining the necessity of conservation policies that go beyond geopolitical borders and take into account the full life cycle of these creatures. This perspective is consistent with current concepts in the field of conservation biology, which prioritize the preservation of landscapes and the significance of preserving ecological interconnectedness.

In order to provoke action in people, Safina constantly highlights the urgency of taking action. He says “The oil spill was not just an environmental disaster; it was a wake-up call. It was a reminder of the fragility of the natural world and the consequences of our actions” (*A Sea in Flames* 148). Regrettably, our capacity to take action for the planet’s well-being or any other entity depends on the presence of tangible proof substantiating a

particular entity's detrimental impact, as Safina emphasized. Safina provides extensive information about the Gulf of Mexico oil spill because he believes in the effectiveness of education and public outreach in cultivating a deeper understanding of the ocean and motivating conservation efforts. He supports efforts to increase knowledge about marine conservation, foster understanding of the ocean, and promote sustainable practices among individuals and communities. We need more information on the serious consequences of oil spills, poor fishing practices, their adverse impact on wildlife, and numerous other factors. Through a comprehensive understanding of every aspect, observing and perceiving the extensive damage mostly caused by human activities, we realize that we are the main cause of the degradation of the marine environment and that it is possible to restore its health. The ocean and all of the organisms in it are vital, and their well-being has an impact on us as well, which is why many ecocritics and advocates prioritize conservation.

Similar to Safina's beliefs, Sylvia Earle, a prominent oceanographer and marine biologist, emphasizes the significance of the ocean and conservation: "Just as we have the power to harm the ocean, we have the power to put in place policies and modify our own behavior in ways that would be an insurance policy for the future of the sea, for the creatures there, and for us, protecting special critical areas in the ocean" (Earle, *The World is Blue* 189). A more positive attitude towards nature can be achieved by altering our attitudes toward the marine environment and nature in general. While humans may occasionally lack interest in ocean conservation, it is crucial to acknowledge the Earth's fragility and the potential for us to make changes that would ensure a sustainable future. Additionally, ocean conservation can be achieved by bringing together scientific knowledge, implementing effective rules and regulations, and encouraging individual responsibility. The main argument behind the belief that awareness and science are essential for conservation lies in the necessity to gain a more profound comprehension of the natural world. This knowledge enables us to develop empathy towards nature, establish a lasting connection, and thus contribute to the protection of the marine environment. We are unable to demonstrate concern for something that we lack awareness of its significance in our lives.



Several people have come to understand the fundamental value of nature and the marine environment, aiming to share this sentiment with those who may not have a strong connection to nature and recognize its worth. Numerous environmental organizations and centers have actively engaged in efforts to restore the coastal ecosystem to the greatest level possible. The Mississippi Trustee Implementation Group has published its fourth restoration plan following the Deepwater Horizon oil spill. The plan included efforts to partially repair damages to wetlands, coastal areas, and nearby habitats. It also sought to reduce nutrient pollution and improve recreational opportunities in the Mississippi Restoration Area, which had been adversely affected by the Deepwater Horizon oil spill. Furthermore, the U.S. Fish & Wildlife Service formed the Gulf Restoration Office in response to the Deepwater Horizon oil leak that occurred on April 20, 2010 (U.S. Fish & Wildlife Service). Its primary purpose was to engage in the evaluation and restoration of ecological resources that were harmed as a result of the spill. The main objective was to actively participate in the evaluation and recovery of natural resources that were negatively impacted by the spill. Chris Doley, the chief of the National Oceanic and Atmospheric Administration Center (NOAA), expressed his thoughts and actions following the catastrophic oil spill:

The oil caused unprecedented injury to the ecosystem, including marine life like fish, sea turtles and marine mammals, birds, and coastal wetlands and nearshore habitats. It also impacted so many people and communities whose livelihoods depended on the Gulf's unique natural resources. NOAA was on the scene from the earliest moments of the crisis. As the lead science agency for coastal oil spills, we brought decades of experience protecting and restoring our coasts. We provided critical information to guide the emergency response, both on-scene and through our headquarters and regional offices. For the next six years, NOAA was there, assessing the damages, quantifying the injury, and determining the types and cost of restoration needed. (Doley)

Restoring the connection between nature and human beings fosters an affective bond and provides benefits to all organisms living on the planet. The significance is in cultivating consciousness of our environment and establishing a balance with nature. The restoration and conservation of nature can only be achieved upon the recognition of our innate

interconnectedness with it. As emphasized by numerous ecocritics and academics in literature, our interconnectedness with nature necessitates the acquiring of abilities to respect and maintain harmony with it. As Rachel Carson highlighted many years ago: “The balance of nature is not a status quo; it is fluid, ever shifting, in a constant state of adjustment. Man, too, is part of this balance” (Carson, *Silent Spring* 128).

Through the lens of affective ecocriticism, narratives become not just vehicles of storytelling, but also channels for emotional engagement and environmental awareness. Safina employs many narrative strategies to foster empathy in the reader and inspire action for a sustainable future. One of the most powerful strategies is the use of personal narratives. By weaving personal stories and experiences related to the marine environment, Safina invites readers to empathize with his journeys, creating a sense of shared connection. His narrative provides perspective on environmental challenges, making them more captivating and understandable.

Conversely, he gives detailed information about the Deepwater Horizon oil spill and addresses the distressing images and destroyed habitats of several animals to evoke an emotional response in the reader. This is to raise awareness about the repercussions that the marine environment endures when we harm it. This stands as a reminder for every human being that the natural world is fragile and demands our heightened attention. Furthermore, he uses vivid depictions of the environment and scientific details about the blowout incident, aiming to foster a positive relationship with all organisms on Earth.

There is a growing awareness that narratives play a crucial role not only in science communication but also in our interactions with other individuals, animals, and the broader environment (*Affective Ecologies* 196). With environmental narratives and the study of ecocriticism, the hope is to live a balanced and interconnected life with all that nature has to offer.

## CONCLUSION

The study of affect has garnered substantial attention in ecocriticism, especially within the last five years. Given the multifaceted nature of affect theory, diverse perspectives have emerged regarding the mechanisms for generating affect. Silvan Tomkins, a psychologist and founder of the affect theory, primarily studied emotions and expressions in human beings. Antonio Damasio's focus is on the interplay between emotions, cognition, and our perception of our surroundings. Damasio contends that the emotional reactions resulting from our body's interactions with the environment have an impact on our conscious experiences and that these emotional reactions play a critical role in forming our knowledge of the outside world. Furthermore, he believes that emotions and feelings "assist us with the daunting task of predicting an uncertain future and planning our actions accordingly" (Damasio 34). On the other hand, Kyle Bladow and Jennifer Ladino's book *Affective Ecocriticism: Emotion, Embodiment, Environment*, contributes to affect theory by highlighting the inherent influence of the environment and animals on the emotions of readers and viewers. In a similar vein, Alexa Weik von Mossner explores the sensory and emotional aspects of virtual environments encountered in literary and cultural texts in her book *Affective Ecologies: Empathy, Emotion, and Environmental Narrative*. She additionally examines how narratives about the environment inspire us to care about both humans and the more than human world.

Safina's marine narratives center on the emotional aspect as he delves into the marine ecosystem and its inhabitants. He additionally examines people's current disconnection from the natural world while sharing his own encounters in the marine environment with readers. This lost connection leads to detrimental effects on the ecosystem and causes irreparable damage to it. Despite our inherent bond with nature from birth, this connection has been gradually severed due to various circumstances, including the anthropocentric belief that humans are superior to all other living beings and that nature is more dependent on us than we are on it. Safina argues that there may come a point when nature becomes irreparable, and the conflict between humans and nature will persist unless immediate action is taken. Consequently, there will be a depletion of natural resources and insufficient space for sustainability if the disconnection to the marine environment

continues. Safina's three marine narratives, *Song for the Blue Ocean*, *Voyage of the Turtle*, and *A Sea in Flames*, emphasize the importance of this vital aspect. They also depict how we can reconnect with the marine environment and see the beauty of nature, while also illustrating the potential consequences if it is devastated beyond recovery.

While environmental narratives depict both the beauty and the degradation of nature, Safina focuses on especially one question in all of his marine narratives: "Is this the only thing we give generously and abundantly to nature, such pain?" (*Song for the Blue Ocean* 66). On the other hand, Rachel Carson argues: "It is a curious situation that the sea, from which life first arose, should now be threatened by the activities of one form of that life" (Carson, *The Sea Around Us* 1). To address this situation and rekindle our connection to nature, embracing Edward O. Wilson's biophilia hypothesis proves invaluable. According to biophilia, humans possess an innate affinity for nature—a bond that, though weakened and disrupted, can be rekindled through emotional engagement. Wilson further argues that this inherent connection offers an adaptive advantage, enabling humans to appreciate and preserve the environment essential for survival (Wilson 106). To restore our relationship with nature and rekindle our innate connection, it is crucial to fully understand the complex aspects of human nature before seeking to comprehend nature itself. Understanding the complex relationships frees our minds and spirits, allowing us to live in harmony and with the freedom to discover the wonders of nature. As Safina underlines, "The only prerequisites for taking this path are respectfulness and an extravagant desire for exploration—both impulses that build an elevated sense of vitality and purpose" (*Song for the Blue Ocean* 533).

Topophilia gained traction in ecocriticism's early phases, "offering portable terminology and interdisciplinary perspectives on positive feelings about places" (Bladow and Ladino 8). Topophilia encompasses a wide variety of emotions, from momentary visual enjoyment to the pleasurable sensation of physical connection, the affection for familiar locations like home, and the happiness derived from good health and vitality (Tuan 247). Through affective engagement with these places, human beings may feel a greater sense of well-being and experience environmental stewardship, as our experiences of places encompass all of our senses. This could be a setting or location where we have gathered

memories or feel a strong connection, evoking our emotions, like the ocean does for Safina.

Safina's poetic depiction of marine environments and places elicits strong emotional responses, emphasizing the aesthetic and sensory allure of these settings. The detailed, sensory-rich descriptions of marine life and seascapes engage readers' senses, fostering their own emotional connections to these places. Yi-Fu Tuan contends that the ocean, regarded as humanity's original home, holds significant importance for individuals and fosters topophilic attachment in marine narratives: "Human agility in water is, however, a fact. The talent is not widely shared among the primates...Could it be that our earliest home was a sort of Eden located near a lake or sea?" (Tuan 115). Topophilia refers to the innate tendency to establish connections with places and all of their animate and inanimate elements. This bond is "...adaptive, fostering the acquisition of detailed, habitat-specific knowledge" (Tuan 26). Given the significance of oceans and seas in our lives, as emphasized by Tuan and other scholars, Safina directs his attention toward the marine environment and endeavors to cultivate a stronger connection between his readers and the marine world. Accordingly, Safina emphasizes his attachment to the marine environment by offering vivid descriptions that not only showcase his connection to the marine world but also engage readers, encouraging them to reflect on their own experiences and develop a connection with the marine environment. To explain his focus on the ocean environment and his profound connection to it, he emphasizes: "No place can inspire us with more hopefulness than the great, life-making sea" (*Song for the Blue Ocean* 533).

Safina's emotionally charged narratives, aimed at conveying the ongoing issues of the marine environment and the pain experienced by its inhabitants due to human actions, serve a strategic purpose. In his narrative *Voyage of the Turtle*, he skillfully crafts an engaging narrative around sea turtles and other marine animals, delving into their behaviors and the suffering inflicted upon them by human activities. Many environmental writers, including Safina, use "readers' empathy strategically to make a moral argument" (*Affective Ecologies* 78). By vividly portraying the emotions and struggles of marine animals, he effectively immerses readers in his storytelling. While positive emotions such as happiness and relief are typically favored, Safina understands the potency of negative

emotions as catalysts for environmental action. Through his detailed depiction of animals' lives and challenges, he evokes empathy and moral concern, making distant environmental issues feel personal and urgent. This emotional engagement not only raises awareness about ecological crises but also inspires readers to take concrete steps towards conservation, whether through personal lifestyle changes, advocacy efforts, or support for conservation efforts.

Safina emphasizes the importance of taking action to support sea turtles' well-being by addressing specific aspects, such as the need to turn off neon lights on beaches and maintain a set distance between beach chairs and sea turtles, particularly during their hatching season. He highlights the suffering that sea turtles endure due to human selfishness and interference. He also challenges the misconception that only people can experience emotions, emphasizing that sea turtles too have feelings and emotions. Safina argues that animals "aspire to higher rank and wait for their chance to challenge the existing order. Their status affects their offspring's prospects. Their life follows the arc of a career. Personal relationships define them. Sound familiar? Of course. 'They' includes us. But a vivid, familiar life is not the domain of humans alone" (Safina, *Beyond Words* 2). Despite the common perception that animals are fundamentally different from humans, Safina continuously challenges and disputes this notion by providing examples of the pain and experiences of marine animals.

Many environmental writers and ecocritics incorporate scientific discourse into their narratives to educate readers and provide insight into the state of nature. Safina's book, *A Sea in Flames*, offers a thorough analysis and scientific details of one of the most devastating environmental catastrophes that occurred in American history. Nevertheless, through the delivery of objective information and the harsh facts, he elicits uncomfortable feelings such as pain and disappointment in the reader. Safina's dissatisfaction with the Deepwater Horizon oil blowout comes from the declining health of the ocean and the marine environment. This incident emphasizes ecological urgency and has the power to "organize individuals' perceptions, and convert awareness into an ethic" (Ottum 260). Understanding the causes and consequences of environmental disasters like the BP and the Exxon Valdez oil spill can prompt readers to become more cautious and attentive to environmental needs. As Lisa Ottum in her article "Feeling Let Down", "Nature might

disappoint, but it might also transport us, especially if we can train affect toward interest and reflection” (Ottum 274).

In his books, *Song for the Blue Ocean*, *Voyage of the Turtle*, and *A Sea in Flames*, Safina highlights the deterioration of animal habitats and the overall marine ecology. His narratives consistently explore “whether a tipping point has already been reached or whether we are close to an anthropogenic major extinction event” (Scanes 464). Throughout his works, Safina supports his arguments with scientific evidence. In addition, Safina’s writing is remarkable for its highly captivating, easily understandable, and exceptionally perceptive exploration of intricate connections between humans and the marine environment. Through his writing, he straightforwardly presents scientific data, to evoke empathy in the reader and provide them with a deeper understanding of the marine environment since we are incapable of feeling affectionate or protective toward matters we do not understand.

This study explores the sensory and affective experiences depicted by Safina in his selected marine narratives and their impact on readers. Environmental narratives are widely recognized as a powerful tool for helping people understand the world. They effectively engage readers and provide them with information on current global issues and the interdependence between humans and the natural environment. By employing strategic narrative techniques in environmental storytelling, instances of environmental injustice—whether involving humans or the exploitation and mistreatment of nonhuman animals—can be conveyed to readers in a way that emotionally influences them and promotes behavioral change toward the environment. Safina’s marine narrative *Song for the Blue Ocean* portrays the emotional bond with the marine environment and the connection between humans and nature. In *Voyage of the Turtle*, he delves into the emotional realm and lives of marine animals. However, *A Sea in Flames* shifts focus towards environmental injustice, the risks faced by the marine environment, and specifically, the BP oil blowout incident that occurred in the Gulf of Mexico.

This study shows the usefulness of the affective ecocritical approach in exploring the impact of environmental narratives as regards readers’ emotional engagement and change of behavior in an age of environmental crises. To foster further ecological and behavioral

changes in humans, it is essential to share personal stories of the natural environment. By connecting with these narratives, we can work towards positive changes in the natural world, given its vital importance to our lives. Throughout his marine narratives, Safina consistently emphasizes the ongoing problems facing the marine environment and the pain inflicted on marine animals, largely due to human actions. Recognizing these challenges can lead to a healthier environment and a stronger connection between humans and the marine world. Affective studies offer insights into our relationship with nature, encompassing all living and non-living entities. In the words of Carl Safina: “Where there’s life there’s hope, and so no place can inspire us with more hopefulness than the great, life-making sea—that singular, wondrous ocean covering the blue planet” (*Song for the Blue Ocean* 533). Through environmental narratives and affective ecologies, there is potential for a more balanced and harmonious coexistence with all that nature has to offer.



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## APPENDIX1. ORIGINALITY REPORT

	<b>HACETTEPE ÜNİVERSİTESİ</b> <b>SOSYAL BİLİMLER ENSTİTÜSÜ</b>	Doküman Kodu Form No.	FRM-YL-15
		Yayın Tarihi Date of Pub.	04.12.2023
	<b>FRM-YL-15</b> <b>Yüksek Lisans Tezi Orijinallik Raporu</b> <i>Master's Thesis Dissertation Originality Report</i>	Revizyon No Rev. No.	02
		Revizyon Tarihi Rev.Date	25.01.2024

<b>HACETTEPE ÜNİVERSİTESİ</b> <b>SOSYAL BİLİMLER ENSTİTÜSÜ</b> <b>AMERİKAN KÜLTÜRÜ VE EDEBİYATI ANABİLİM DALI BAŞKANLIĞINA</b>	
Tarih: 01/07/2024	
Tez Başlığı: Carl Safina'nın Deniz Anlatılarına Afektif Çevreci Eleştiri Yaklaşımı: <i>Song for the Blue Ocean, Voyage of the Turtle ve A Sea in Flames</i>	
Yukarıda başlığı verilen tezimin a) Kapak sayfası, b) Giriş, c) Ana bölümler ve d) Sonuç kısımlarından oluşan toplam 129 sayfalık kısmına ilişkin, 26/06/2024. tarihinde şahsım/tez danışmanım tarafından Turnitin adlı intihal tespit programından aşağıda işaretlenmiş filtrelemeler uygulanarak alınmış olan orijinallik raporuna göre, tezimin benzerlik oranı % 8 'dir.	
Uygulanan filtrelemeler*:	
1. <input type="checkbox"/> Kabul/Onay ve Bildirim sayfaları hariç 2. <input type="checkbox"/> Kaynakça hariç 3. <input type="checkbox"/> Alıntılar hariç 4. <input type="checkbox"/> Alıntılar dâhil 5. <input type="checkbox"/> 5 kelimedenden daha az örtüşme içeren metin kısımları hariç	
Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü Tez Çalışması Orijinallik Raporu Alınması ve Kullanılması Uygulama Esasları'nı inceledim ve bu Uygulama Esasları'nda belirtilen azami benzerlik oranlarına göre tezimin herhangi bir intihal içermediğini; aksinin tespit edileceği muhtemel durumlarda doğabilecek her türlü hukuki sorumluluğu kabul ettiğimi ve yukarıda vermiş olduğum bilgilerin doğru olduğunu beyan ederim.	
Gereğini saygılarımla arz ederim.	
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	Öğrenci No	N20131404
	Enstitü Anabilim Dalı	Amerikan Kültürü ve Edebiyatı
	Programı	Amerikan Kültürü ve Edebiyatı

### DANIŞMAN ONAYI

UYGUNDUR.  
(Unvan, Ad Soyad, İmza)

\* Tez **Almanca** veya **Fransızca** yazılıyor ise bu kısımda tez başlığı **Tez Yazım Dilinde** yazılmalıdır.

\*\*Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü Tez Çalışması Orijinallik Raporu Alınması ve Kullanılması Uygulama Esasları İkinci bölüm madde (4)/3'te de belirtildiği üzere: Kaynakça hariç, Alıntılar hariç/dahil, 5 kelimedenden daha az örtüşme içeren metin kısımları hariç (Limit match size to 5 words) filtreleme yapılmalıdır.

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		Yayın Tarihi Date of Pub.	04.12.2023
	<b>FRM-YL-15</b> <b>Yüksek Lisans Tezi Orijinallik Raporu</b> <i>Master's Thesis Dissertation Originality Report</i>	Revizyon No Rev. No.	02
		Revizyon Tarihi Rev.Date	25.01.2024

**TO HACETTEPE UNIVERSITY**  
**GRADUATE SCHOOL OF SOCIAL SCIENCES**  
**DEPARTMENT OF AMERICAN CULTURE AND LITERATURE**

Date: 01/07/2024

Thesis Title (In English): An Affective Ecocritical Approach to Carl Safina's Marine Narratives: *Song for the Blue Ocean, Voyage of the Turtle, and A Sea in Flames*

According to the originality report obtained by myself/my thesis advisor by using the Turnitin plagiarism detection software and by applying the filtering options checked below on 26/06/2024 for the total of 129. pages including the a) Title Page, b) Introduction, c) Main Chapters, and d) Conclusion sections of my thesis entitled above, the similarity index of my thesis is 8 %.

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	<b>Student Number</b>	N20131404
	<b>Department</b>	American Culture and Literature
	<b>Programme</b>	American Culture and Literature

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## APPENDIX2. ETHICS BOARD WAIVER FORM

	<b>HACETTEPE ÜNİVERSİTESİ</b> <b>SOSYAL BİLİMLER ENSTİTÜSÜ</b>	Doküman Kodu Form No.	FRM-YL-09
		Yayın Tarihi Date of Pub.	22.11.2023
	<b>FRM-YL-09</b> <b>Yüksek Lisans Tezi Etik Kurul Muafiyeti Formu</b> <i>Ethics Board Form for Master's Thesis</i>	Revizyon No Rev. No.	02
		Revizyon Tarihi Rev.Date	25.01.2024

**HACETTEPE ÜNİVERSİTESİ**  
**SOSYAL BİLİMLER ENSTİTÜSÜ**  
**AMERİKAN KÜLTÜRÜ VE EDEBİYATI ANABİLİM DALI BAŞKANLIĞINA**

Tarih: 01/07/2024

Tez Başlığı (Türkçe): Carl Safina'nın Deniz Anlatılarına Afektif Çevreci Eleştiri Yaklaşımı: *Song for the Blue Ocean, Voyage of the Turtle ve A Sea in Flames*

Tez Başlığı (Almanca/Fransızca)\*: .....

Yukarıda başlığı verilen tez çalışmam:

1. İnsan ve hayvan üzerinde deney niteliği taşımamaktadır.
2. Biyolojik materyal (kan, idrar vb. biyolojik sıvılar ve numuneler) kullanılmasını gerektirmemektedir.
3. Beden bütünlüğüne veya ruh sağlığına müdahale içermemektedir.
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