

## The Growth of Vegetal Perception in “The Weed”: The Emergence of Plant Subjectivity in Elizabeth Bishop’s Poetry

Li Yuan

Department of English, School of Foreign Languages, Sun Yat-sen University

### Author Note:

The author declares no conflicts of interest to disclose. Correspondence concerning this article should be addressed to Li Yuan, Department of English, School of Foreign Languages, Sun Yat-sen University, Guangzhou, Guangdong 510275, China. Email: yuanli\_1900@163.com

### Abstract

Elizabeth Bishop’s poetry abounds with vegetal imagery. She not only depicts the plants’ forms and growth but also endows them with perception, emotion and movement, transforming them into subjects with consciousness and thought. Grounded in the theoretical framework of “phytocriticism”, this study takes “The Weed” as the central text to explore how Bishop, through her delicate portrayal of vegetal perception and movement, constructs an “intersubjective relationship” between human beings and plants. The weed that grows from the human body symbolizes the mutual penetration of life and language, revealing a non-anthropocentric logic of perception and an awareness of ecological balance. In this transformation, plants cease to be passive objects of observation and become subjects capable of engaging in an equal dialogue with the poet. This study will also draw on other poems such as “Florida” and “The Moose” to reveal how Bishop further develops her vegetal narrativity and ecological vision of coexistence. Bishop’s vegetal poetics turns the sensibility of plants into a poetic mode of perception. Within the intertwining of language, life and consciousness, her poetry accomplishes a transition from the representation of nature to an ecology of coexistence.

**Keywords:** Elizabeth Bishop, “The Weed”, phytocriticism, vegetal perception, vegetal subjectivity

Elizabeth Bishop is renowned for her acute observational power and meticulous linguistic precision. Her poetry abounds with natural elements including animals and

---

Received 8 September 2025, Revised 22 September 2025, Accepted 13 October 2025.

**Citation:** Yuan, L. (2025). The Growth of Vegetal Perception in “The Weed”: The Emergence of Plant Subjectivity in Elizabeth Bishop’s Poetry. *Verse Version*, 14 (2), 74-108.  
<https://doi.org/10.64699/25ZJIX2165>

plants that are far from mere background scenery; instead they constitute an integral part of her perceptual and ecological imagination. Whether the elms, sugar maples, and silver birches in “The Moose,” the “pink swim-bladder like a big peony” in “The Fish,” or the islands covered with blooming flowers in “North Haven,” Bishop consistently animates plants and natural landscapes with vivid and embodied presence. Yet despite the prominent role of vegetal imagery in her poetry, scholarly attention to plants as perceptive, agentic subjects within Bishop’s work remains remarkably limited.

In existing international scholarship, Byun and Sehee (2016) examine Bishop’s self-positioning as “a minor female Wordsworth,” arguing that she both inherits and critiques the Romantic nature tradition by denaturalizing the feminine and feminized nature. She didn’t see nature as a mirror of human morality but rather as an independent, completely self-existent entity. Neimneh and Abussamen (2018), adopting an ecofeminist perspective, analyzing Bishop’s animal poems and reveal her depictions of vulnerable nonhuman life articulate anti-patriarchal and anti-anthropocentric ecological ethics. These studies mainly focus on animal imagery or broader ecological critique, paying insufficient attention to plants as beings with their own perceptual capacities and narrative agency. In Chinese scholarship, critics such as Wang Wenfei (2011) have emphasized Bishop’s ecological consciousness, natural ethics and environmental sensibility. Sheng Yan’s comparative study of Bishop and Marianne Moore’s versions of “The Fish” argues that Moore’s nature writing is more realistic, while Bishop’s is marked by imagination and creation. Although these studies discuss both animals and plants as part of Bishop’s ecological thought, they largely remain within a generalized

ecocritical framework and lack systematic inquiry into plants as distinct non-human subjects with perceptual and agentic capacities.

“Our” world, in turn, is without fail vegetal. None of it would have been in existence were it not for the life activity of plants (Marder, 2023, p. 3). In contrast to the limited attention to plants in Bishop studies, phytocriticism has recently emerged as an influential branch of ecocriticism internationally. Plants have long occupied a marginal position within Western thought. As Laist notes, plants appear to inhabit a time-sense, life cycle, a desire-structure and a morphology that is so utterly alien that it is easy and even tempting to deny their status as animate organisms (Laist, 2013, p. 12). For Aristotle, all living beings, including animals and humans, are alive by virtue of sharing this rudimentary vitality with plants (Marder, 2016, p. 45). Since Aristotle, Western philosophy has relegated plants to *anima nutritiva* (the nutritive soul) while elevating animals to *anima sensitiva* (the sensitive soul), a hierarchy that shaped centuries of thinking about vegetal life (De Chadarevian, 1996, p. 26). However, scientific developments have radically challenged this tradition. Charles Darwin’s *The Power of Movement in Plants* (1880) proposed that plant roots possess perceptual and information-processing capacities analogous to the animal brain – an idea that transformed European understandings of plant behavior and agency (Darwin and Darwin, 2016, p. 419). In the twentieth century, plant neurobiology further demonstrated that vegetal sensitivity isn’t confined to anomalous species like the “touch-me-not,” but is in fact characteristic of the entire plant kingdom. Plants are now understood to perceive, decide, learn, remember, and respond dynamically to their

environments.

With the development of these scientific achievements, philosophers such as Michael Marder have significantly reshaped plant studies in the humanities. They argue that plants constitute a crucial site for rethinking subjectivity, ethics and ontology from interdisciplinary perspectives. Building on such frameworks, phytocriticism is labelled as “the particular mode of botanico-criticism enunciated and put into practice in this study – one that draws from neurobiological standpoints that confer greater agencies and capacities to plants” (Ryan, 2018, p. 11). It thus offers a compelling approach for re-examining the status of plants as active participants in poetic worlds rather than passive objects of depiction. Despite the rise of phytocriticism in contemporary literary studies, its application to Elizabeth Bishop’s works remains virtually limited. This study therefore takes Bishop’s “The Weed” as its central text and other poems such as “Florida” and “The Moose” as complementary materials to trace the development of Bishop’s vegetal poetics. Drawing on the theoretical framework of phytocriticism, this article explores how Bishop employs delicate depictions of vegetal perception and embodiment to transform the plant from an observed natural object into a living subject capable of entering an intersubjective relation with the human. By analyzing the poem’s vegetal narrativity, this article highlights the significance of plant subjectivity and contribute to the broader expansion of phytocriticism in the study of modern poetry.

### **1. The Emergence of Vegetal Perception: From Natural Object to Embodied Subject**

Since Bishop finished “The Weed” in 1942, she sent the poem to Marianne

Moore for criticism and advice. It emerges from a formative period in which Bishop's poetic imagination was becoming increasingly attuned to the natural world. This sensitivity to nonhuman life was strengthened not only by her living environment with rich ecological elements but also by the influence of Marianna Moore, her mentor and close friend. Moore's meticulous observational poetics and sustained attention to natural elements provided Bishop with precise depiction and ethical attentiveness to the natural world. Consequently, Bishop gradually cultivates a poetics of close looking that later enables her to perceive vegetal beings not as static metaphors but as dynamic entities with perceptual capacities of their own. Bishop's sensitivity to vegetal life was not only cultivated through close observation but also shaped profoundly by the ecological environment of Key West. In 1938, she left New York for Florida, where the abundance of animals and plants profoundly expanded her sensory imagination. Florida's tropical vegetation exposes Bishop to rhythms of plant life obviously different from those of the northern flora she has previously known. She spent evenings walking along the shoreline, gathering shells, studying local flora, and memorizing their names (Fountain & Brazeau, 1994, p. 71). This immersive engagement informed poems such as "Florida," where vegetation is rendered as dense and vibrantly alive. Her relationship to plant life extended from observation to cultivation. In a letter for Moore in 1939, Bishop described her "great plating plan," having planted "a ravaged-looking palm tree, and I hope to get a ten-foot Night Blooming Cereus planted in the front yard" (Bishop, 1994, p. 85). Even after returning to New York in the 1940s, she carried seeds from Key West and planted them on her apartment's tiny terrace. Apparently, she desires to keep

contact with vegetal life despite the constraints of urban living. These experiences cultivate in Bishop an attentiveness that views plants not as decorative objects but as perceptual beings, which profoundly shapes the emergence of vegetal subjectivity in “The Weed.”

What’s more, Bishop confessed that she “prefer(s) the Florida landscape—all this dampness and leafiness is a little oppressive” in a September 1940 letter to Marianne Moore. She also repeatedly in the letter urged Moore to visit her in Key West, insisting that, “I’ll keep right on saying it until you say ‘yes’ or ‘stop’” (Bishop, 1994, p. 95). Indeed, Bishop found the tropical environment to be a considerable source of inspiration, with its humid air, rapid plant growth and dense forests. Her engagement with vegetal life during this period extended beyond observation to include sustained encounters with botanical knowledge. In a later letter to Moore written in 1943, Bishop mentions reading H. F. Macmillan’s *Tropical Gardening and Planting, with Special Reference to Ceylon*. Despite its author’s “slightly snobbish” tone and digressions into colonial anecdotes, she describes it as “the best book of the sort I’ve seen” (Bishop, 1994, p.117). Significantly, Bishop reflects on the act of identifying plants as both “rather pointless” and peculiarly satisfying, noting the experience of encountering a flower in the yard and then finding it again in a book. Her observation that “so many things are misnamed in Key West” and that “no one knows where anything comes from” (Bishop, 1994, p.117) reveals an acute awareness of the instability of botanical naming and origin, reinforcing her sensitivity to plants as living beings embedded in complex ecological and cultural histories.

This sensorial experience finds poetic expression in “Florida,” in which the state’s identity is inextricably linked to its vegetation. The opening lines of the poem describe Florida as a land “The state with the prettiest name, / the state that floats in brackish water, / held together by mangrove roots / that bear while living oysters in clusters,” (Bishop, 2011, p. 33) presenting vegetation as an active force that shapes the land’s physical structure and sustains its networks of biological interdependence. In *Timaeus*, Plato envisions the human as a celestial plant with the roots connecting the rational principle of vitality housed in our heads to the supernal sphere of ideas (Marder, 2023, p. 48). It’s important to note that rootedness is displaced from the soil to the intellect, and vegetal morphology becomes a metaphor for transcendence. Unlike Plato’s celestial plant, the mangroves don’t reach upward towards an ideal realm; instead, they extend horizontally and downward into unstable and “brackish water.” “Mangrove roots” function not as passive landscape elements but as active, shaping forces of the environment, modeling a form of vegetal agency that prefigures the autonomous perceptual life later attributed to the weed in “The Weed.” The state may appear fluid and unstable, but it’s vegetal life that actively stabilizes and sustains its existence. In contrast to Plato’s vegetal rootedness, Bishop’s roots signal immersion in the environment, mutual dependence, and survival within fragile ecological conditions. The mangrove roots that bear “living oysters” and leave dead “skeletons” indicates that plant life shapes growth and decay within the same system, bringing vegetal life back into ecological reality.

The simile “green hummocks / like ancient cannon-balls sprouting grass”

(Bishop, 2011, p. 33) is particularly revealing in Bishop's vegetal imagination." The image "cannon-balls" invokes the language of warfare and it suggests violence and destruction, reinforcing the earlier description of the swamp as "dotted as if bombarded" (Bishop, 2011, p. 33). However, this martial imagery is immediately transformed by "sprouting grass." The "cannon-balls" are thus recast as a figure of vegetal renewal, where earth and grass absorb and overwrite the memory of violence. The adjective "ancient" distances the violence into time, while the act of sprouting brings the image into the present and ongoing rhythms of vegetal growth. As a result, the landscape is reshaped and revitalized into a living and regenerative surface. The comparison of "hummocks" to "cannon-balls" underscores how vegetal processes as a quiet and persistent agency counteract and replace linear histories of human's conflict. Therefore, "cannon-balls sprouting grass" exemplify Bishop's broader poetic vision, in which plants actively shape the world and vegetal life is no longer background scenery but a formative presence.

Throughout "Florida," Bishop describes plants in ways that highlight their movement, sound, and material effects rather than treating them as mere symbols. The presence of the palm trees is indicated aurally through their movement in the breeze, as shown in the line "The palm trees clatter in the stiff breeze / like the bills of the pelicans" (Bishop, 2011, p. 33). This simile aligns vegetal motion with animal behavior, suggesting that plant life participates in the same acoustic field as living creatures. The palm trees' movement produces noise that actively enters the poem's soundscape, contributing to the sensory density of the environment. Similarly, the tropical rain is



described as “freshening the tide-looped strings of fading shells,” (Bishop, 2011, p. 33) thereby suggesting a constant interaction between plant life, water, and the shoreline. Rain here is not merely atmospheric but functions as a regenerative force that renews coastal materials shaped by tidal movement. The word “freshen” implies both cleansing and reactivation, reinforcing the sense of cyclical exchange governing Florida’s ecology. Even vegetal remnants such as “stumps and dead trees,” (Bishop, 2011, p. 33) continues to exert a sensory influence, with their charred surfaces evoking an appearance similar to “black velvet.” Through this tactile and visual metaphor, dead plant remains materially expressive, contributing texture and atmosphere rather than disappearing into inert background. These images present Florida’s vegetation as something that actively shapes the atmosphere, soundscape, and ecological activity of the place. Bishop’ attention to these sensory and material dimensions reflects her growing recognition that plants are not passive background scenery for human observation but a dynamic participant in the making of place, leading to her later and more explicit explorations of vegetal agency and perception.

In “The Weed,” Bishop constructs a poetic space in which vegetal life emerges not as passive scenery but as a sensate subject. The poem’s premise – a weed taking root in the speaker’s body – dissolves conventional boundaries between human and plant, signaling a mode of perception in which vegetal existence acquires agency and experiential vitality. The opening lines of “The Weed” dramatize the very moment in which vegetal perception enters the poem as an active force. The speaker dreams of lying “dead, and meditating,” immobilized within a “cold and close-built bower,”

(Bishop, 2011, p. 22) where both body and thought are frozen in as a state of suspended animation. From the perspective of phytocriticism, one of the fundamental differences between humans and plants lies in their divergent experiences of time (Jiang Lifu, 2025, p.111). Time becomes distorted in the lines “for a year, a minute, and hour,” (Bishop, 2011, p. 22) a collapse that signals the dissolution of human temporal experience. Generally speaking, ordinary human consciousness distinguishes sharply between minutes, hours and years, but Bishop here renders these units interchangeable. This leads to a temporality that more closely resembles the slow, continuous, and non-linear rhythms characteristic of vegetal life. Bishop allows the poem to enter a liminal, non-anthropocentric temporal zone in which vegetal temporality becomes perceptually available even before the weed appears. Thus, the blurred time experience is not merely a metaphor for death but a poetic enactment of plant time, preparing the ground for the emergence of vegetal agency. The frozen, dreamlike state in which the speaker lies “unchanged together” with the “final thought” represents the slow, perceptible processes of plants, whose growth and internal movements often evade human perception.

Into this suspended temporal field, Bishop introduces the sudden motion of the weed: first “as startling, there, to every sense,” and “then it dropped/to insistent, cautious creeping in the region of the heart” (Bishop, 2011, p. 22). This movement is a distinctly vegetal mode of action: slow, oriented towards environmental stimuli. Traditional literary criticism has tended to treat plants as metaphors subordinate to human subjects, overlooking their autonomy and experiential depth (Jiang Lifu, 2025,

p. 110). In contrast, Recent literary studies of plants are beginning to focus on the representation of the intelligence, behavior, and subjectivity of the vegetal world in works of poetry and prose, fiction, and nonfiction. Importantly, these new texts release the vegetal from a background position in literary discourse and underscore the vital role of plant narration, voice, presence, and sensoriality (Gagliano & Ryan xvi). Bishop's depiction of the weed exemplifies this vegetal turn: the plant does not symbolize a psychological state but acts as an agent capable of initiating perception, breaking the speaker's "desperate sleep," (Bishop, 2011, p. 22) and asserting its presence through tactile and sensory means.

As "a light young weed/had pushed up through the heart and its/green head was nodding on the breast," (Bishop, 2011, p. 22) it functions not as a symbolic projection of the speaker's consciousness but as an autonomous organism whose rhythms of movement, growth, and response arise from internal biological imperatives. Naturally, it introduces a nonhuman vitality into the poem, which begins to replace the inert stasis of the human body lying "dead, and meditating." To some degree, Bishop dramatizes a moment of ecological succession at the level of ontology. The transition from immobile and frozen human body to the dynamic emergence of vegetal life suggests a rotation or relay between human and plant forms of existence. The weed's rising movement indicates that life continues, transforms, and transfers across species boundaries. Where human thought has reached its "final" state and become "frozen," vegetal life begins again, embodying a regenerative principle that replaces and revitalizes the human domain. This transformation of the plant into an active subject aligns with what Fan

Yuefen identifies as the core of the contemporary “vegetal turn,” in which plants become the very origin of textual interpretation and are endowed with subjectivity that dismantles the traditional subject-object binary (Fan Yuefen, 2024, p. 107). This dynamic is brought to its most profound expression in the poem’s closing lines:

The weed stood in the severed heart.

“What are you doing there?” I asked.

It lifted its head all dripping wet

(with my own thoughts?)

and answered then: “I grow,” it said,

“but to divide your heart again.” (Bishop, 2011, p. 23)

The speaker, formerly the center of perception, becomes the one who asks, whereas the plant becomes the one who answers. The weed “stands” in the “severed heart,” occupying the very center of human interiority conventionally regarded as the core of emotion and consciousness. The plant’s presence in this intimate anatomical and symbolic space is a radical displacement of human-centered subjectivity, as the vegetal being takes root in the place where human being was once presumed sovereign.

The vegetal subjectivity becomes more tangible when Bishop describes how “it grew an inch like a blade of grass; / next, one leaf shot out” (Bishop, 2011, p. 22). The plant’s capacity to develop is based on its own internal rhythms, independent of human intention or perception, a temporal mode intrinsic to vegetal life. The plant’s sensitivity is highlighted as well in the lines of “the nervous roots reached to each side” (Bishop, 2011, p. 22). The adjective “nervous” subtly attributes a perceptual agency to the plant,

suggesting its ability to respond to the surroundings. Contemporary plant studies, emerging from the scientific development of plant neurobiology, demonstrates that such sensitivity is a fundamental characteristic of vegetal life. Plants have the equivalent of a nervous system as well as an electro-mechanical pulsation, or what he labeled affectionately the vegetal “heartbeat” (Shepherd, 2009, p. 104). This insight resonates with a longer scientific tradition. As early as the nineteenth century, Charles Darwin and his son suggested that plant roots function in ways comparable to an animal brain, a proposal later termed as the “root-brain hypothesis” (Marder, 2016, p. 87). From this perspective, the weed’s “nervous roots” are not merely figurative but can be read as poetic rendering of vegetal cognition rooted in biological sensitivity and environmental responsiveness. The weed’s exploratory roots therefore signify biological function and even a mode of active engagement with the world. Such engagement reflects a broader understanding of vegetal subjectivity, which is not concentrated in a single organ or function but dispersed throughout the plant body, from roots to leaves and shoots (Marder, 2016, p. 42). In this sense, the weed’s growth and sensitivity do not merely support life but constitute a distributed mode of perception and agency. As the weed has rooted in the speaker’s heart, its movement enacts what Ryan refers to as “co-enervation” (Ryan, 2018, p. 83).

When the weeds lift its head “all dripping wet,” the following parenthetical question further blurs the boundaries between plant and human cognition. It prompts a phytocritical thinking: whether the plant’s thoughts emerge from the human, or whether the plant’s presence has begun to absorb or reconfigure human consciousness. The

weed's reply brings a crucial conceptual turn. "I grow... but to divide your heart again" becomes an act of disruption, reconfiguration and reopening. The plant's purpose is not to heal the heart but to redivide it, making space within human interiority. Symbolically, this division means the breaking of anthropocentric perception and allows vegetal agency intervenes, proliferates and redefines the boundaries of experience. Moreover, the biosemioticians of today have likewise argued that language is "pervasive in all life" (Wheeler & Dunkerley, 2008, p. 8). In other words, semiotic exchanges are not exclusive to human beings but are inherent in the vital activities of all living forms. In "The Weed", growth becomes the plant's language, its mode of being and its assertion of agency. It's an ongoing iterative process of the human toward the vegetal being, mirroring ecological rhythms of decay and regeneration.

By granting the plant's own movement, Bishop destabilizes anthropocentric boundaries and establishes a space in which human and plant forms of being begin to overlap. She reconfigures vegetal life as an autonomous perceptual subject whose rhythms and agencies interrupt and reshape the stasis of the human world. This shift not only attests to the plants' inherent vitality but also provides the foundation for a more reciprocal mode of interaction, where the plant's presence initiates an emotional response, mutual influence, and the potential for intersubjective coexistence. As Yan Jianhua and Fang Fang (2022) state, human live by consuming plants and return, in death, to nourish them, so this reciprocal corporeality constitutes the material basis for what may be called vegetal empathy. (p. 91) Intercorporeality brings to the fore the potent awareness that human and nonhuman bodies are subjected to the same

circumstances and partake in a common fate (Ryan, 2018, p. 75). In this sense, Bishop's reconstruction of the plant agency is an ontological recognition of the intertwined fates and shared corporealities that bind human and vegetal life.

## **2. Vegetal Empathy: The Intersubjective Symbiotic Relation Between Humans and Plants**

Contemporary environmental ethicists enlist the term "bioempathy" to specify the moral implications of empathy for nonhuman beings, particularly in relation to intrinsic value theory (Ryan, 2018, p. 92). Since the vegetal being is presented as an autonomous perceptual subject, subsequent scenes of "The Weed" reveal a deeper intersubjective entanglement between plant and human. This entanglement is vividly depicted in the poem's portrayal of the weed's corporeal intrusion into the human body, which can be understood through the lens of vegetal empathy (bioempathy). As John Charles Ryan asserts,

Bioempathy is not a distant yearning for identification with nonhuman lives, but, in contrast, denotes the deep-seated corporeal resonances that already exist between emplaced beings. From this point of view, human-plant entanglement is a persistent material negotiation enacted in the present rather than an inaccessible Romantic ideal attained at an undeterminable future juncture. (Ryan, 2018, p. 84)

Such assertion underscores that human-plant relations arise from embodied interdependence, that is, an intercorporeality in which each life form affects and is affected by the other. It is within this mutual influence that Bishop's poem situates the

encounter between the speaker and the weed. The human body, as both host and medium, supports botanical growth and participates in a shared ecological vitality. Before the plant enters into direct exchange with the speaker, its agency is already evident:

The stem grew thick. The nervous roots  
reached to each side; the graceful head  
changed its position mysteriously,  
since there was neither sun nor moon  
to catch its young attention. (Bishop, 2011, p. 22)

The weed exhibits a commonly perceptual responsiveness of vegetal species, which aligns with modern botanical science emerging out of plant neurobiology. Plant neurobiology underscores the “downright erroneous” ascription of utter passivity to plants (Marder 2012a, 2). Reasonably speaking, the weed’s movements arise from its own perceptual logic even in the absence of “sun or moon.” When the weed “changed its position mysteriously,” this kind of vegetal subjectivity underlies bioempathy, a mode of vitality grounded in life-processes shared species. Its gesture prepares the conditions for its later intercorporeal exchange with the human speaker. In this sense, Bishop dissolves the hierarchy in which plants are passive responders to external conditions.

This is further intensified when “the rooted heart began to change / (not beat) and then it split apart / and from it broke a flood of water” (Bishop, 2011, p. 22). The heart here is no longer exclusively human; it is transformed into a hybrid organ of



vegetal life. The rupture symbolized a release of vitality through which plant and human partake in a reciprocal exchange. The “two rivers” flowing from the split heart transforms the scene from an intimate bodily event into a figure of expansive ecological circulation. The rivers, “one to the right, one to the left,” evoke a symmetrical bifurcation suggesting a redistribution of life energy. Meanwhile, the splitting of the human heart initiates a broader metabolic process in which vitality is no longer contained within the human body but released outward into the surrounding environment. In tradition, rivers often symbolizes renewal, cyclical return and the movement of life across boundaries. Bishop employs this imagery to suggest that the human heart, once the seat of interiority, now becomes the source of a more-than-human flow.

It’s worth noting that Bishop’s changes of water imagery from “river” to “stream” and finally to “cascades” charts a progressive intensification of vegetal agency and intercorporeal exchange. The initial emergence of “two rivers” from the split heart marks the moment when human vitality escapes its anthropocentric enclosure and enters a wider ecological field. The term “river” registers the first stage of dispersal, in which human interiority becomes redistributed into an ecological circuit shared with the plant, marking the first movement towards bioempathy. As the poem continues, these rivers condense into “rushing, half-clear streams,” (Bishop, 2011, p. 22) a shift that refines the flow from macrocosmic dispersal to microcosmic sensorial movement. Their “half-clear” quality highlights their hybrid composition: a fluid no longer entirely human nor purely vegetal but a liminal substance in which species boundaries begin to

dissolve. The stream becomes a conduit for vegetal semiotics, preparing for the following “illuminated scenes” and “racing images” the plant imparts. To be honest, the water imagery acts as the medium for the interspecies communication.

In the line describing how “the ribs made of them two cascades,” (Bishop, 2011, p. 22) the word “rib” functions as a pivotal site of semantic and symbolic convergence, carrying a dual reference that deepens the poem’s exploration of bioempathy. On the one hand, ribs undeniably evoke the human anatomical structure: the curved bones that surround the chest and protect the heart; on the other hand, the term resonates with botanical vocabulary, where it refers to the primary veins of a leaf, the structural channels through which nutrients, water, and energy circulate within vegetal bodies. The dual reference is indeed a poetic strategy that collapses the distinction between human anatomy and plant morphology. When the poem states that the ribs “made of them two cascades,” it suggests that the human ribcage has been transformed into something akin to the vascular structure of a plant, a system of channels reconfigured to sustain vegetal flow. In other words, the structure that previously protected the human heart now functions as the structural support for a hydraulic system analogous to that of a plant. The human body no longer merely contains the plant, whereas it becomes plant-like in its function, form and circulation. They are subjected to the same material processes and thus partake in a common fate. The rib, as a shared morphological feature, acts as a hinge between species. By using a term belonging to both biological kingdoms, Bishop makes the deep anatomical kinship underlying vegetal empathy visible, thereby demonstrating the interconnectedness of all living things. The cascades now serve as

the plant's vascular system, suggesting that the human body has been repurposed to support plant life. In this light, the dual meaning of "rib" is not a linguistic coincidence, but rather a philosophical consideration. The human body is inherently susceptible to being interpreted in a vegetal sense.

Their shared fate becomes materially concrete when vegetal fluid literally touches the human body: "A few drops fell upon my face / and in my eyes, so I could see" (Bishop, 2011, p. 23). The plant's water becomes the medium through which the speaker gains vision, indicating that perception is now coproduced by the vegetal other. This moment marks a shift in visual clarity and a fundamental redistribution of perceptual agency. What the speaker "could see" is inseparable from what the weed itself generates, which embodies the vegetal-human reciprocity. As Ryan notes, bioempathy therefore reveals that human manipulation of herbal plants is not reducible to asymmetrical acts of ascendancy over vegetal nature. While we affect the medicinal plant, so the plant impacts us in return. (Ryan, 2018, p. 95) The human heart provides the water that nourishes and burdens the weed, and the weed transforms that same water into a perceptual vehicle that alters human vision. The "light" and "small, illuminated scene" (Bishop, 2011, p. 23) within each drop implies that the plant generates its own semiotic content — units of vegetal meaning that humans can only access through physical contact with botanical matter.

However, this poem also exposes the limits of anthropocentric empathy because empathy as "feeling into" potentizes narcissistic identification with plants, invariably leading back the egoistic self while elevating "exclusively human subjects,

who rely on it to construct their ideal selves or to retrieve alienated features of their own existence” (Marder, 2012b, 271). Bishop’s depiction resists such self-centered projection. The speaker’s tentative phrasing, “I thought I saw,” (Bishop, 2011, p. 23) acknowledges that the perceived phenomenon may not fully align with human perceptual frameworks. The scene does not emerge from the process of imaginative appropriation; rather, it is the result of material, bodily entanglement. This entanglement serves to ground empathy in substance rather than sentiment.

Marder points out the fact that poetry is an amenable medium for empathizing with plants and poetry can generate empathy—in its most ethical incarnation— and facilitate understanding of the vegetal registers within us. (Marder 2012b, 265) Bishop materializes this potential by letting vegetal processes drive the perceptual event. The culmination of this perceptual transformation is captured in the striking assertion that “the weed-deflected stream was made / itself of racing images” (Bishop, 2011, p. 23). The phrase “weed-deflected stream” first of all indicates that the flow of water is no longer governed by an autonomous, neutral physical trajectory; it has been redirected and reoriented by the plant. The stream is not merely passing by the weed, but has been deflected by it, which means that vegetal agency now intervenes in the very pathways of material and perceptual circulation. From a phytocritical perspective, this marks a significant shift: the plant ceases to be a passive recipient of environmental forces and instead becomes an agent that modifies, bends, and redistributes the flows that were previously associated with the human body. It’s equally significant to note that the stream is not simply carrying images as a transparent conduit; it is made of them. Within

the logic of phytocriticism, the line suggests that the weed generates a form of vegetal semiosis: a nonhuman production of signs and scenes that arises from the plant's own embodied processes. The images are not imposed from outside by the human mind; they are condensed within the medium of the stream as a result of the weed's deflection and agency.

By claiming that the stream “was made itself of racing images,” the poem implies that the plant has transformed a human-derived fluid into an imagistic current that belongs as much to vegetal perception as to human sight. The employment of the adjective “racing” serves to further intensify this reconfiguration of perception. In contrast to the prevailing stereotypes of plant life as static, inert, or slow, Bishop portrays the imagistic field associated with the weed as dynamic, proliferating, and temporally accelerated. This movement suggests not only the speed of the stream but also the rapid succession and continual transformation of the scenes it contains. In the context of bioempathy, this “racing” quality is particularly salient: human perception is no longer anchored in a stable, self-possessed subjectivity, but is instead swept up into the plant's own rhythms of motion and change. The weed does not merely mirror the speaker's inner life; it reconfigures the field of perception by transforming water into images and flow into signification. The weed-deflected, image-laden stream is therefore not just a vivid metaphor but a figure for the very process by which vegetal life enters, alters, and co-authors human consciousness.

Bishop's portrayal of the vegetal agency – from the weed's independent movements to the water droplets that enter the speaker's eyes and generate luminous

scenes – reveals a mode of interspecies relation grounded in material reciprocity rather than metaphorical identification. The “weed-deflected stream,” composed of “racing images,” exemplifies how plant life actively reorganizes perception through its own rhythms and semiotic capacities. Through the botanical resonance of the ‘rib,’ Bishop further imagines a shared corporeal architecture in which humans and plants co-create and co-sustain one another. This phytocritical reconfiguration of empathy and perception not only dissolves anthropocentric hierarchies but also opens the way toward a broader ecological vision. The poem’s vegetal interventions begin to function not merely as sensory events but as narrative forces, shaping how environments, meanings, and relational worlds are produced. It is this emergent vegetal narrativity, and its implications for ecological coexistence, that the following section will examine in greater depth.

### **3. Vegetal Narrativity and Ecological Coexistence**

Within the increasingly influential field of phytocriticism, scholars argue that reimagining plants as sentient, intentional, and communicative beings constitutes a necessary first step toward “empathically, reciprocally, and sustainably co-inhabiting places with them” (Ryan, 2018, p. 102). This reconfiguration challenges the longstanding Western habit of reducing plants to passive metaphors or decorative background elements. As Hall argues, imagining plants as spiritually autonomous and communicative beings enables them to enter relations of kinship—relations of care or solidarity (Hall, 2011, p. 11). Fan Yuefen similarly emphasizes that plant ethics involves delving into issues such as the life, rights, status, moral identity, and intrinsic value of

plants within a theoretical framework. It seeks to highlight the shared aspects between plants and humans while acknowledging the distinct nature of plants, thereby promoting a more humane approach to treating them (Fan, 2024, p. 105). Such an expanded ethical and ontological awareness further supports Marder's proposition that poetry can allow vegetal life to manifest itself not as metaphor but as "the thing itself" (Marder, 2012a, p. 5), participating directly in meaning-making. This conceptual shift toward vegetal agency is closely tied to recent ecological theories of nonlinear time.

Drawing on Evan Thompson's neurophenomenology, Siewers argues that ecopoetic narratives reveal "time-plex" human encounters with the natural world – experiences that disrupt linear temporal models and destabilize inherited assumptions about time's relationship to space (Siewers, 2011, p. 109). Such a reconceptualization of time requires readers to move beyond anthropocentric chronologies and attend to the rhythms embedded in nonhuman processes. To attend to these rhythms is, in Wood's words, to perceive "the invisible in the heart of the visible," the latent temporal articulations that structure existence beyond the immediately perceptible (Wood, 2003, p. 215). Bishop's "The Weed" emerges as a poem whose narrative and temporal structure are profoundly shaped by vegetal life, for the weed's own growth initiates and propels the poem's entire narrative trajectory. The weed disrupts the speaker's frozen interiority, and each subsequent movement—its leaf shooting out "like a twisting, waving flag," (Bishop, 2011, p. 22) its stem thickening, its "nervous roots" (Bishop, 2011, p. 22) reaching outward—constitutes a distinct narrative event. For Marder, reformulating the Western metaphysical tradition with regard to vegetal life, botanical

events mark the passage of time and the temporalization of human awareness through material-semiotic processes of “germination and growth, flourishing, dehiscence, blossoming, coming to fruition, and finally fermentation and decay” (Marder, 2013, p. 94). At this stage, vegetal temporality opens onto a deeper existential register. As Marder further observes, plant roots are sensitive to the “under-world,” a domain that, for humans, often signifies death or, at best, unconscious existence (Marder, 2016, p. 88). The weed’s actions create a sequence of transitions that align with Marder’s botanical processes: emergence, expansion, differentiation, and rupture. In this sense, the plant becomes a storyteller, structuring time according to its own rhythms, which differ fundamentally from human linear chronology. As Marder argues, plant growth illuminates the modularity of the past and the future—multiple parallel pasts and futures that coexist with one another at the level of roots and branches respectively, as well as within each of these organs of vegetal morphology (Marder, 2023, p. 52). This model of vegetal temporality illuminates Bishop’s inclination to allow narrative meaning to emerge through layered rhythmic patterns.

This narrative agency becomes most striking when the stream released from the split human heart is redirected by the plant and becomes “made / itself of racing images.” The stream no longer functions merely as a physical substance, but transforms into a semiotic flow, rapidly shifting scenes generated through vegetal intervention. The acceleration of the images— “racing”—introduces a nonhuman temporality, one that departs from the slow, stable rhythms conventionally attributed to plants. Instead, Bishop depicts vegetal life as capable of producing dynamic, even urgent, temporal



patterns. This corresponds with Siewers's theory of "time-plexity," which posits that non-human processes give rise to layered and intersecting temporal modes that extend beyond the confines of anthropocentric experience. The poem thus dramatizes how vegetal agency can reorganize not only perception, as seen in the droplets that enter the speaker's eyes, but also the fundamental temporal logic through which narrative develops.

This vegetal narrativity is not unique to "The Weed" but resonates across Bishop's broader ecological imagination. Bishop's vegetal narrativity appears in "The Moose," where "elms," "sugar maples," and "silver birches" form more than a descriptive background to the bus journey; they generate the ecological atmosphere through which the poem's temporality unfolds. Unlike the overtly dynamic weed of "The Weed," the trees in "The Moose" participate in a slow, expansive vegetal temporality, shaping the poem's gradual pacing and contemplative tone. First published in the *New Yorker* on July 15, 1972, "The Moose" was inspired by a bus journey Elizabeth Bishop took from Nova Scotia to Boston in 1946. Bishop worked on the poem intermittently for more than twenty years and finally completed it when she agreed to read at Harvard's 1972 commencement ceremony. The poem captures not only the landscape of the Maritime provinces and the seemingly uneventful atmosphere within the southbound bus but also the moment when a female moose emerges from the forest, compelling the vehicle to stop. Importantly, the poem is deeply rooted in the ecological character of northeastern North America, where sugar maples, silver birches, elms, foxgloves, lupins, and other regionally specific plants shape both the scenery and the

temporal unfolding of the narrative.

As the bus travels “on red, gravelly roads, / down rows of sugar maples,” (Bishop, 2011, p. 189) the journey is immediately imbued with a distinctly North American quality. The iconic sugar maples, renowned for their sap flow and seasonal rhythms, introduce a vegetal temporality that transcends the linearity of human travel. The “twin silver birches” provide a contrasting luminous effect, their pale bark creating a moment of perceptual brightness. The subdued farewell, “Goodbye to the elms,” (Bishop, 2011, p. 190) functions as a spatial and temporal pivot, creating a sense of historical disappearance. Through these trees, Bishop establishes a layered temporal field in which vegetal presences mark environmental time more profoundly than human agency. As the bus restarts and the light “grows richer,” (Bishop, 2011, p. 190) fog begins to settle, and plants once again mediate the scene’s temporal and atmospheric transformation. The fog’s “cold, round crystals” form and slide across “white hens’ feathers,” “gray glazed cabbages,” “cabbage roses,” and “lupins like apostles” (Bishop, 2011, p. 190). Rather than passively receiving the fog, these plants function as material interfaces through which the fog becomes visible and legible to the senses. Ecological time, which is normally imperceptible, manifests itself through vegetal textures and surfaces. The moisture accumulating on cabbages and lupins turns evening into a plant-mediated temporal event rather than a merely chronological transition.

The arrival of evening is further announced through subtle ecological behaviors. The “sweet peas cling / to their wet white string,” their tightened posture responding to increasing humidity, while “bumblebees creep / inside the foxgloves,” (Bishop, 2011,

p. 190) retreating into floral chambers for the night. These interactions between plants and insects function as natural indicators of time, marking the subtle yet pivotal transition: “and evening commences” (Bishop, 2011, p. 190). Time here is not declared by a human perspective but by vegetal and animal rhythms, exemplifying Siewers’s concept of time-plexity, in which temporal experience arises from ecological process rather than anthropocentric measurement. The line “Moonlight as we enter / the New Brunswick woods” (Bishop, 2011, p. 191) does not simply mark a spatial shift but signals the crossing of a temporal and ecological threshold, one in which human perception becomes subordinated to vegetal structures. The enjambment in these lines slows the reader’s progress, mirroring the gradual filtering of moonlight through a dense network of trees. This temporal delay signifies that the woods, a plant-constituted world that determines how time and light are experienced, dominate the space, not the passengers. In particular, the woods are rendered “hairy, scratchy, splintery,” (Bishop, 2011, p. 191) foregrounding a distinctly corporeal presence by showing the tactile materiality of bark, moss, twigs, lichen and underbrush. Bishop attributes to plants a sensorial signature, allowing them to impress themselves upon human experience through touch rather than sight alone. This shift highlights a vegetal phenomenology: the forest “touches” the travelers before they can properly see it.

Furthermore, the subsequent image, “Moonlight and mist / caught in them like lamb’s wool / on bushes in a pasture,” (Bishop, 2011, p. 191) suggests that the trees hold the light, bending, trapping and refracting it through their branches, in much the same way that bushes catch stray wool. The “moonlight” does not merely illuminate

the forest, whereas becomes entangled with it. This simile is of pivotal significance, as it endows the trees with a grasping capacity that is conventionally associated with animals. The vegetation functions as a perceptual apparatus, shaping the visual field through a process of vegetal agency. In this sense, this scene demonstrates how the forest constitutes itself materially instead of symbolically. The interplay of mist and moonlight with plant life also signifies a significant shift in time. While mist is a transient atmospheric phenomenon, moonlight represents a slower celestial cycle. The moment when both are “caught” by the woods simultaneously crystallizes several temporalities: day and night day and night, atmospheric and lunar cycles, and the rhythms of plant life. Consequently, this layered temporality is an example of Siewers’ concept of time-plexity: the forest becomes a place where various ecological rhythms converge, forming a temporal landscape that cannot be understood through human-centred chronology. Moreover, the image of wool caught on bushes gently recalls scenes of rural, domesticated landscapes. However, Bishop places this familiar gesture within a wild forest. This shift implies that human farming environments and nonhuman woodland ecosystems are not entirely separate, but share an underlying ecological continuity. It reinforces the idea that plants help shape the world in ways that parallel human activities but do not depend on them.

Finally, this scene prepares for the passengers’ shift into a dreamlike state. The transition into the passengers’ dreamlike state is not abrupt but grows organically out of the vegetal atmosphere Bishop carefully constructs. After moonlight and mist have been “caught” in the branches, and after the tactile density of the forest has enveloped

the bus, the passengers' bodies naturally respond. They "lie back" and drift into "a dreamy divagation" because the forest—its textures, its tangled branches, and its glowing light—creates a sensory atmosphere that relaxes the mind. In this way, the woods guide the narrative: they take in the moonlight, blur the sense of time, and create the conditions for moving from an external, ecological rhythm into an internal, psychological one. The passenger's posture just aligns with the plants' rhythms at night. In the following line "Snores. Some long sighs," (Bishop, 2011, p. 191) the syntax becomes short and breath-like, suggesting that human respiration itself begins to follow a slower, more vegetal rhythm. The phrase "a dreamy divagation" shows how the passengers' minds begin to drift away from clear, logical thinking into a more wandering, dreamlike state. Exactly speaking, it is triggered by the forest itself—the soft moonlight, the quiet mist, and the dense textures of the trees—which together blur the edges of what the passengers see and feel, gently pushing them into a more relaxed, drifting kind of consciousness.

Bishop's use of sound in the lines "a gentle, auditory, / slow hallucination" (Bishop, 2011, p. 191) shows that hearing becomes more important than seeing at that moment. Thus, the passengers are no longer rooted in the visual world. Instead, they are gradually drawn into a sound-shaped, atmospheric space created by the forest around them. As result, the woods assume a clear narrative role: they absorb external stimuli, soften temporal boundaries, and generate a liminal atmosphere in which waking and dreaming naturally blend. In this manner, the passengers' drift into "a dreamy divagation" is not merely a sign of tiredness but the result of ecological forces

that the poem has been establishing from the very beginning. The forest, functioning as a living vegetal agent, prepares and enables this changing state of mind, reinforcing Bishop's broader ecological vision in which plants are not passive background elements but active participants that shape human perception, emotion, and narrative unfolding. It is important to acknowledge the significance of plant life in shaping human experience. Rather than merely being a passive element, plant life actively influences and contributes to the manifestation of various forms of consciousness.

"The Weed" offers its most striking articulation of vegetal narrativity in the final exchange, "It lifted its head all dripping wet / (with my own thoughts?) and answered then: 'I grow,' it said, 'but to divide your heart again'" (Bishop, 2011, p. 23). The weed's declaration of growth is not merely a biological fact but a narrative act that asserts its agency. The question "with my own thoughts?" signals a moment of ecological entanglement in which human consciousness and vegetal processes become indistinguishable. Meanwhile, the act of "dividing" the human heart suggests a temporal rupture: vegetal time interrupts human psychological time, compelling the speaker to confront a form of life whose rhythms exceed anthropocentric expectation. Moreover, the line "to divide your heart again" frames vegetal action as transformative rather than merely invasive. The heart's division suggests not destruction but reconfiguration, which is a movement toward ecological coexistence in which human emotional life is altered by contact with vegetal agency.

"The Weed" and "The Moose" demonstrate how Bishop gradually develops a sophisticated vegetal narrativity that reconfigures the relationship between human

perception and non-human world. In “The Weed,” the autonomous motions of the plant initiate and shape the poem’s temporal and narrative trajectory, transforming vegetal life into an active agent capable of disrupting and reorienting human consciousness. “The Moose,” however, reveals a further refinement of this strategy: the cumulative presence of sugar maples, birches, foxgloves, and the moonlit undergrowth creates a dense vegetal sensorium that modulates the passengers’ awareness and draws them into a collective state of “dreamy divagation.” It’s sensible to say that the progression from “The Weed” to “The Moose” marks a decisive maturation in Bishop’s engagement with plant life. In this way, vegetal presence becomes neither decorative nor symbolic; rather, it structures the very conditions through which narrative, temporality, and perception unfold. This movement from the subjectification of a single plant to the perceptual force of an entire vegetal landscape reveals the increasing sophistication of Bishop’s vegetal narrativity: plants are no longer merely seen; they generate atmosphere, shape temporality, and alter states of mind.

## **Conclusion**

This study has examined Elizabeth Bishop’s vegetal poetics by taking “The Weed” as its central text and investigating how the poem reconfigures vegetal life from a passive background element into an autonomous perceptual and narrative agent. Through the weed’s self-directed growth, sensory capacity and distinctive temporal rhythm, the poem reveals the emergence of vegetal subjectivity and demonstrates how plant life can generate psychological movement and narrative unfolding. Simultaneously, Bishop’s portrayal of reciprocal interactions between humans and

plants, characterized by shared material processes, bioempathic resonance and subtle sensory exchanges, disrupts established anthropocentric boundaries, thereby establishing an intersubjective domain where both living organisms exert influence. In relation to poems such as “Florida” and “The Moose,” Bishop’s vegetal poetics can be seen to develop progressively throughout her career. In “Florida,” plants such as mangroves already appear as material agents that stabilize landscapes and reorganize ecological relations, revealing Bishop’s early sensitivity to vegetal agency within fragile environments. In “The Moose,” this sensibility expands further, as entire plant communities and forest space generate immersive sensory and temporal conditions that reshape human consciousness. All in all, these poems trace a movement from the agency of a single plant to the collective force of vegetal environments, reflecting a deepening ecological imagination and a growing orientation toward multispecies coexistence.

As contemporary phytocriticism insists, plant narrativity should not confine plants to their outward appearance but should emphasize relationality and interactivity, encouraging readers to move beyond habitual neglect of plant life; anthropomorphism, when carefully moderated, can function as a bridge to awaken awareness of vegetal complexity (Jiang Jinghui, 2022, p. 25). Accordingly, Bishop’s plants preserve their distinctive alterity, while still engaging in reciprocal exchanges with human perception, thereby becoming partners in meaning-making rather than mere objects of description. In this sense, Bishop’s vegetal poetics corresponds to the ethical understanding of friendship as a willingness to share a world – one that acknowledges unavoidable



differences in perspective between self and other, rather than seeking to erase them (Marder, 2016, p. 28). This model of relationship doesn't require identification or assimilation but is instead based on attentiveness, responsiveness, and the capacity to coexist with that which remains fundamentally different. In her poetry, plants are not made fully transparent or humanized; they retain their own rhythms and agency, while nonetheless entering into meaningful relations with human consciousness. This shared world is therefore not a unified or harmonious entity, but rather a space of negotiated coexistence shaped by mutual influence and respect for differences. Her poetics demonstrates that vegetal beings are embedded within the same temporal, affective and ecological processes as humans, participating actively in shaping perception, emotion and narrative form. Bishop's poetry suggests a more extensive reorientation of both poetic and ethical principles. By incorporating vegetal temporalities, agencies, and sensoria into her lyrical compositions, she transitions from conventional nature descriptions to a paradigm of ecological coexistence, in which humans and plants occupy a shared domain of interdependence. Notably, Bishop's work continues to offer substantial foundation for reimagining how literature might cultivate more attentive, ethical, and sustainable relationships between humans and the vegetal world.

### References

- Bishop, E. (1994). *One art*. In R. Giroux (Ed.). Farrar, Straus and Giroux.
- Bishop, E. (2011). *Poems*. Farrar, Straus and Giroux.
- Byun & Sehee (2016). A minor female wordsworth, Elizabeth Bishop's view of nature. *The Journal of Modern British & American Language & Literature* 34(3), 87-110.

- Darwin, C., & Darwin, F. (2016). *The works of Charles Darwin: The power of movement in plants*. In Paul B. and R.B. F. (Eds), Routledge.
- De Chadarevian, S. (1996). Laboratory science versus country-house experiments: The controversy Between Julius Sachs and Charles Darwin. *The British Journal for the History of Science* 29 (1), 17–41.
- Fan, Y. F. (2024). Critical plant studies: a keyword in critical theories. *Foreign Literature* (04), 100-110.
- Fountain, G. & Brazeau, P. (Eds.) (1994). *Remembering Elizabeth Bishop: An oral biography*. University of Massachusetts Press.
- Gagliano, M., John R. & Vieira P. (Eds.) (2017). *The language of plants: science, philosophy, literature*. University of Minnesota Press.
- Hall, M. (2011). *Plants as persons: A philosophical botany*. State University of New York Press.
- Jiang, J. H. (2022): Anthropomorphism and John Ryan’s phytocriticism. *Journal of Mudanjiang University* 31(3), 21-27.
- Jiang, L. F. (2025): Plant ecocriticism as a trend in anthropocene ecocriticism: An interview with Professor Scott Slovic. *Journal of Xi’an International Studies University*, 33 (02), 108-112.
- Laist, R. (2013). “Introduction.” In Laist (Ed.), *Plants and literature: essays in critical plant studies*. Rodopi, 9-17.
- Marder, M. (2012a). Plant intentionality and the phenomenological framework of plant intelligence. *Plant Signalling and Behavior* 7 (11), 1–8.
- Marder, M. (2012b). “The life of plants and the limits of empathy.” *Dialogue* 51 (2), 259–73.
- Marder, M. (2013). *Plant-thinking: A philosophy of vegetal life*. Columbia University Press.
- Marder, M. (2016). *Grafts: writing on plant*. Univocal.
- Marder, M. (2023). *Time is a plant*. Brill.
- Ryan, J. C. (2018). *Plants in contemporary poetry: ecocriticism and the botanical*

*imagination*, Routledge.

- Shepherd, V. (2009). "Reflections on the many-in-one: J. C. Bose and the roots of plant neurobiology." In Sen Gupta D. P., M. H. Engineer & V. Shepherd (Eds.), *Remembering Sir J.C. Bose*, World Scientific Publishing, 101- 60.
- Sheng, Y. (2006). Ecological Perspectives in Bishop and Moore: A Reading of "The Fish". *Journal of Suihua University*, 26 (6), 106-107.
- Siewers, A. (2009). *Strange Beauty: Ecocritical Approaches to Early Medieval Landscape*. Palgrave Macmillan.
- Wang, W. F. (2011). An analysis of Elizabeth Bishop's poetry from the perspective of eco-criticism. *Journal of Nanyang Institute of Technology* 3 (5), 8-10.
- Wheeler, W. & Dunkerley, H. (2008), "Introduction," In Wheeler, W. & Dunkerley, H. (Eds.), *Earthographies: ecocriticism and culture* (pp. 7-14). Lawrence & Wishart Ltd.
- Wood, D. (2003). "What is eco-phenomenology?" In C. Brown and T. Toadvine (Eds.), *Eco-phenomenology: back to the earth itself* (pp. 211–33). State University of New York Press.
- Yan, J. H, & Fang, F. (2022). "Faraway places and desert country: The geographical hindrance to plant sympathy." *Journal of Poyang Lake* 2, 88-96.