

BARBARA KINGSOLVER INTERTWINES ECOLOGY AND WOMEN TO SYMBOLISE COMMUNITY PRACTITIONERS TO COMPREHEND THE EFFECTS OF CLIMATE CHANGE IN HER NOVEL FLIGHT BEHAVIOUR

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Abstract

Barbara Kingsolver's novel *Flight Behaviour* creatively explores nature in the novel. The story is set in the Appalachian Mountains on a farm in Tennessee, and the plot revolves around Dellarobia, a young mother who pursues an affair out of desire. Instead, she discovers something marvellous that captivates her in the Appalachian woods: A Monarch Butterfly. The story describes how the novel's characters are dealing with climate change and the ways in which their lives have changed as a result of the sudden shift in climate. This fiction raises serious questions about what man has done to the environment and human lives in the name of development. Barbara Kingsolver incorporates creative thinking into the novel by discussing butterfly migration and showcasing its influence with climate change. She writes the entire novel as a warning to humanity by depicting the effects of climate change. This novel is fully enriched by the Appalachian Mountains, farm, culture, and community that emerge as the central thought of the novel. Ecocriticism theory is concerning for a variety of reasons, including environmental degradation, particularly climate change. The paper aims to shed light on ecocriticism theory through the novel's characters who live in harmony with nature, as well as to shed light on the extinction of a specific butterfly species. The research would also represent a 'sense of place' in the novel through the main concept of 'Climate Change'. The primary goal of this paper is to investigate the relationship between women, nature, and oppression. Thus, it achieves its goal by comprehending various ecocritical concepts such as ecocriticism, climate change, and anthropogenic.

Keywords: Creativity, Ecocriticism, Ecofeminism, Gyn/Ecology, Anthropogenic Climate Change and Climate Change.

1. INTRODUCTION

The author Barbara Kingsolver always has a deep concern about nature which was depicted in all her works. She is a renowned American writer who completed ten novels and a few nonfiction works which include poetry and essays. She won many awards in the literary field one among which is the Orange Prize in 2010 for *The Lacuna*. This paper aims at analysing Barbara Kingsolver's *Flight Behaviour* which illustrates the author's creative touch on nature while concurrently investigating the story's major problem, Climate Change. This paper is also aims to inspect on the destruction of nature simultaneously influencing the destruction of women and the relationship between them by using the theories of ecocriticism and ecofeminism.

Ecocriticism is a predominant literary theory that explores the relationship between literature and ecology. So, when studying natural disasters or environmental degradation in the novel, such as climate change, it is important to understand the theory of ecocriticism in order to understand the combinations of literary and science fiction elements. There have been numerous theories laid out under this major theory,

which includes ecofeminism. This theory analysis the connection between the domination of women and the exploitation of nature. They also claimed that this is a political theory and movement.

Ecofeminism primarily renounces the patriarchal where man is considered the epi-center and has complete domination over every creation. This fallacious claim for the indubitable authority of patriarchy would have led to the domination of women and nature in this world (A & G, 2023, p. 279).

Their only aim is to oppose the patriarchal domination. Similarly, dominating nature and exploiting the environment are contributing to climate change. Barbara Kingsolver has creatively compared these two aspects in her works, especially in the novel *Flight Behaviour*.

Barbara Kingsolver's *Flight Behaviour* (2012) was used as the primary source for this research. The qualitative method and Textual analysis have been used by the researcher to construct the analysis.

2. REVIEW OF LITERATURE

Researchers have widely read this novel under the theory of ecocriticism, especially under the concept called climate change. But still, the awareness of climate change needs to increase in all existing fields in order to sustain nature. The scientific research state that

There is now ample evidence of the ecological impacts of recent climate change, from polar terrestrial to tropical marine environment. The responses of both flora and fauna span an array of ecosystems and organization hierarchies, from the species to the community levels. Despite continued uncertainty as to community and ecosystem trajectories under global changes, our review exposes a coherent pattern of ecological change across systems. Although we are only at an early stage in the projected trends of global warming, ecological responses to recent climate change are already clearly visible (Walther, et al., 2002).

Even though, there is an abundance of data demonstrating the effects of climate change on the ecosystem, including all species. However, the researcher believes that awareness needs to rise.

The present investigation additionally looked at Barbara Kingsolver's way of approaching the trending concept of climate change in her novels, especially in the novel *Flight Behaviour*. Here are a few research works done by different researchers which were discussed in the upcoming paragraph. In the article "Actuality of Monarch Butterfly Migration and Drastic Climate Change in Barbara Kingsolver's *Flight Behaviour*. An Eco-Critical Approach" by P. Sujitha and Dr. M. Leema Rose. These researchers state that environmentalists and ecocritics believe that technological advances and scientific discoveries are the primary reason for the global ecological crisis, depleting natural resources and deteriorating (Sujitha & Rose, 2019, p. 7758). Additionally, they utilized biblical allusions in their research paper to analysis the novel in a different dimension.

Similarly, in the research article "Climate Change Consciousness and Scepticism in Barbara Kingsolver's *Flight Behaviour*" by Syama Mohan. The writer claims that this novel is 'Climate Fiction' which is concerned about changes in nature. This kind of fiction has a big awareness and creates fear among people.

It introduces the readers to the impact of anthropogenic activities through the journey of the story. And this kind of study comes under the theory of 'Ecocriticism'. Through this work, the researcher came to say that the natural surroundings have been disrupted and depleted as a result of the human species' constructed hegemony over other living organisms (Mohan, 2017, p. 107). On the other hand, the author says, "Barbara Kingsolver's novel deals with what people think about climate change and how religious ideas can interfere in understanding the science behind different phenomena" (Mohan, 2017, p. 110). The researcher suggests that religion plays a vital role in understanding the science and environment. A huge number of biblical allusions was given in this novel to reveal the message that the environment belongs to God.

The research article "Rethinking Climate Change: Cli-fi Dynamics in Barbara Kingsolver's *Flight Behaviour*" was written Nanthinii M. & Dr. V. Bhuvaneshwari. In this work, the researchers explain the inundated ecocatastrophes scenes in the novel through the concept of climate change. Here, the researchers believes that this novel is a blend of real-world and fictional world climate change impacts. Similarly, the researcher claims that this author represents the real-life ecocatastrophe that was the flood in Anganguero in 2010, the main cause of the destruction is climate change. This became an important reason for the migration of monarch butterflies. The researcher has examined this novel with the dynamics of cli-fi and finds an intense concern for ecology and human's conflicted heart. "The study also stressed the need for a symbiotic living between human and the non-human world to reinstate the lost equilibrium on earth, and infers that humans only lose if they go against nature" (Vijay & Mohan, 2015, p. 41975).

Subsequently, the research article "Sense of Place and Sense of Planet": Local-Planetary Experiences of Climate Change in Barbara Kingsolver's *Flight Behavior*" was written by Sonam Jalan. The researcher has borrowed the title from the book *Sense of Place and Sense of Planet: The Environmental Imagination of the Global* by Ursula K. Heise's book where she addresses the concept of 'eco-cosmopolitanism'. In this paper, the researcher has emphasised on climate change, eco-apocalypse, and global warming by analysing the novel Kingsolver's *Flight Behavior*. Likewise, the researcher states that "Climate change challenges our knowledge about regionalism and as such ecocriticism's presumed devotion occludes the broader effects of globalism and planetary crisis" (Jalan, 2020, p. 4) . She warns the readers about the impact of climate change and how it is challenging to our people and our environmental surroundings. And then she concluded the study by stating that the 'sense of planet' and 'sense of place' are the two significant things that was focused in Barbara Kingsolver's *Flight Behavior* (Jalan, 2020, p. 6).

3. BACKGROUND NARRATIVE FOR *FLIGHT BEHAVIOUR* (2012)

The tale centers on Dellarobia Turnbow, 28-year-old female protagonist of the novel and a young mother who pursues an affair out of passion. She is living with her two children Preston and Cordelia in the fictional town called Feathertown which is located in the rural place of Tennessee. The novel is set in the Appalachian Mountains and on a farm in Tennessee, where Dellarobia's husband Cub works in the Turnbow family's land. In the Appalachian forests, she comes upon something amazing that enthralls her: A Monarch Butterfly. This monarch butterfly has impacted not just the lives of the novel's major protagonists, but also those around them. The narrative explains how the characters in the book are adjusting to the unexpected change in environment and

how it has affected their lives. Through these elements, the author has highlighted the impact of climate change in the novel.

4. THEORETICAL OVERVIEW OF CLIMATE CHANGE

To understand the concept of 'Climate Change' in literature the researcher uses the theory of ecocriticism. A long-term change happening in the temperature, weather patterns and climate which affect all the species on the earth are defined as climate change. This climate change can be natural, but now scientists are increasingly claiming that it is anthropogenic. Anthropogenic climate change is human activities that have also been one of the primary cause for climate change for example deforestation, the burning of fossil fuels. These kinds of anthropogenic activities take place in the novel which has been analysed by the help of the theory of ecocriticism. The novel *Flight Behaviour* is a climate fiction "Cli-fi novels mostly takes place in the near future and presents before us a planet that is ravaged by extreme climate cataclysm" (Francis, 2021).

The scientific research states that,

Phenology-the timing of seasonal activities of animal and plants- is perhaps the simplest process in which to track changes in the ecology of species in response to climate change. Birds, butterflies and wild plant, in particular, include popular and easily identifiable species and thus have received considerable attention from the public. As a result many long-term phenological data sets have been collected. Studies in Europe and North America have revealed phenological trends that very probably reflect responses to recent climate change (Walther, et al., 2002, p. 389).

According to this scientific study, scientists monitor all species' reactions to climate change in order to measure the impact of climate change. These species include butterflies, birds, and wild plants. Studies from North America and Europe have unveiled the phenological trends and proven the possibilities. The storyline of *Flight Behaviour* novel describes these types of responses from the monarch butterfly species as a result of the cause of climate change. The article looks at the cause of climate change, how it affects humans and other species and how people are able to recover from it.

"We are seeing a bizarre alteration of a previously stable pattern," he said finally. "A continental ecosystem breaking down. Most likely, this is due to climate change. Really I can tell you I'm sure of that. Climate change has disrupted this system. For the scientific record, we want to get to the bottom of that as best we can, before events of this winter destroy a beautiful species and the chain of evidence we might use for tracking its demise. It's not a happy scenario." (Kingsolver, 2012, p. 315).

This dialogue from the novel was delivered by Ovid to Dellarobia. Ovid Byron is a professor at a university and a researcher who focuses his research on monarch butterflies. He is explaining the serious impact of climate change, which is drastically altering the stable pattern of climate in their place. The monarch butterfly species, which is something that everyone tries to conserve, is most certainly being killed by this type of harm. As a researcher and a scientist Ovid witnessed and testified that these alterations were all caused by climate change.

5. KINGSOLVER'S CREATIVE TOUCH ON UNDERSTANDING NATURE

The fundamental feature of the novel *Flight Behaviour* is the butterfly, which represents the severity of 'Climate Change'. Even though climate change seems negative, it was artistically explained to the readers in a cordial manner through the depiction of a monarch butterfly in the initial stage of the story. "The novel is also explicitly concerned with imagining (or re-memembering) the future as much as the past and present" (Lloyd & Rapson, 2017, p. 911). In her novel *Flight Behaviour*, Barbara Kingsolver employs a unique approach to comprehend nature and its influence on climate change. The author's usage of the monarch butterfly is the primary creative element here to portray the severity of climate change.

These golden darts filled the whole of the air, swirling like leaves in a massive storm. Wings. The darts underfoot also were wings. Butterflies..... Every tree on the far mountainside was covered with trembling flame, and that, of course, was butterflies (Kingsolver, 2012, p. 71).

The above lines are taken from the novel which shows the people of the village witnessing the butterflies in the Appalachia Mountain and that place belongs to Dellarobis's in-law family. Everyone who came with Dellarobia to witness the monarch butterflies were spellbound by the marvellous views they were witnessing on that mountain. They think that Dellarobia got this vision from God, they see her as a holy person.

Barbara Kingsolver put butterflies as a primary creative element here to show the beauty of nature's power.

There trees were completely filled now. Even the tree trunks wore butterfly pelts, all the way up, like the bristling hairy legs of giants. It was a whole butterfly forest, magically draped with dark, pendulous clusters masquerading as witchy tresses or dead foliage (Kingsolver, 2012, p. 129).

The above depiction from the novel portrays a magical picture of nature. Subsequently, the people around the village love the butterfly, they are welcoming this kind of beautiful alteration in nature. They remained amicable till the research team disseminated the information that climate change was the reason for this shift.

At winter's end, the now-elderly butterflies in Mexico roused themselves and mated like crazy. The male copulated their brains out, then left it to the pregnant single moms to struggle north across the border into Texas looking for milkweed plants, the sole sustenance that could feed the caterpillars. There they laid their eggs and died without ever seeing their young. Dellarobia was stunned by this tale, which sounded soap-opera tragic, like something on the Oxygen network. She could tell Ovid liked telling it, too. The motherless baby monarch hatched as caterpillars, grew up, and then flew north to repeat the drill, laying their eggs on milkweed plants and dying. The monarchs they would normally see in these mountains, he said, would be a second spring generation. Their offspring would go north to produce a third, And only those, in the fall, would fly all the way to Mexico (Kingsolver, 2012, p. 201).

The above lines describe the magnificent creature in the novel which is the monarch butterflies. The readers were astounded when Professor Ovid described the complicated system of the butterfly species cycle to Dellarobia.

Consequently, this picture of butterflies' life cycle portrays the complicated system of God's creation through these little species in the world. Here the readers can witness the intrinsic biological details of particular species in the above line, which proves the author's concern and love for nature is inevitably expressed in her works. "The southern end of things was getting difficult too, he said.

The monarchs had to leave the Mexican roost sites earlier every year because of seasonality changes from climatic warming" (Kingsolver, 2012, p. 202). Subsequently, they found that these butterflies came from Mexico due to climate change and proved that this miracle is an impact of climate change. Ovid's view on climate change, "The ordinary homes in Mexico was changing, trees getting cut down and climate zones warming up, much too quickly for their liking" (Kingsolver, 2012, p. 490). The typical Mexican house was changing, trees were being chopped, and the country's environment was rising much too rapidly for their comfort, so the author gave a hint of anthropogenic climate change to readers.

"We are seeing a bizarre alteration of a previously stable pattern," he said finally. "A continental ecosystem breaking down. Most likely, this is due to climate change. Really I can tell you I'm sure of that. Climate change has disrupted this system. For the scientific record, we want to get to the bottom of that as best we can, before events of this winter destroy a beautiful species and the chain of evidence we might use for tracking its demise. It's not a happy scenario". (Kingsolver, 2012, p. 315)

The characters who are witnessing this beauty of migration in the story aren't aware of the impact of climate change. Ovid declares that they are witnessing strange modification of a hitherto reliable pattern due to climate change which ends in the ecosystem disintegrating. Consequently, they plan to help the species before the winter obliterates an exquisite species. Ovid once said that "Animals losing their homes, because of people being careless" (Kingsolver, 2012, p. 491).

This statement shows how animal life is at stake due to the selfish and careless actions of human beings. The author first illustrated the beauty of nature before highlighting the disaster in nature that is caused by people, Kingsolver pictures this climate change as an anthropogenic climate change, which means humans causing climate change. Among the crowd of people witnessing this miracle, many from the general public also contributed to the butterfly's rescue from the bitter cold, which pictures the reconciliation of human attitude towards nature.

Some deep and terrible trouble had sent the monarchs to the wrong address, like the protesters themselves. The butterflies had no choice but to trust in their world of signs, the sun's angle set against a turn of the seasons, and something inside all that had betrayed them (Kingsolver, 2012, p. 338).

The above line demonstrates how the butterfly species was deceived by nature, this is the saddest part of the story and somehow humans are connected behind this act. The sun's angle against the changing of the seasons, their world of signals and something within everything that had deceived them were the only things the butterflies could rely on. Despite being partially to blame for climate change, people have stepped up to preserve the butterfly and it now depends on them for its last chance.

6. A CREATIVE PERSPECTIVE OF GYN/ECOLOGY ON WOMEN AND NATURE

The female protagonist in Barbara Kingsolver's novel often plays a crucial role in spreading vital information to readers. In her other novels *The Bean Trees* and *Prodigal Summer* characters like Turtle, Taylor, Lusa, Deanna and other female characters play a strong role and also develop a strong bond with nature to spread environmental sustainability among readers. One such character is Dellarobia from *Flight Behaviour* who witnesses the monarch butterfly during her journey to meet her affair. "Hester seemed incensed by the article, which referred to Dellarobia as Our Lady of the Butterflies" (Kingsolver, 2012, p. 106). After she became popular in her village, people saw her as a godly woman because they thought God gave a vision about this monarch butterfly to Dellarobia. She is the one who teams up with Ovid and other researchers to save monarch butterflies from the bitter cold. "They take efforts and endeavour to create an awareness invariably due to an ecological wisdom or 'ecosophy' they have assimilated in their selves" (Jose & Paul, 2021, p. 102). Though she has no financial stability but still helps the research team by all means to save the butterfly. Subsequently, this character faces the domination of the patriarchal society by the hands of her husband. The research has investigated this kind of interconnection with women and nature subjugation by using the term Gyn/Ecology. This term is taken from Mary Daly's *Gyn/Ecology: The Metaethics of Radical Feminism*.

Through this radical feminist work, she tries to be the voice for those whose voices were unheard across generations. In her book *Gyn/Ecology: Metaethics of Radical Feminism* (1978), she talks about the patriarchal oppression of women down the centuries under the pretext of upholding religious dogmas and mores (A & G, 2023, p. 279).

In one of the scenes, we can see that Dellarobia got a nice job and her salary is more than her husband Cub. But her husband is not very much happy about the news and indirectly he told her to drop the plan. He told her that he was not happy about some stranger raising their children. She gives it back to him by saying "Strangers are teaching him his ABCD's" (Kingsolver, 2012, p. 263). This is one kind of indirect subjugation that Dellarobia faces in the patriarchal society. Dellarobia's biggest dream is a good job and education, she felt guilty that she didn't have a proper degree. Once she said, "Me with a job Dovey. Can you picture it? Maybe I'd learn Something" (Kingsolver, 2012, p. 263).

Here the author postulates a piece of important information to readers that education is very important for female freedom in a dominant patriarchal society. "Two months ago. Impossible. Her world had been the size of a kitchen then. Now she had a life in which she might not see Hester for over a week" (Kingsolver, 2012, p. 337). Dellarobia's life had been extremely limited until she left her domineering existence and everything had changed. She is now prioritizing her life and taking care of herself.

Barbara Kingsolver demonstrates how men's decisions had a significant role in deciding whether to save or destroy nature, as well as women, throughout the narrative.

"with what those guys are saying about the butterflies, is that it's all centred around what they want. They need things to be a certain way, financially, so they think nature will organize itself around what suits them" (Kingsolver, 2012, p. 354).

According to what those men are saying, everything revolves around what they want with the butterflies. They want to turn that location into a tourist destination, which is why everything they say about the butterflies is centered on their desire. Here, Dellarobia came to say that humans alter nature according to their financial benefit.

This provided an illustration of an anthropocentric or human-centered point of view. Nature has also gone through the same domination that females went through. For example, Bear said once “We’re going to spray these things and go ahead. I’ve got some DDD saved back in the basement” (Kingsolver, 2012, p. 75). In the novel, masculine characters prepare to use DDT to kill butterflies and chop down trees for financial gain likewise nature also faces subjugation like females in this patriarchal society.

Patriarchal society hardly believes “Women also have the knowledge and understanding of what is required to be acquired to challenge the changing environmental circumstances in order to determine practical solutions” (Rao, 2021, p. 70). The term Gyn/Ecology is useful for analysing this kind of subjugation of women and nature in patriarchal societies.

7. CONCLUSION

In addition to being a biologist student, Barbara Kingsolver has always been interested in nature, which is evident in all of her works which include *Flight Behaviour*. Her writings always oppose human activities that endanger the environment.

Likewise, in this novel, she applied the concept of anthropogenic climate change and gave a warning note to the readers. To implicate this concept Kingsolver created strong female characters and uses them in the novel to deliver the strong news.

The analysis of this work connects the link between nature and women's subjugation. And also investigated the impacts of climate change caused by human beings which is known as anthropogenic climate change.

The novel ends with a new start for women as well as nature which the author Barbara Kingsolver symbolically connects. It demonstrates how they have both left the patriarchal group behind to create a new life.

To regain one’s place in the world, one must undergo a deep analysis over our ecosystem. That is the best possible solution for one to understand that the real problem is lack of concern towards nature and women (Dharshini, 2022, p. 110).

Through the ages, women connected to nature because they were both capable of creating a new world and helpful for future generations, so the author reminds the readers to sustain both the power for a bright and healthy future.

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The authors of this paper declare that they have no conflict of interest.

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