

**ENVIRONMENTAL DAMAGE IN MOBI WARREN'S *THE BEE*  
*MAKER: AN ECOCRITICAL ANALYSIS***

**THESIS**

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**DEPARTMENT OF ENGLISH LITERATURE  
FACULTY OF HUMANITIES  
UNIVERSITAS ISLAM NEGERI MAULANA MALIK  
IBRAHIM MALANG**

**2024**

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**THESIS**

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in Partial Fulfillment of the Requirements for the Degree of *Sarjana Sastra* (S.S.)

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**2024**

## STATEMENT OF AUTHORSHIP

I state that the thesis entitled “Environmental Damage in Mobi Warren’s *The Bee Maker: An Ecocritical Analysis*” is my original work. I do not include any materials previously written or published by another person, except those cited as references and written in the bibliography. Hereby, if there is any objection or claim, I am the only person who is responsible for that.

Malang, 6 November 2024

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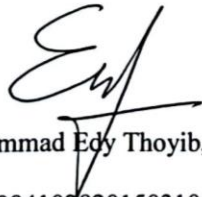
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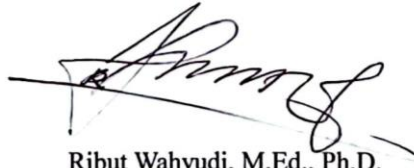
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**MOTTO**

“Knowledge is the key to transformation.”

(Unknown)

## **DEDICATION**

This research is particularly devoted to my beloved father, Mr. Aminudin Zen and my mother, Mrs. Erlina Mardiningsih. It is also dedicated to my older brother, Reza Farkhi, and to all my family members.

## ACKNOWLEDGEMENT

I extend my heartfelt gratitude to Allah SWT, the Most Gracious and Merciful, for the boundless guidance and blessings that have enabled me to complete my thesis, titled *Environmental Damage in Moby Warren's The Bee Maker: An Ecocritical Analysis*. May blessings and peace continually be upon the Prophet Muhammad SAW, who has guided the Muslims from darkness into light.

I am truly grateful for the help and support of many people during the work on this thesis. My deepest gratitude goes to my parents. Their love, support, and prayers have been everything to me. They have sacrificed so much, and I would not have succeeded without them.

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I acknowledge that this thesis may have imperfections due to my limitations as a researcher. I sincerely welcome any feedback or suggestions from readers that may help improve the quality and depth of my future work. My hope is that this thesis serves as a meaningful contribution to the field and encourages further research. I extend my heartfelt gratitude to everyone who has supported me throughout this journey.



Malang, 6 November 2024

A handwritten signature in black ink, appearing to read 'Usm'.

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## ABSTRACT

**Maftuh, Hisyam Amier** (2024). *Environmental Damage in Mobi Warren's The Bee Maker: An Ecocritical Analysis*. Undergraduate Thesis. Department of English Literature, Faculty of Humanities, Universitas Islam Negeri Maulana Malik Ibrahim Malang. Advisor Muhammad Edy Thoyib, M. A.

*Keywords: Ecocritical, environmental damage, environmental ethics*

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In contemporary discourse, environmental issues such as climate change, pollution, and biodiversity loss have gained increased attention, evidenced by alarming media reports on these crises. Mobi Warren's novel, *The Bee Maker*, poignantly illustrates the ecological challenges of human activity, particularly the catastrophic decline of honeybee populations crucial for pollination. This research thoroughly analyzes the environmental damage depicted in *The Bee Maker* using Garrard's ecocriticism theory and the environmental ethics theory by Keraf to explore how environmental damage can be solved within the novel. The researcher found three environmental damage in the novel: (1) pollution, which is in the form of pesticides that ruin the honeybees' capability to survive; (2) apocalypse, which is illustrated by a state of severe drought, resource depletion, and global warming's effects on agriculture; (3) and animals, focusing on honeybees rights, honeybees exploitation, and worsening honeybees population. Additionally, the protagonist Melissa's and her father's roles in solving the environmental damage include (1) together conducting a beehive rescue mission, (2) Melissa's father doing research on honeybees, and (3) Melissa participating in the 5K fundraiser for the bee sanctuary. By analyzing Warren's *The Bee Maker* novel, the researcher hopes it helps us raise awareness regarding the importance of preserving natural life nowadays.

## ABSTRAK

**Maftuh, Hisyam Amier** (2024). *Kerusakan Lingkungan dalam Novel The Bee Maker Karya Mobi Warren: Sebuah Analisis Ekokritis*. Undergraduate Thesis. Department of English Literature, Faculty of Humanities, Universitas Islam Negeri Maulana Malik Ibrahim Malang. Pembimbing Muhammad Edy Thoyib, M. A.

*Kata Kunci: Ekokritis, kerusakan lingkungan, etika lingkungan*

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Dalam wacana kontemporer, isu lingkungan seperti perubahan iklim, polusi, dan hilangnya keanekaragaman hayati telah mendapat perhatian yang meningkat, dibuktikan dengan laporan media yang mengkhawatirkan tentang krisis ini. Novel karya Mobi Warren, *The Bee Maker*, dengan menyentuh hati menggambarkan tantangan ekologis dari aktivitas manusia, khususnya penurunan populasi lebah madu yang sangat penting untuk penyerbukan. Penelitian ini menganalisis secara menyeluruh kerusakan lingkungan yang digambarkan dalam *The Bee Maker* dengan menggunakan teori ekokritik Garrard dan teori etika lingkungan oleh Keraf untuk mengeksplorasi bagaimana kerusakan lingkungan dapat diselesaikan dalam novel tersebut. Peneliti menemukan tiga kerusakan lingkungan dalam novel tersebut: (1) polusi, yang berupa pestisida yang merusak kemampuan lebah madu untuk bertahan hidup; (2) bencana, yang digambarkan oleh keadaan kekeringan parah, penipisan sumber daya, dan dampak pemanasan global pada pertanian; (3) dan binatang, dengan fokus pada hak lebah madu, eksploitasi lebah madu, dan populasi lebah madu yang semakin memburuk. Selain itu, peran tokoh utama Melissa dan ayahnya dalam mengatasi kerusakan lingkungan meliputi (1) bersama-sama melakukan misi penyelamatan sarang lebah, (2) ayah Melissa melakukan penelitian tentang lebah madu, dan (3) Melissa berpartisipasi dalam penggalangan dana 5K untuk tempat perlindungan lebah. Dengan menganalisis novel *The Bee Maker* karya Warren, peneliti berharap hal ini dapat membantu kita meningkatkan kesadaran mengenai pentingnya melestarikan kehidupan alam saat ini.

## مستخلص البحث

مفتوح، هشام أمير (٢٠٢٤). الضرر البيئي في رواية *The Bee Maker* لموي وارن: تحليل نقدي بيئي. أطروحة جامعية. قسم الأدب الإنجليزي، كلية العلوم الإنسانية، جامعة إسلام نيجري مولانا مالك إبراهيم مالانج. المشرف محمد إيدي ثيوب، ماجستير في الآداب.

الكلمات المفتاحية: النقد البيئي، الضرر البيئي، الأخلاق البيئية

في الخطاب المعاصر، اكتسبت القضايا البيئية مثل تغير المناخ والتلوث وفقدان التنوع البيولوجي اهتمامًا متزايدًا، وهو ما يتضح من التقارير الإعلامية المثيرة للقلق حول هذه الأزمات. توضح رواية موي وارن، *The Bee Maker*، بشكل مؤثر التحديات البيئية للنشاط البشري، وخاصة الانحدار الكارثي في أعداد نحل العسل التي تعد حاسمة للتلقيح. يحلل هذا البحث بدقة الضرر البيئي الذي تم تصويره في *The Bee Maker* باستخدام نظرية النقد البيئي لغارارد ونظرية الأخلاق البيئية لكيراف لاستكشاف كيفية حل الضرر البيئي داخل الرواية. وجد الباحث ثلاثة أضرار بيئية في الرواية: (١) التلوث، والذي يكون في شكل مبيدات حشرية تدمر قدرة نحل العسل على البقاء؛ (٢) نهاية العالم، والتي تتجلى في حالة الجفاف الشديد، واستنزاف الموارد، وتأثيرات الانحباس الحراري العالمي على الزراعة؛ (٣) والحيوانات، مع التركيز على حقوق نحل العسل، واستغلال نحل العسل، وتدهور أعداد نحل العسل. بالإضافة إلى ذلك، تتضمن أدوار البطلة ميليسا ووالدها في حل الضرر البيئي (١) القيام معًا بمهمة إنقاذ خلية نحل، (٢) قيام والد ميليسا بإجراء أبحاث حول نحل العسل، و(٣) مشاركة ميليسا في حملة جمع التبرعات لمسافة ٥ كيلومترات لصالح محمية النحل. من خلال تحليل رواية وارن *The Bee Maker*، يأمل الباحث أن يساعدنا ذلك في زيادة الوعي بشأن أهمية الحفاظ على الحياة الطبيعية في الوقت الحاضر.

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# CHAPTER I

## INTRODUCTION

This chapter presents key points of explanation. The first point explains the background of the study. Furthermore, it explains the problems of the study, the significance of the study, the scope and limitation, and the definition of key terms.

### **A. Background of the Study**

In recent years, there has been much news about environmental disasters in the mass media, which is very worrying since it can threaten human life or even nature in the future. For example, CNN News reports disasters such as climate change, which causes wildfires (Paddison, 2024). Euronews also reported on the extinction of more than 1,400 bird species resulting from human activities such as overexploitation and illegal hunting (Symons, 2024). Another news report from BBC News reported that coughs and colds suffered by children are caused by prolonged air pollution (Suwarso, 2023). This news about environmental disasters indicates that human actions can threaten the ecological stability of all living things on Earth.

Humans play a key role in shaping and transforming land, air, and water ecosystems. Several human activities threaten the environment, but humans also make efforts to save the environment. This delicate balance between harm and preservation reflects Garrard's (2004) ecocriticism theory, which explores cultural representations of environmental issues. This theory engages with various environmental perspectives, including environmental ethics. Environmental ethics involves protecting nature and seeing nature as one to create harmony (Keraf,

2010). Glotfelty (1996) said that one of the forms of response to the ecological crisis is through literary works. The emergence of literary works with a focus on environmental issues says that the literary works have a visible sign of awareness of social and environmental issues. In order to discuss and analyze that, there is a literary theory known as literary ecology. Literary ecology studies how nature and literature are connected; it is also referred to as literary eco-criticism (Arbain, 2020).

Literary ecocriticism studies environmental issues like natural destruction, famine, disease outbreaks, pollution, places, the pastoral, the wilderness, the end of the world, dwelling, animals, and anything else that has to do with the earth's environment (Garrard, 2004). One of those areas of study that explores a devastated nature is apocalyptic eco-criticism. Apocalyptic eco-criticism is an attempt to bring humanity together to raise awareness about environmental issues that have happened in our world through literary works. According to Pamungkas (2021), the literary work that has the theme of preserving nature while raising awareness related to environmental issues is green literature. One of the authors who cares about environmental issues is Mobi Warren, a poet, translator, and former math professor at the University of Texas at San Antonio. Her first novel, *The Bee Maker*, published for the first time in 2019, is a masterpiece green literature-themed novel that was awarded the Best Middle Grade Book Purple Dragonfly Award (Warren, 2019).

The novel *The Bee Maker* tells the story of two main characters named Melissa and her father, who live in Yolo County, California. Melissa is 13 years old, while her father, Dr. Paul Bui, is a scientist specializing in honeybee communication. They live in 2036, and the environment around where they live is



damaged due to human actions, such as the overuse of pesticides, causing the honeybee population to decline. The declining population of honeybees causes food scarcity. Melissa and her father are on a mission to save the declining honeybee population. This novel beautifully captures the deep, inseparable bond between humans and nature. Therefore, the researcher is interested in analyzing this novel further regarding the form of environmental damage in Mobi Warren's novel *The Bee Maker* through Garrard's (2004) ecocriticism theory and also using Keraf (2010) environmental ethics theory to analyze the main characters action to solve the environmental damage.

Garrard's (2004) also said that ecocriticism is a way for people to show how they feel, what they think, and how they react to the environment around them by defining, exploring, and even solving ecological problems. He also said that ecocriticism uses a politically aware, earth-centered perspective, evaluating texts based on their responses to environmental crises. Through this approach, ecocriticism analyzes how literature can serve as a call to action for addressing ecological problems. This is in accordance with the story in Mobi Warren's novel *The Bee Maker*, which primarily describes how the main characters, Melissa and her father, is concerned about environmental damage because she is aware of the effects of honeybee extinction, such as the scarcity of food. She fought hard to save the remaining honeybees so that the pollination process could still occur. Thus, using an ecocriticism approach is suited to analyzing this novel, and it helps in conducting this research.

In order to conduct this research, the researcher needs several previous studies first. These are several theses using Garrard's (2004) ecocriticism theory. First, research conducted by Andika (2023) analyzes the environmental apocalypse in Imbolo Mbue's novel *How Beautiful We Were*. The research produces data that shows oil mining depletes clean water, food, and oil, and tree removal for infrastructure development is causing biodiversity loss. Second, Muhlisin's (2022) research on John Lanchester's book *The Wall* found that environmental issues are causing the protagonist to develop solastalgia and eco-anxiety. Research on John Lanchester's book *The Wall* found that environmental issues are causing the protagonist to develop solastalgia and eco-anxiety. Third, Aprilia (2022) analyzes William Kambkwamba and Bryan Mealer's novel *The Boy Who Harnessed the Wind*, shows Malawi's drought, floods, and severe winds, and also reveals how the main character invents a 6R windmill to solve Malawi's environmental damage.

Besides the thesis, the researcher also found several other studies in the form of journal articles that also use the same theory. The first article was conducted by Arianto, Sayuti, and Efendi (2021), which analyzed Conie Sema's *Rawa Gambut* drama script and found that humans desire to acquire wealth causes ecological disasters that damage millions of hectares, contributing to haze pollution. Later, Busairi, Supratono, and Tjahyono (2021) did research, followed by Sartini and Endahati (2023) and Rahmah and Hartono (2023). The result of those three can be concluded: environmental damage is divided into six types: pollution, wilderness, apocalypse, dwelling, animals, and earth. Through those three previous studies, the

similarity of the representation of environmental damage in the novel is described as the act of greedy human intervention.

In addition, there is still another previous study that uses the same theory but a different object than before, which is short stories. The first research was from Widyaningtyas & Liliani (2020), and the second was by Juanda & Azis (2023). The similarities between these two articles are that they describe the environmental ethic needed to solve environmental damage. The study by Widyaningtyas and Liliani (2020) analyzes the Jawa Pos Online short story and discovers environmental issues like soil pollution, deforestation, and blast fishing, while its environmental ethics are respect for nature. Meanwhile, Juanda and Azis (2023) analyze the short story *Pengelana Laut*, which tells about dolphin exploitation and also discusses environmental ethics to prevent it. In contrast to both of them, Afandi and Juanda (2020) conducted research on Anas S. Malo's short story *Apakah Rumah Kita Akan Tenggelam*, in which they used a questionnaire to gather student data on environmental disasters. The findings showed that students discovered themes of environmental disasters like floods in the story.

Based on previous studies, there are similarities and differences with this research. The similarities are about discussing the same topic and theory. The difference is in the object of the study and the aim of the research being conducted. Because of previous research, no one used the research object of Mobi Warren's novel *The Bee Maker*. Therefore, the researcher aims to describe the environmental damage in the novel *The Bee Maker* by Mobi Warren using Garrard's (2004) ecocriticism theory. In addition, the researcher also wants to describe the main

characters' efforts in solving the environmental damage using Keraf's (2010) environmental ethics theory. By comprehending the result of this research, the researcher hopes it helps us raise awareness regarding the importance of preserving natural life nowadays.

## **B. Problems of the Study**

The main goals of this study are to answer these two questions:

1. What are the forms of environmental damage caused by humans shown in Mobi Warren's *The Bee Maker*?
2. How do the main characters solve the environmental damage in Mobi Warren's *The Bee Maker*?

## **C. Significance of the Study**

This research offers both practical and theoretical benefits in the field of literature, especially in ecocriticism theory. Practically, the results of this study can educate people about the environment problem and why protecting ecosystems is necessary. Theoretically, this research contributes to ideas and literature within ecocriticism for future research. It's useful for students and researchers, especially those who like to look at literature from an ecological point of view.

## **D. Scope and Limitation**

This research focuses on exploring Mobi Warren's novel *The Bee Maker* by discussing the forms of environmental damage and the efforts of the main

characters, Melissa and her father, to solve the environmental damage and save the honeybees from extinction.

## **E. Definition of Key Terms**

### 1. Ecocriticism

Ecocriticism is a way to explore how literature and nature connect. It uses literary techniques and ecological ideas to study how a piece of writing involves the author, characters, and their environment (Garrard, 2004).

### 2. Environmental Ethics

Environmental ethics is a study of how humans interact morally with nature. It questions the old belief that people are superior to the environment and can use it solely for their gain (Keraf, 2010).

### 3. Environmental Damage

Environmental damage is a result of human actions that harm the environment. These actions pollute the air, water, and land. They destroy habitats and reduce the number of plants and animals. This also affects the climate (Garrard, 2004).

## CHAPTER II

### REVIEW ON RELATED LITERATURE

This chapter presents a literature review. It provides key information forming the basis for the theory and analysis. The discussion focuses on the definition of ecocriticism, the history of ecocriticism, the scope of ecocriticism, and environmental ethics study.

#### A. Definition of Ecocriticism

Ecocriticism, derived from Greek words *oikos* and *kritos*, is a literary and cultural theory that explores the relationship between humans and the earth. *Oikos*, meaning nature, refers to a place, while *kritos*, meaning judges, refers to those who maintain order in a house. Ecocriticism stands out among contemporary literary and cultural theories because it is closely tied to ecology which studies interactions between species and their habitats. It should take into account, its role in the offense for which it criticizes (Howard, 1996).

Garrard (2004) said that ecocriticism is a literary theory that analyzes the relationship between literature and environment whereby the author, characters and place interact in a dialogue. This theory is a basis for analysis of how people describe the connection between humans and nature.

Glotfelty (1996) in her book entitled *The Ecocriticism Reader: Landmarks in Literary Ecology* says ecocriticism is a type of study that highlights the connection between human and non-human elements. But, apart from that, another definition of ecocriticism comes from Kerridge's *Writing the Environment* (1998), which says ecocriticism investigates how textual and intellectual responses to the

environmental crisis and how ideas concerning the environment appear throughout the text.

## **B. The History of Ecocriticism**

The history of ecocriticism begins with an interest in the relationship between humans and the environment in literature and culture. Rachel Carson's 1962 book *Silent Spring* is often credited with sparking modern environmental consciousness (Carson, 1999). Carson used the narrative of *A Fable for Tomorrow* to depict the ecological damage caused by pesticides such as DDT, which she argued was a serious threat to human and wildlife health. Through her poetic writing style and scientific approach, Carson sparked public awareness and introduced debates about pollution and the need for ecological responsibility, which formed the basis for the development of ecocriticism (Garrard, 2004).

Influenced by Buell's critical perspective, ecocriticism focuses on the bond between text and humans, focusing on scientific aspects of ecology (Upstone, 2017, p. 284). For the first time, the term "ecocriticism" was used by Rueckert in his essay, *Literature and Ecology: An Experiments in Ecocriticism* (1978). Glotfelty later contributed to the development of ecocriticism, describing it as a theory or criticism that looks into how a literary work is connected to its physical environment.

Ecocriticism is a way of thinking about literature and culture that focuses on the relationship between humans and the environment. It became well-known in the early 1990s when the Association for the Study of Literature and Environment (ASLE) was formed. The goal of ecocriticism is to help people better understand how everything on Earth is connected within a larger ecological system. The ASLE

(1992) initiated academic debates on literary analysis, education, creative writing and environmental problems in conferences and publications such as *The Ecocriticism Reader* (1996) by Glotfelty and Fromm and Garrard's *Ecocriticism* (2004). Early ecocriticism focused mostly on romantic poems, stories about the wilderness, and writings about nature. However, in recent years, it has shifted to something called cultural ecocriticism. This means studying movies, TV shows, and popular books that talk about environmental problems. The growing interest in ecocriticism shows that people are becoming more aware of and concerned about the environment.

Buell, in his book *The Future of Environmental Criticism: Environmental Crisis and Literary Imagination Ecocriticism* (2005) says that ecocriticism is a literary movement that can be divided into three waves and aims to broaden human understanding of this world as a whole, beyond human life alone. The first wave focused on dehistoricizing nature, overlooking deeper political and theoretical dimensions. The second wave brought new ways of analyzing literature that broke down human-centered scholarship, imperialism, and environmental damage. The third wave wants everyone in the world to understand what ecocritical practice means and how it can help with problems like global warming (Buell, 2005).

### **C. Scope of Ecocriticism**

Garrard (2004) divides the focus of his theory into eight concepts. They are pollution, position, pastoral, wilderness, apocalypse, dwelling, animals, and the earth. However, this research focuses on the concept of pollution, position, apocalypse, and animals to answer the research problems.



## **1. Pollution**

Garrard (2004) said that pollution constitutes an environmental problem marked by the excessive presence of something at the wrong spot and resulting in the degradation of the environment. He also notes that pollution can take the form of solids, gases, liquids, or dissipated energy. It disrupts the balance of nature and environment. One of the major causes of pollution according to the American biologist Rachel Carson is the use of organic pesticides like DDT, aldrin, and dieldrin, which are frequently utilized for killing pest insects (p. 2). Additionally, pollution is not limited to chemical pesticides alone; it can also be radioactive, artificial light, noise, and carbon dioxide which are invisible pollutants (p. 12).

## **2. Position**

Garrard divided position concept again into four smaller group, include cornucopia, environmentalism, deep ecology, ecofeminism, and social (Garrard, 2004, p. 16).

### **a. Cornucopia**

Garrard's concept of cornucopia addresses the economic impact of scarce natural resources, framing it as an economic rather than environmental issue. He argues that human welfare is prioritized over environmental preservation and criticizes the cornucopian view, which downplays environmental threats, relying on human ingenuity and capitalism to solve problems. Cornucopians believe economic growth and technological progress will improve welfare, citing falling resource prices. However, Garrard points out flaws, such as overlooking nature's intrinsic value and overestimating capitalism's problem-solving abilities, emphasizing that

many environmental improvements result from activism and regulation, not just innovation (Garrard, 2004, p. 16).

### **b. Environmentalism**

Environmentalism encompasses a broad range of people concerned with issues like global warming and pollution, aiming to maintain their standard of living without radical social change. These "environmentalists" often belong to mainstream organizations like the Sierra Club or Nature Conservancy, valuing rural lifestyles and seeking technological solutions through government or NGOs. While some engage in actions such as recycling or buying organic products, they still uphold Western traditions like democracy and progress. Despite criticism from radicals for compromising with the socio-economic order, environmentalism has made significant advancements, like expanding organic farming, and continues to influence industries (Garrard, 2004, p. 18).

### **c. Deep Ecology**

Deep ecology is a radical form of environmentalism that emphasizes the intrinsic value of all human and non-human life, independent of human needs. The movement advocated for population reduction and opposed anthropocentric views, promoting ecocentrism, where nature holds inherent worth. Critics argue that deep ecology's egalitarian stance may seem misanthropic or impractical. Nonetheless, it plays a vital role in radical environmentalism, addressing issues like poverty and deforestation in developing and developed countries, stressing the interconnectedness between humans and nature (Garrard, 2004, p. 21).

#### **d. Ecofeminism**

Ecofeminism challenges the connection between patriarchy and environmental destruction, asserting that women's liberation is intertwined with nature's preservation. It critiques stereotypes that associate women with nature and emotion, while men are linked to culture and reason. By opposing anthropocentrism and androcentrism, ecofeminism highlights parallels between the exploitation of nature and the oppression of women, rooted in dualistic thinking that prioritizes men over women and humans over nature. While radical ecofeminism has been criticized for reinforcing gender roles, ecofeminism emphasizes environmental justice and critiques intersecting oppressions of race, gender, and class (Garrard, 2004, p. 23).

#### **e. Social Ecology and Eco-Marxism**

Social ecology and eco-Marxism argue that environmental issues stem from human domination and exploitation, rather than solely from anthropocentrism. Both oppose deep ecology's mysticism and individualism, advocating for a political approach to ecological problems. Eco-Marxists focus on class conflict and the role of capitalism, while social ecologists emphasize decentralized, non-hierarchical communities. Though marginalized in developed nations, these ideologies influence Third World environmental movements and anti-globalization efforts, with anarchism experiencing a resurgence (Garrard, 2004, p. 27).

### **3. Apocalypse**

Garrard (2004) believes that apocalypse in this case is an abnormal condition of nature and the environment which include climate change, natural

disasters and destruction caused by humans. He points out that the world will not stop existing, and it is probable that the environment can tolerate it as well. Garrard, among others, also noted that depletion of natural resources and natural imbalances are environmental apocalypses (p. 94).

In addition, over-population, which results from uncontrolled births, may lead to environmental degradation, famine and war (p. 96). This indicates that over-population is not merely a political or economic calamity, but a breakdown of the environment. It therefore implies that the appropriate approaches on how economic development can be realized and environmental sustainability should be put in place. Garrard stated that there are two forms of environmental apocalypse, which are climate change and depletion of natural resources, as explained below:

**a. Climate Change**

Climate change, according to Garrard, Goodbody, Handley, and Posthumus (2019), is a long-term change in the average weather conditions of a region or the world, like changes in temperature, rainfall, and wind. Human activities, such as releasing carbon dioxide, contribute to this. Climate change has led to problems like droughts (lack of water), heatwaves, higher temperatures, and rising sea levels.

**b. Depletion of Natural Resources**

Garrard (2004) notes that over-exploitation of the earth due to activities beyond normal levels will lead to the depletion of the natural resources. Since natural resources are limited, for example fresh water, forest, and fossil fuels will not last forever. Causes include overconsumption, overfishing, deforestation, and

fossil fuel burning. Such activities lead to the depletion of biodiversity, destruction of habitats and environmental problems.

#### **4. Animals**

Animals play a crucial role in human existence, providing essential services like food. However, humans often treat animals as mere meals, neglecting their rights and authority. Garrard's book explores the relationship between humans and animals, focusing on animal rights in cultural analysis and representation (Garrard, 2004, p. 136). He divides the study into domestic animals and cyborgs, and wild animals and biodiversity (p. 141). Ecocriticism addresses issues such as boundaries between human and animal life, advanced technology, and the deteriorating habitats of animals (p. 142).

#### **5. The Earth**

The concept of the earth encompasses various aspects and concerns related to environmental issues that were not mentioned in the previous concept, such as global warming, greenhouse effect and others (Garrard, 2004). Globalization, driven by population growth and capitalism, has led to the destruction of the earth.

Garrard uses the Greek Goddess Gaia and Christianity to describe the earth's destiny and history (p. 172). These days, cultural studies and socio-ecology have turned into the major world issues which impacted the whole globe economically, politically, literary, and generally in terms of popular culture.

#### **D. Environmental Ethics Study**

According to Keraf (2010), humans and nature were once united in an ecological network, with humans as protectors of nature. However, an anthropocentric view has developed which considers humans to be the center of the universe and capable of exploiting nature. Biocentrism and ecocentrism are environmental theories that oppose this view. Biocentrism argues that everything has inherent value, while ecocentrism considers the whole ecosystem including living and non-living elements (Keraf, 2010; Dewi, 2015). Environmental ethics is needed to maintain balance and interdependence between humans and nature.

Keraf's environmental ethics and Garrard's ecocriticism theory share a focus on the interconnectedness of humans and nature and the moral duty to protect the environment. Keraf highlights the intrinsic value of nature, advocating for respect and collective responsibility beyond anthropocentric views (Keraf, 2010). Similarly, Garrard explores how cultural and literary portrayals of human-nature relationships inspire ecological awareness and challenge anthropocentric narratives (Garrard, 2004; Keraf, 2010).

Keraf, in his book entitled *Etika Lingkungan Hidup*, published in 2010, divides the environmental ethics principles into several categories: 1) respect for nature; 2) responsibility towards nature; 3) cosmic solidarity; 4) love and care for nature; 5) principle of "no harm"; and 6) simple principle of living and harmony with nature.

### **1. Respect for Nature**

Humans, as part of the ecological community, should respect nature. This attitude is a basic principle for humans as part of nature. The reason is that humans, as an ecological community, must respect each other's lives together, maintain existence, and respect nature as a home in the ecological network. This respect can be done by allowing all living things to grow and develop according to their purpose (Keraf, 2010, p. 168).

### **2. Moral Responsibility Towards Nature**

Keraf emphasizes that humans bear a moral responsibility toward nature, as they are part of it. This responsibility demands not only individual but collective efforts to protect nature's integrity, ensuring its sustainability and preventing harm. Every being in nature has intrinsic value, beyond human utility. Therefore, humans should adopt a stewardship mindset, treating nature as a shared treasure rather than exploiting it. A moral responsibility towards nature includes working together to preserve ecosystems, reminding others of their duty, and intervening to prevent environmental damage (Keraf, 2010, p. 169).

### **3. Cosmic Solidarity**

This principle emphasizes the need for solidarity between humans and nature, as they are equal parts of the ecological network. Keraf (2010, p. 171) said that cosmic solidarity includes the ability to feel what animals feel, so that awareness arises to protect them. It involves implementing pro-nature policies and opposing actions that harm the environment.

#### **4. Caring for Nature**

The development of a caring attitude towards the environment stems from acknowledging that every living organism, as a part of the ecological system, possesses a right to receive care, safeguarding, and avoidance of harm (Keraf, 2010, p. 172). This principle is a derivative of the previous ones and involves caring for and protecting nature. This action can be done by recognizing that all living beings should be cared for and protected entirely, without expecting exchange or reward.

#### **5. Principle of “No Harm”**

Humans have moral responsibilities and obligations towards nature, which include avoiding unnecessary damage. This relies on the idea that humans lack the ethical right to engage in behaviors that cause harm to other beings. The stance of refraining from interfering in the preservation of others emphasizes the importance of human tolerance. This principle, rooted in biocentrism and ecocentrism, advocates for no harm to nature. It can be practiced through beliefs such as reverence for sacred trees or abstaining from certain areas and the conscious avoidance of causing harm to nature without reasoning (Keraf, 2010, p. 173).

#### **6. Simple Principle of Living and Harmony with Nature**

This principle encourages a simple and harmonious lifestyle with nature, which can be actualized by using and utilizing nature according to need. It is considered a fundamental principle in addressing the ecological crisis (Keraf, 2010, p. 176).



## CHAPTER III

### RESEARCH METHOD

This chapter presents how this research is conducted. This explains the steps that are taken to achieve the research objectives. It includes research design, data source, data collection, and data analysis.

#### **A. Research Design**

This research design is categorized as a literary criticism because its purpose is to analyze a literary work (Peck & Coyle, 1984). It is in line with what Gillespie (2010) says that literary criticism includes analyzing, interpreting, and evaluating literary works. In order to analyze the novel and achieve the objective of this research, the ecocriticism methodology is utilized in the course of this literary criticism. First, the researcher describes the forms of environmental damage in Moby Warren's *The Bee Maker* using Garrard's (2004) ecocriticism theory. This theory aims to reveal any forms of environmental damage found in the novel. It includes the effect of environmental damage on humans. Second, this research describes how the main characters solve the environmental damage in Moby Warren's *The Bee Maker* using Keraf's (2010) environmental ethics theory. This theory reveals the main characters' efforts to save the environment directly and indirectly.

## **B. Data Source**

The main data source for this research is one of the novels by Mobi Warren, entitled *The Bee Maker*. This novel was first published on March 25<sup>th</sup>, 2019, by BookBaby, and it has a total of eighteen chapters and two hundred eighteen pages.

## **C. Data Collection**

Several methods, including documenting, reading, taking important notes, and highlighting the novel's key points, are utilized to collect data from *The Bee Maker* for this research. The researcher takes the following procedures to ensure a thorough analysis:

1. Conduct a deep reading of the novel carefully and repeatedly.
2. Comprehending the novel content that especially focuses on the issues of environmental damage and the main characters' efforts to solve it.
3. Highlighting and taking note of the information related to the environmental damage and the main characters' effort to solve it.
4. Putting data into appropriate categories based on how they are classified, especially in the data that shows environmental damage and the main characters' effort in solving the environmental damage.

## **D. Data Analysis**

After the data is successfully collected, the data is analyzed by the researcher as follows:

1. Processing and classifying the data based on the problems of the study.

2. Describing the environmental damage found in the novel by giving evidence or quoting data from the novel using Garrard's (2004) Ecocriticism theory.
3. Describing the main characters' efforts to solve the environmental damage in the novel using Keraf's (2010) Environmental Ethics theory.
4. Drawing conclusions that answer the problems of the study.

## CHAPTER IV

### FINDING AND DISCUSSION

This chapter describes the findings and the discussion according to the problem of the study of this research. Moreover, the result of these findings and the discussion answers the question regarding environmental damage in Moby Warren's *The Bee Maker*. Besides that, the researcher also discusses how the main characters solve environmental damage through the value of environmental ethics.

#### **A. Forms of Environmental Damage in Moby Warren's *The Bee Maker***

Environmental damage is a natural state brought on by human activities, including global warming, climate change, widespread destruction, food shortages, dwindling species, and even species extinction. In the novel *The Bee Maker*, researcher found environmental damage caused by humans as seen in the form of the ecocriticism concept by Garrard (2004), namely pollution, apocalypse, and animals.

##### **1. Pollution**

Pollution causes environmental degradation in the surrounding environment. Garrard (2004) says that the most common pollutants are in the form of solids, gases, and liquids. Those pollutants disrupt the balance of nature and the environment. In the novel *The Bee Maker*, researchers found pollution in the form of liquids, which are sourced from pesticides.

The pollution caused by chemical pesticides is one of the relevant environmental damages that we have endured in this modern era. The utilization of chemical pesticides to kill pest insects has already proven more effective in

controlling pest insects (Garrard, 2004). This novel highlights how honeybees become weak as a result of chemical pesticides that damage their brains. As in the quotations below:

*For decades, billions of bees had been transported like prison crews. Stressed out. Plagued by mites and prone to viruses. Exposed to now-outlawed pesticides. Pesticides, her father had explained, that damaged memory cells in their brains so badly, many bees couldn't remember the way back to their hives. There had been great hopes that after the pesticides were banned, the bees would rebound. And for some years they did, but something had changed. The bees were weaker. They no longer thrived. They began to abandon their hives again (p.8).*

The data above shows that Dr. Bui, who is Melissa's father, explained to Melissa how the honeybees are getting weaker after being contaminated by chemical pesticides for a long time. Chemical pesticides damage memory cells in the bees' brains, so many bees cannot remember the way back to their nest. Although there was hope that after the ban on pesticides, the bee population would recover, it turned out that the bees became weaker and began to leave their hives again. This means that bees have been assisting humans in pollinating plants for ten thousand years, and losing them means losing a variety of food.

In addition, other data highlights the long-term effect of chemical pesticides on honeybees' abilities. As in the quotations below:

*Her father cleared his throat. "We think the long use of pesticides and stressors like parasites and climate change may have damaged honeybee abilities to use their multi-dimensional communication system (p.72).*

The data above shows that Melissa's father's talk about chemical pesticides affects honey bees' ability to use their multi-dimensional communication system. He suggests that this damage may have impaired the honey bees' ability to communicate and orient, which is essential for their survival. He also says that if this is allowed to happen, the honeybee population will be threatened.

Moreover, prolonged use of pesticides and other environmental stressors often have catastrophic impacts on ecosystems, such as the harmful effects of chemical pesticides on the environment and living organisms. Melissa's father also says that there is a chance for science to mitigate these affected honeybees by learning more about their communication systems and potentially reversing the damage caused by the chemical pesticide.

The two data shown above show that chemical pesticides are really dangerous to animals. This is in accordance with what Garrard (2004) said in his book, which states that pesticides are a form of pollution in the form of liquid objects that can disturb the environmental balance if used excessively.

## **2. Apocalypse**

According to Garrard (2004), the concept of apocalypse is used to analyze the environmental damage caused by human activities. Several forms of environmental apocalypse, known as environmental damage, found in *The Bee Maker* include drought, famine, and global warming.

The novel *The Bee Maker* takes place in Yolo County, California, in 2036. Melissa and her father rode their bikes home after stealing a beehive from an almond orchard to save the remaining honeybees. As they cruised on their bikes, Melissa looked at both sides of the road; she saw the decimated conditions of almond trees along her way home. As in the quote below:

*Now, as she gazed at both sides of the road, she saw nothing but acre after acre of parched and dying almond trees. Irrigation wells dug decades ago had no more water to give (p.8).*

The data above shows that Melissa has observed worrying conditions in Yolo County today. California's almond orchards cannot survive due to the groundwater resources that have sustained them for years being depleted.

Drought and dying almond orchards cause environmental damage, including a decrease in the honeybee population. With the destruction of almond orchards, honeybees automatically have no place to live. As in the quote below:

*He didn't answer at once, as if choosing his words with care, then repeated what Melissa already knew. "They helped us pollinate crops for ten thousand years, Melissa. We've lost a lot of foods." (p.9).*

The data above shows that honeybees play a crucial role in an ecosystem, such as helping pollinate plants. Melissa's father is worried about the future of humanity if honey bees completely become extinct. He wants to emphasize how important honeybees are for human survival and how big an impact the decline in the honeybee's population has had. In this case, the near extinction of honeybees means the scarcity of certain foods.

*What chance did honeybees have, she wondered. Or humans? She could barely remember the taste of some fruits and vegetables. A good many others she'd never even tasted. Like strawberries. She'd always wanted to taste real strawberries, not the vitamin lozenges that accompanied every meal and supposedly came in flavors like strawberry or kiwi or pumpkin. She'd looked up photos of grocery aisles from twenty years ago on a holo-vid once and been amazed to see bins and shelves stuffed with foods, colors and shapes she'd never known. What she did know was the monotony of peanut butter and bread, rice and beans. Day after day after day. Meals without color (p.9).*

Furthermore, the data above highlight the effect of the declining honeybee's population. The scarcity of certain foods like fruits and vegetables, and the monotony of limited food options. This scenario aligns with the apocalyptic vision of environmental collapse and resource depletion, where over-exploitation of natural resources leads to a significant decline in the availability of diverse food

sources. It echoes the concept of depletion of natural resources as a result of human activities, such as overconsumption and environmental destruction.

Additionally, the passage also suggests a broader climate change narrative, considering the mention of "real strawberries" being a rare or nonexistent item, implying drastic environmental changes affecting agriculture and food production. This follows what has been explained in Garrard's (2004) *Ecocriticism*, which states that famine is part of the apocalypse concept.

The next analysis is when Melissa's father, Dr. Paul Bui, accepted a new position at Benefit College in Texas. As a honey bee researcher, he needed to join the team of honey bee experts gathered there. At that time, Melissa and her father drove through a vast, arid desert with a very gloomy view. As in the quotation below:

*Melissa's spirits sank with every passing mile. Her father's face was grim. He'd hardly spoken a word as the solar van carried them across the sterile stretch of bleached desert called the Hell Zone. Thousands of abandoned tracking wells stood like nails in an enormous coffin, remnants of the last desperate push to extract fossil fuels. Whatever plants and animals had once lived here had either vanished or been forced north by the lack of water and a warming climate (p.50).*

The data above shows the exploitation of fossil fuels, which results in a warming climate known as global warming. Thousands of abandoned oil wells depict the environmental devastation caused by past fossil fuel exploitation. The loss of plants and animals that once lived there, either through extinction or migration north due to drought and climate change, shows the serious impact of environmental damage that is occurring. In the end, this desert has lost its biodiversity and life-supporting capacity.

In addition, the data implies that global warming is a serious problem that is becoming a larger issue of environmental damage. It is also stated in Garrard's



(2004) *Ecocriticism*, which states that burning fossil fuels can cause the depletion of biodiversity, the destruction of habitats, and environmental problems.

The next analysis shows the environmental damage is clearly visible in Yolo County, California, as in the quote below:

*Melissa wished she had Noi's faith that the world of honeybees could be restored. The truth was, Melissa wasn't at all sure that any of her own actions could make a difference in the wrecked world she'd been born into. So many species gone, so many layers of life faded (p.58).*

The data above shows how horrible the environmental damage had been happened when she was born. Melissa's reflection on the loss of species and "layers of life faded" mirrors the concept of environmental apocalypse caused by the depletion of natural resources, as described by Garrard (2004). Melissa's uncertainty and hesitation about the impact of her actions to mitigate the damage symbolizes the overwhelming scale of environmental degradation, such as the collapse of ecosystems, loss of biodiversity, and irreversible climate change. The analysis below shows the effect of major environmental damage on human daily life.

*Some herbs could be hand-pollinated in the absence of bees, a tricky and time-consuming task, but worth it to break the bland monotony of vegetable and fruit deprived meals. Fruity and Veggie Pills, in their bright and chewable shapes, were no substitute for the real thing. Of course, in many cases, Melissa didn't even know what the real thing tasted like (p.62).*

The data above describes how the depletion of natural resources resulting in environmental imbalances and loss of biodiversity. This is in accordance with what Garrard (2004) said that over-exploitation and unsustainable human activities lead to the depletion of natural resources. In the quote, the absence of honeybees a crucial natural resource for pollination highlights a significant ecological

imbalance. The need for hand pollination indicates that a natural process has been disrupted due to environmental damage.

The data also highlights the scarcity of fruits and vegetables and reliance on artificial substitutes like “Fruity and Veggie Pills,” further emphasizing the consequences of resource depletion on human sustenance and the quality of life in the future. This leads to Melissa not knowing what real fruits and vegetables taste like, underscoring the profound disconnect between humans and the natural world caused by environmental damage.

Other data also show the depletion of natural resources affects Melissa’s daily life.

*Cheese and yogurt were infrequent items at the Bui's dinner table. And forget ice cream. No one could afford that luxury anymore. Dairy cows needed alfalfa and clover, both pollinated by bees (p.67).*

The data above is clear evidence that the scarcity of certain food items, like dairy products, is due to the declining population of bees, which are crucial for pollination. The dependency of cows on honeybees pollinated plants, such as alfalfa and clover, illustrates how human food systems are intricately linked to natural processes, and the disappearance of pollinators disrupts this balance, leading to shortages of everyday essentials like ice cream. This ties into Garrard’s (2004) definition of environmental apocalypse, where natural systems are degraded to the point of abnormal functioning.

Furthermore, here is the data that strengthens the previous data that the declining honeybee population affects the food system.

*"Well, I've got to harvest a bitter melon to make soup tonight. I hand pollinate my melon vines now. It's quite a nuisance and often not successful." (p.114).*

The data above strengthen the previous data as they explain how hard it is to pollinate without natural pollinators like honeybees. Melissa's father's mention of having to hand-pollinate the vines suggests that natural pollinators, such as bees, may no longer be available, indicating an ecological imbalance. This aligns with Garrard's (2004) concept of the environmental apocalypse, particularly related to the depletion of biodiversity, where the disruption of natural processes forces humans to intervene in inefficient and unsustainable ways.

Hand pollination is considered a "nuisance" method by Melissa's father as he is trying to make soup for dinner tonight, and its frequent lack of success further highlights the difficulty of trying to replace or compensate for the lost natural systems, an underlying concern in Garrard's (2004) environmental apocalypse analysis. Additionally, the text implies that the ecosystem's disruption, including the loss of natural pollinators, makes it challenging to achieve the same success that natural pollination does. That means that humans still need honeybees to pollinate effectively, as human interventions alone cannot fully replace the natural role of honeybees in pollination.

All the data above shows that it can be classified as an "apocalypse" in Garrard's (2004) ecocriticism theory. It is in line with what he said that the form of apocalypse is caused by an increase in environmentally unfriendly human activity such as deforestation, overexploitation, and fossil fuel burning, which can cause effects such as drought, biodiversity loss, and environmental degradation (Garrard, 2004).

### 3. Animals

Animals are a concept that explains the various states of animals in an environment. This concept includes how animal rights apply to animals and how the presence of animals in their natural environment is progressively being eliminated due to humans' habitat deterioration (Garrard, 2004). In the novel *The Bee Maker*, researchers find the cause of the decline in the honeybee population, which almost causes food loss because plants lose their natural pollinators.

*The Bee Maker* tells the story of a situation in Yolo County, California, where honeybees are almost extinct due to various factors, such as deteriorating habitats of honeybees and honeybee exploitation caused by humans. In this section, the researcher discusses both of them. As in the quote below:

*The reign of the almond orchards was over; the honeybees all dead or disappearing (p.8).*

The data above exemplifies how honeybees' habitat in Yolo County has been degraded, which has led to the displacement of honeybees. In this case, the almond orchards, symbolic of industrial agriculture, can no longer thrive without honeybees. Garrard (2004) discusses the deteriorating habitats of animals and the blurred boundaries between humans and the natural world, which is reflected in how the collapse of the honeybee population leads to the downfall of entire agricultural systems.

In addition, the next data strengthens the previous data, which mentions the honeybee colonies as in the quote below:

*"Bad news. The only bees left in the Yolo hive are the queen and maybe a hundred worker bees. They won't live much longer without the rest of the colony." (p.119).*

The data above signifies the situation where only a handful of honeybees are left in Yolo County due to habitat loss. The mention of “a hundred worker bees” signifies that without the majority of their colony, these bees are unlikely to survive. A loss of honeybees threatens both biodiversity and food security, aligning with Garrard’s (2004) concern about the deteriorating habitats of animals caused by human activities. Honeybees play a vital role in pollinating crops, and the collapse of their colonies can lead to disastrous consequences for food production.

Moreover, the next data proves further reasons why honeybee colonies collapsed, as in the quote below:

*That was why bee colonies had collapsed, why so many bees had perished. Humans had forced them to live against their honeybee natures, trucking them like prison crews to pollinate crop after crop after crop, never allowing them to rest or enjoy their own honey (p.198).*

The data above depict that human intervention disrupts the natural behaviors and well-being of bees. In this case, the mention of “Humans had forced them to live against their honeybee natures” clearly shows how humans disregard the natural limitations and rights of animals by forcing the honeybees to behave in ways contrary to their natural instincts, treating them as only tools for agricultural production that can lead to the honeybee population to decline.

The phrase “never allowing them to rest or enjoy their own honey” underscores the exploitation and deprivation honeybees experience due to human actions. On a literal level, it portrays bees as victims of exploitation and reflects how humans have violated animal rights, as Garrard (2004) has said, in which, in this case, humans are forcing honeybees to work continuously for agricultural purposes, pollinating crops without respite.

## **B. The Main Characters' Role in Solving Environmental Damage in Mobi**

### **Warren's *The Bee Maker***

Keraf's (2010) concept of biocentrism and ecocentrism emphasizes how humans should behave toward nature, highlighting that humans are an integral part of the ecological community. He also stated that his principles toward nature are ethical codes that humans must follow in their treatment of nature, not only for practical benefits to humans but also because nature has intrinsic value, warranting respect and care regardless of its utility.

Mobi Warren's *The Bee Maker* reflects Keraf's environmental ethics, emphasizing his principles of how humans should behave toward nature. Set in Yolo County, California, Melissa and her father embody these principles through actions such as rescuing a bee hive, Melissa participating in a 5K fundraiser race to support a honeybee sanctuary, and her father conducting research on honeybee conservation efforts. These actions will be discussed further below:

### **1. Conducting a Beehive Rescue Mission**

Since childhood, Melissa Growing up in a world where honeybees are nearly extinct. She witnesses the devastating impact of environmental degradation on agriculture and biodiversity. Melissa sadness is clearly shown in the data below:

*If only the stars were actual bees, she thought, I would gather them and give them back to the world. Magically bring them back. Eat a bowl of strawberries everyday. Make things better with Ba (p.10).*

The data above describe how ruined the condition of the environment around Yolo County, California was. Melissa always wanted to eat real taste of strawberries or even another food that is need to pollinated, but the honeybees is near-extinction, so it become scarce. For those reason, Melissa desire to save the

environment is inevitable in order to save the honeybees from becoming extinct, so she joined her father to save the remaining beehive in Yolo County as in the data below:

*Her father hadn't wanted her to join his bee stealing heist, but he'd been too tired to argue (p.2).*

*He was doing everything he could think of, including stealing this hive, to prevent the final extinction of honeybees (p.6).*

Based on the information above, Melissa and her father carry out a mission to save a beehive to prevent the extinction of honeybees, which are essential for ecosystems and food production. Her father hesitates to involve her because of safety concerns and the risks involved in taking one of the last surviving beehives. However, Melissa joins the mission because she cares about the environment and wants to support her father. This action reflects Keraf's (2010) principles, especially moral responsibility toward nature and cosmic solidarity, highlighting the importance of honeybees. Despite the unusual way of their rescue mission, their efforts show great respect for nature as they risk their safety to steal a beehive hidden between the almond orchard, as in the quote below:

*She tucked the bee in her jacket pocket and helped her father hoist the hive over the fence. They crawled back beneath it. "What if we get caught, Ba?" Melissa asked as she stood up. "We won't. If the owner knew the packers had missed a hive, he'd have an armed guard out here and I would never have brought you (p.6).*

The data above shows that Melissa and her father are willing to take significant risks to save the honeybees from extinction, showing of how important honeybees to them. Their act of stealing a remaining beehive between almond orchard reflects the desperation to protect one of California's remaining surviving honeybees' colonies. Melissa's question, "What if we get caught?" reveals her awareness of the risks involved, while her father's response underscores the hive's

immense value, noting it could be heavily guarded if discovered. This aligns with Keraf's (2010) principles, particularly moral responsibility toward nature and the need to prioritize environmental preservation amid worsening environmental damage.

In conclusion, Melissa and her father's beehive rescue mission highlight the urgency of addressing environmental damage. Facing the near extinction of honeybees, they take significant risks to protect a species that is vital to ecosystems and biodiversity. Their actions align with Keraf's (2010) principles, especially moral responsibility and cosmic solidarity, and so does respect for nature. Despite the risks and unusual methods, their mission highlights a commitment to restoring balance between humanity and the environment.

## **2. Doing Research on Honeybees**

Melissa's father, Dr. Paul Bui. He is a scientist specializing in honeybee communication and is deeply committed to saving honeybees from extinction. He moves to Texas and wanted to join with another honeybee experts' teams in Benefit College as illustrated in the data below:

*"My work is in Texas now," her father said. "A team of honeybee experts has gathered at Benefit College and I need to be there. It may be the last shot we have at saving them." (p.23).*

The data above shows the reason of he moves to Texas is because he wanted to collaborate on efforts to preserve and restore honeybee populations. The phrase *"It may be the last shot we have at saving them"* shows the critical and urgent situation of where collaborative efforts with the expert team to address honeybees decline. The mention of Texas and the team of experts at Benefit College highlights his commitment to participating in collective scientific efforts, this means that



saving the honeybees requires hard work, cooperation, and advanced research. He and the expert team is working hard to preserve of the last North America's honeybees which is shown in data below:

*Threads of mauve and purple for the lavender field where the Yolo bees now lived, where her father and his team were trying to keep the last of North America's honeybees alive (p.55).*

The data above suggests that this is the final effort to save something as precious as the Yolo bees, which are at risk and on the brink of extinction. Dr. Bui and his expert team's mission is to preserve the remaining honeybee colonies in North America. The urgency of their work highlights the desperate need to protect a species that is crucial to the ecosystem. Their efforts align closely with Keraf's (2010) ideas on environmental ethics. They acknowledge nature's inherent value, share responsibility for protecting it, show care for other species, and aim to safeguard the environment without harm. Their approach highlights how deeply humans and nature depend on each other, a key part of Keraf's principles.

The goal of his research was to examine how honeybees communicate in many ways. However, this communication has been harmed. The main causes are the long-term use of pesticides, parasites, and climate change. The data below shows these effects clearly:

*"We think the long use of pesticides and stressors like parasites and climate change may have damaged honeybee abilities to use their multi-dimensional communication system. If we can figure out how it worked, we might have a shot at restoring and healing that system in their brains." (p.72)*

The data above shows that long-term pesticide use, along with challenges like climate change and parasites, seems to have disrupted honeybee communication. Dr. Paul Bui highlights the need for research and fixing these issues. Doing so is essential to protecting honeybees from extinction.

Furthermore, another data also shows that Dr. Paul Bui's research is learning about measuring the emotional responses of honeybees, which is presented in the data below:

*"Part of my research has been to measure emotional response in honeybees. I'm pretty sure I can identify cheerfulness, or at least a form of honeybee optimism." (p.149).*

Based on the data above, Dr. Paul Bui's research shows that learning the emotions of honeybees, like cheerfulness or optimism, is important for understanding their health and behavior. These emotions can indicate stress or well-being, helping scientists see how problems like pesticides, habitat loss, or climate change affect bees.

In conclusion, Dr. Paul Bui's research is to save honeybees. His research shows how important honeybees are for the environment. He moved to Texas to work with a team at Benefit College because he cares about protecting honeybees. His research aims to restore damaged honeybee communication systems, particularly their waggle dances, and to measure their emotional responses, such as cheerfulness and optimism, which can indicate their overall health. Dr. Bui's work aligns with Keraf's environmental ethics, emphasizing the interdependence between humans and nature. His efforts are vital for the survival of honeybees, which is showing the importance of collaboration, advanced research, and ethical responsibility in environmental preservation.

### **3. Participating in the 5K Fundraiser for the Bee Sanctuary**

Melissa's growing commitment to saving honeybees is reflected in her decision to participate in the 5K fundraiser event for the bee sanctuary. She first

learns about the event through a flyer at the library which sparks her interest in joining the event, as in the quote below:

*"She's running the 5K, the fundraiser for the bee sanctuary tomorrow." (p.183).*

*"You're caught up in your work for the bees," Beau replied. "She loves to run, you know." (p.183).*

The data above gives the reason why Melissa decided to join the event. She joined the event driven by her moral responsibility toward nature, as she desires to support her father's mission to save honeybees because of the declining population. She also wants to connect with others who share her environmental concerns through that event, embodying the principle of cosmic solidarity. Since the 5K fundraiser is a community event, it allows her to engage with others, demonstrate respect for nature, and care for nature through joint action, which aligns with Keraf's (2010) principles.

Additionally, Melissa loves running. Melissa's friend, Beau, tells Melissa's father that it is something she truly enjoys. While she is busy helping her dad with his mission to save honeybees, Beau reminds him that running is her thing, too. It brings her happiness. This passion helps her support her dad's work while keeping something just for herself.

In conclusion, Melissa's decision to participate in the 5K fundraiser for the bee sanctuary shows her care to save honeybees from extinction. While she supports her father's research mission, she also meets others who care about nature, the same as her in the event. This event also combines her passion with a chance to make a difference in the damaged environment where she lives, showing her alignment

with values like cosmic solidarity and respect for nature, which is in accord with Keraf's (2010) principle of environmental ethics.

## CHAPTER V

### CONCLUSION AND SUGGESTION

This chapter provides a summary of the key findings from the ecocritical analysis of nature in Mobi Warren's *The Bee Maker*. The researcher has successfully addressed all the research problems posed at the beginning of the study. Toward the conclusion of the chapter, recommendations are offered to readers, particularly for future researchers interested in applying ecocriticism in their literary studies.

#### A. Conclusion

Mobi Warren's novel *The Bee Maker* was carefully analyzed through the perspectives of Greg Garrard's ecocriticism and Keraf's environmental ethics. This analysis enabled a deeper understanding of the themes of environmental damage and the values of environmental ethics depicted in the novel. The following paragraph will provide a detailed conclusion based on examining environmental damage and environmental ethics.

First, the researcher analyzed using Greg Garrard's ecocriticism theory to identify forms of environmental damage. Three key forms of ecological apocalypse were found: (1) Pollution, highlighted by the harmful effects of excessive chemical pesticides on honeybees, causing memory loss and communication disruption. (2) Apocalypse, evidenced by drought, groundwater depletion, collapsing almond orchards, warming climate, and biodiversity loss due to fossil fuel exploitation. (3) Animals focusing on honeybee exploitation and habitat destruction are demonstrated by the decline of honeybee populations in Yolo County, driven by habitat loss and exploitation. This threatens biodiversity and food security,

revealing human impact on animal rights. These themes reflect environmental degradation in the novel.

Second, Melissa and her father's roles in addressing environmental damage are analyzed through the lens of Keraf's environmental ethics. Their efforts to mitigate environmental damage are demonstrated through actions such as conducting a beehive rescue mission together, Melissa's father researching honeybees, and Melissa participating in a 5K fundraiser event for the bee sanctuary. These actions exemplify a deep commitment to environmental conservation, aligning with the principles of environmental ethics, which emphasize humanity's shared responsibility in protecting and sustaining the natural balance.

## **B. Suggestion**

To further enrich the study of environmental issues in Mobi Warren's *The Bee Maker*, it is recommended that future researchers explore this literary work through other critical lenses, such as ecofeminism theory. In particular, an ecofeminism analysis could examine the connection between the exploitation of women and the exploitation of nature, arguing that both are interconnected and stem from patriarchal structures, which is a subtle undercurrent in the novel.

Lastly, the researcher acknowledges that the current study has limitations in exploring all aspects of ecocriticism in *The Bee Maker*. For this reason, the researcher welcomes any suggestions, insights, or constructive criticism to improve future work. Such feedback will help enhance precision and contribute more effectively to ecocriticism discussions, supporting continuous growth as a scholar.

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## **CURRICULUM VITAE**



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