

## "Of Toads and Men": Brutal Kinship in Emily Dickinson and Charles Darwin

Kaitlin Mondello

Both Emily Dickinson and Charles Darwin spent significant time in their gardens, closely observing the local ecology. Poet and scientist alike were fascinated by the predator-prey relationships between birds, worms, frogs, and insects that they witnessed on a daily basis. In part, these humble, domestic observations led them to question the prevailing ideas of natural theology, which discerned in nature scientific evidence of God's design. While Darwin's now-famous tour on the *H.M.S. Beagle* planted the seeds for the idea of natural selection, he developed his theory further in his daily observations on walks through his garden at Down House. The American botanist Asa Gray notes this fact early in his influential review of *On the Origin of Species*, "the author [Darwin] takes us directly to the barn-yard and the kitchen-garden" (Gray). Meanwhile, across the Atlantic, Dickinson was studying the sciences in her coursework at Amherst Academy and Mount Holyoke Female Seminary, learning Linnaean taxonomy and collecting plant specimens to craft an herbarium. She avidly read her family's magazine subscriptions to *Harper's Weekly* and *The Atlantic*, which were brimming with stories on the popular science of her time. While worlds apart, Darwin's and Dickinson's radical thinking converges in the difficult recognition of the suffering of sentient life.

This article brings together these two canonical figures into an unlikely pairing that traces more fully the circulation of controversies over science, religion, nature, and species in the nineteenth century. Considering Dickinson and Darwin in a transatlantic context crosses not only national borders, but also disciplinary ones to find the science in Dickinson and the poetry in Darwin. Indeed, Dickinson mentions Darwin three times in her later letters in ways that demonstrate her awareness of the impact of his controversial theories, particularly on religious belief. Though constantly torn between faith and doubt, she eschewed any form of religious orthodoxy. Both Darwin and Dickinson questioned religious faith in the wake of deaths in their families; they channeled these experiences into their work to call attention to pain and death as communal across animal life. The death of Darwin's beloved ten-year old daughter Annie in 1851 due to illness haunted him more than any other loss and cemented his disillusionment with religious belief. For Dickinson, death was a constant spectre that began in childhood when her close friend and second cousin Sophia Holland died from illness in 1844. In his first Transmutation notebook (*Notebook B*, 1837-8), Darwin writes, "animals – our fellow brethren in pain, disease, death & suffering, & famine . . . from our origin in one common ancestor; we may be all netted together" (232). Dickinson's poems about animals, which she tellingly calls "Nature's People" in "A narrow fellow in the grass" (line 17, Fr1096, J986)<sup>1</sup>, can be described as representations of this dangerous net in which all life is caught. With the full recognition of humans' mutual material vulnerability with other animals, Dickinson and Darwin resisted claims to human exceptionalism, whether these came from religious doctrine or scientific arrogance. Instead, each saw humans as yet another creature likewise bound in what Darwin would famously call nature's "web of complex relations," knit together in "a war of nature, of famine and death" (*Origin* 73, 490). These same spectres haunt

Dickinson's nature poetry, leading her to describe nature as "a Haunted House" (L459A). As Susan Howe argues, in Dickinson's poetry, "Nature is no soothing mother, Nature is annihilation brooding over" (21). Both Dickinson and Darwin attempt to reconcile the brutal side of nature with an ecological perspective that is, by necessity, no longer anthropocentric. Their recognition of what I am calling "brutal kinship," or a shared biological vulnerability to pain and death, is essential to any ecological understanding of the interconnections between ourselves and other animals. I use "kinship" to reinforce Darwin's sense of shared ancestry and descent, and "brutal" for both its original meaning, of the animals ("brutes"), as well as the connotation of suffering. The phrase "brutal kinship" has been used by Jane Goodall and photographer Michael Nichols as the title of their 1998 book about chimpanzees. The term echoes Donna Haraway's recent imperative to "make kin" in *Staying with the Trouble: Making Kin in the Chthulucene*, in which she claims that the recognition that "all earthlings are kin in the deepest sense" (103) is essential to our ability to respond ethically as part of the environment.

By considering Dickinson's poetry in dialogue with Darwin's contemporaneous work, this article offers new readings of poems focused on animal and insect figures in relation to suffering and death. Dickinson's primary poetic subjects, nature and death, then become the ecological grounds by which she explores the materiality of bodies (of both humans and other animals) to their environments. I pair Dickinson's poems primarily with Darwin's notebooks because, as Gillian Beer notes, Darwin finds a kind of "vertiginous freedom" (247) in these private spaces where he can make radical speculations without the pressures of publication and public response; in this way, the notebooks provide important insights into his evolving thought processes and beliefs. Some of his notebook entries themselves resemble Dickinson's poetics with compressed thoughts expressed elliptically and in dashes. For example, for Darwin (like his grandfather, Erasmus Darwin, who wrote scientific and poetic texts), science was itself an art: "– All Science is reason acting on principles, which even animals practically know –" (*N Notebook* 14). Perhaps as a variant or as an addition, Darwin adds "systematizing" above "acting," and then between the two clauses inserts the phrase "art precedes science – art is experience & observation –" (*N Notebook* 14). This compressed entry is part of Darwin's constant search for similarities between humans and other creatures as evidence of a biological ancestry far beyond our closest relatives, the apes. Here, he acknowledges that all animals have a sense of reason that is based on experience, and that experience and observation are essential to both the arts and sciences. For Darwin, the arts and sciences are connected not only to each other, but also across species. In *Chaos, Territory, Art: Deleuze and the Framing of the Earth*, Elizabeth Grosz uses Darwin's work to argue for the origin of art in sexual selection; art, then, in a Darwinian sense is not limited to the human species, and according to Darwin, neither is science.

Following from Darwin's recognition of the relationship between art and science, and humans and other animals, I bring Dickinson's poetry into conversation with his work about kinship and ecology. To this end, I survey the dominant scientific and religious discourse in the early-to-mid-nineteenth century to demonstrate how radically their positions on humans and other animals differed from mainstream convention. While this may be accepted fact for Darwin as a scientist, it is less so for Dickinson as a poet. Dickinson's subject positions as a woman and a poet have been read historically as disconnected from science, but as Nina Baym, Renée Bergland, Richard E. Brantley, Rebecca Patterson, Robin Peel, Kimberley Tolley, Hiroko Uno, and others, have shown, Dickinson was deeply engaged in the sciences in the nineteenth

century. Peel's and Uno's full-length studies of Dickinson catalogue her relationship to nearly every branch of nineteenth-century science, while Brantley places Dickinson in a complex web of relations among fellow writers, thinkers, and scientists. Baym and Patterson empirically establish Dickinson's scientific breadth: Baym notes that more than 270 poems (15 percent) use "scientific language" (134), while Patterson catalogues nearly fifty terms that form Dickinson's scientific vocabulary (218). Baym succinctly describes the range of critical perspectives on Dickinson's use of science: "At the least, her scientific facility testifies to the ubiquitous presence of scientific information in the general culture. At most, she deploys her scientific lexicon to draw strikingly different conclusions about science and religion from those prevailing in this same culture" (133). Taking up the latter claim, this article traces Dickinson and Darwin on parallel paths focused on similarities in their close observations of nature at the local scale. These experiences led each to startlingly similar conclusions ahead of their time: the laws that govern all other animals must apply equally to humans. Both Dickinson and Darwin push this idea to its most radical ends, highlighting commonalities across the animal kingdom outside of our own class (mammalia) to birds, reptiles, amphibians, and even to phyla quite different than our own (chordata), including worms and insects. At a time when both Western science and religion claimed human superiority over nature, Dickinson and Darwin found instead a brutal kinship with their fellow creatures. While this idea may seem like a simple fact, it is met with enormous resistance, from the nineteenth century to today, given the potential ethical implications of this reality, what Haraway calls "Staying with the Trouble."

Both Darwin and Dickinson enact their belief in human-animal kinship through their careful attention to language. As Beer observes in Darwin's work, "words that in other contexts have a specifically human application, such as 'inhabitants,' in his writing apply equally to all species of animal or vegetable life ... Words like 'parent' and 'birthplace', so often reserved for human kind, are here set at the service of all living forms" (31, 61). This is especially true in *Origin* where Darwin is careful in his phrasing to avoid referring to humans explicitly in his theory of descent, while simultaneously maintaining the theory's integrity. Note, for example, the passage at the conclusion of *Origin*: "The framework of bones being the same in the hand of a man, wing of a bat, fin of the porpoise, and leg of the horse, . . . at once explain themselves on the theory of descent with slow and slight successive modifications" (435), in which Darwin begins with "man." At this end of this passage, Darwin concludes "We may cease marvelling at the embryo of an air-breathing mammal or bird having branchial slits and arteries running in loops" (435); air-breathing mammals, of course, include us.

Darwin's reference in the first part of this passage is likely to the Scottish anatomist and surgeon Charles Bell, whose work *The Hand: Its Mechanisms and Vital Endowments as Evincing Design* demonstrates how the bones in the human hand are related to those in extant and extinct animals as evidence of divine design. Bell's text was part of natural theology: the famous Bridgewater Treatises "on the Power, Wisdom, and Goodness of God as Manifested in His Creation." Bell's work on the muscles of the face catalyzed Darwin to refute Bell's religious claims with material ones, detailed in his *M* and *N* notebooks from the 1830s, which became *The Expression of the Emotions in Man and Animals* (1872), briefly discussed further in this essay.

Dickinson employs a related linguistic strategy to Darwin in her poetics to highlight unexpected connections between humans and other animals. In a poem about birds and starvation (a consistent theme for Dickinson to which I will return), "I had been hungry, all the / Years" (J579, Fr439), the poet likens herself to the birds outside the window who dine on crumbs rather than "Plenty" (line 18). In the final stanza, she

includes "creatures" as a variant for "persons": "hunger was a way / Of persons [creatures] outside windows / the entering takes away" (lines 24-26). Dickinson uses "creature" and its variants throughout her oeuvre to refer to humans and nonhuman animals alike, and sometimes even to objects and concepts (Rosenbaum 160). In this instance, the variation from "persons" to "creatures" maintains the connection of the speaker to the birds in identifying hunger as a collective biological experience across species. In most of Dickinson's poems about birds, hunger/starvation and plenty/possession are symbolic of both religious and sexual desire, but for Dickinson, the basis of this symbolism is rooted in the homologous biology of creatures both human and nonhuman. This kind of reading does not dismiss such symbolic registers, but rather examines the vehicle to the tenor in her extended metaphors as equally important. While not the same as Darwin's claims to descent, Dickinson's work proceeds from a shared biology for all animal life.

Dickinson sometimes shifts the balance between the literal and symbolic registers in her poems about animals. In "A Bird came down the / Walk -" (J328, Fr359C), she describes the bird's feeding behavior directly without any clear symbolic weight in a way akin to a naturalist's observations: "He did not know I saw - / He bit an Angle Worm / in halves / And ate the fellow, raw," (lines 2-6). Here, the worm is named colloquially (used by anglers in fishing) and as a "fellow." While this poem focuses on the bird being observed, the worm's detailed demise ("halves," "raw") serves as a similar reminder to Darwin's at the end of *Origin* about the food web in which birds are both predator and prey. Both Dickinson and Darwin are sympathetic not only to birds, but to worms across their work. In his notebooks, Darwin connects human suffering to that of the worm: "Even the worm when trod upon turneth . . . now this is the oldest inherited & therefore remains" (*M Notebook* 52). Here, he recognizes that the sensation of pain is distributed across life forms and may be the first feeling. This close attention to the experiences of nature's "minutest" ("Nature - the Gentlest Mother is," Fr741A, J790, line 15) creatures allowed both Darwin and Dickinson to discover their own brutal kinship even with beings that seem radically different from our own species.

### At the Crossroads of Science and Religion

Prior to Darwin, science had become a powerful means by which to claim human exceptionalism. Following from Francis Bacon's scientific method, human intellect was lauded for uncovering "nature's secrets" (Bacon 363). In the early nineteenth century, the burgeoning branches of science were heavily influenced by natural theology, which heralded humans as the pinnacle of nature, endowed with unparalleled mental and moral capacities despite homologous physical characteristics with other animals. Darwin objected to this kind of anthropocentric "arrogance!!" (*D Notebook* 49). Darwin's notebooks, instead, are full of speculations about the connections between humans and other animals across all facets of their existence, such as "Seeing a dog & horse & man yawn, makes me feel how [much] all animals [are] built on one structure" (*M Notebook* 85). This entry reflects how Darwin repeatedly used close, everyday observation to draw larger and more radical claims about human-animal kinship. This entry is representative of Darwin's work in the late 1830s when he began speculating in the metaphysical *M* and *N Notebooks* that would become the basis for *The Expression of the Emotions in Man and Animals* (1872). In this volume he refuted Charles Bell's work in natural theology that suggested human and animal expression were biologically different. Darwin's book included copious illustrations that emphasized emotional development, from other animals to humans. As the notebook

entry indicates, he drew much of his evidence for collective emotional expression from easily observable domestic animals like the cat and dog. For Darwin, such connections between mammals were only the very start as he set out to prove that all animal life had evolved through common descent.

Like Darwin, Dickinson questioned human claims to superiority over other creatures. For her, death was a form of leveling, not just across "Color - caste - denomination" (J970, Fr836), but also species. Just as Darwin drew conclusions from his observations of domestic animals, so too did Dickinson begin to question the relationships between humans and other animals based on her experience on the literal grounds of the family Homestead. In "The Tint I cannot take - / is best -" (J627, Fr696), Dickinson observes squirrels' feeding behaviors in preparation for the changing season. Toward the end of the poem, winter stands in symbolically for death as a force of nature. Dickinson identifies the squirrels as mocking human arrogance in refusing this reality:

The Pleading of the Summer -  
That other Prank - of Snow -  
[That Covers Mystery with Blonde -] Cushions Mystery with  
Tulle,  
For fear the Squirrels - know.

Their Graspless manners - mock  
us -  
Until the Cheated Eye  
Shuts arrogantly - in the Grave -  
Another way - to see - (lines 19-28)

These ending two stanzas signal the contrast between humans' perceptions of nature and its material reality. The squirrels go about their instinctual ("Graspless") behaviors, which "mock" the human who pretends that death is not the final reality of all life. Dickinson explicitly calls this "arrogant" and recognizes that the human, synecdochally represented by the "Eye," feels "Cheated" by this reality. Yet, from this perspective, Dickinson identifies the importance of seeing ourselves in and with other creatures, as all are subject to the same fate. This different "way - to see -" is influenced by death: hence, she uses her characteristic dashes to frame it in the same way as "- in the Grave -" just above it. This "Another way" becomes an ecological way of seeing, one that participates in Darwin's perspective on the "struggle for existence" (*Origin* 60).

Both Darwin and Dickinson repeatedly object to any form of arrogance that denies our brutal kinship to other creatures. Darwin refers to humans' desire to distance themselves from animals as "arrogance" three times in the *C Transmutation Notebook* from 1838, particularly in relation to religion. He states directly, "Man in his arrogance thinks himself a great work worthy the interposition of a deity, more humble & I believe truer to consider him created from animals" (196-7) and "Animals have voice so has man. . . . – animals understand the language. They know the cry of pain as well as we. – It is our arrogance, . . . like to think his origin godlike" (154-5). In rejecting the doctrine of *Imago Dei*, Darwin likewise seems to dismiss the eighteenth-century Christian conception of the "interposition of providence" which had come into conflict with the idea of probability (Porter 149). Darwin brings the idea of the human down from on high into the very viscera of animate life. For him, even humanity's most prized capacity, thought, must be understood biologically in relation to other natural forces: "Why is thought being a secretion of brain, more wonderful than gravity a property of

matter? It is our arrogance, it [is] our admiration of ourselves" (166). Darwin softens this rhetoric in *Origin* substantially, but even there he frequently points to what remains unknown. As Beer observes "[t]he sense of incongruity – of the insufficiency of man's reason as an instrument for understanding the material universe – was always with Darwin" (46). This humility allowed Darwin to observe keenly the natural world for parallel traits between humans and other animals, including the roles that pain and death necessarily play in species change.

This brutal side of nature did not allow for a teleological sense of progress or meaning, leading both Darwin and Dickinson to question divine design. Darwin's theory of speciation was all the more controversial because of his attempt to move away from a teleological concept of nature. He states directly in the *N Notebook*, "(in my theory there is no absolute tendency to progression, excepting from favorable circumstances!)" (47). For Dickinson, too, nature could not always bear the symbolic weight of order or direction. As Shira Wolosky observes, "Her poetry repeatedly and painfully attests to misgivings that prevent her from reading her world as signs for any redemptive meaning whatsoever. It traces her resistance to making experiences types for each other in a chain of transferred meanings that point ultimately to some redemptive realm" (117). In a similar vein, Betsy Erkkila argues that Dickinson satirizes many forms of progress: "religious, political and scientific" (145). This same resistance to progress applies to Dickinson's understanding of the relationship between humans, other animals, and nature, putting her, like Darwin, at odds with the natural theology and natural history of her time.

As Darwin and Dickinson moved away from the idea of a teleological progression toward humans, in religion and natural history alike, they had to contend with natural theology's claims to an intelligent designer responsible for such progress. While at Cambridge, Darwin studied William Paley's *Evidences of Christianity* (1794) and *Natural Theology* (1802), in which Paley makes his famous analogy for God as a watchmaker: "There cannot be design without a designer" (12). Dickinson, too, was familiar with this tradition through her education and family magazine subscriptions, but also closer to home through Amherst President, professor, and close family friend, Edward Hitchcock. At Amherst, Dickinson likely heard Hitchcock lecture and he influenced the curriculum as a geologist, astronomer, botanist, minister, and poet (Sewall 21). Dickinson also would have used his textbook *Elementary Geology* in her coursework and she directly references her use of his book *Catalogue of Plants growing without Cultivation in the Vicinity of Amherst College* (Farr and Carter 20). Hitchcock's 1851 *The Religion of Geology*, which was part of the Dickinson family library, inveighs against the materialist and atheistic transmutation theories of Lamarck, Geoffroy St. Hilaire, Bory St. Vincent, and the then-anonymous author (Robert Chambers) of *Vestiges of Natural Creation* (1844) (Hitchcock 286). He addresses concerns about geology's implications for religion in the second paragraph of his preface, well before *Origin* would pose a threat: "Geology is usually regarded as having only an unfavorable bearing on revealed religion" (1). Hitchcock likely had in mind Charles Lyell's groundbreaking *Principles of Geology* (1830-3), which argued that the earth must be significantly older than the Biblical account. Trained in both ministry and natural history, Hitchcock attempted to reconcile theology with science through an elaborate reinterpretation of the Genesis text to accommodate a vastly longer timescale for creation in Lecture II of *The Religion of Geology*: "The Epoch of Earth's Creation Unrevealed." Hitchcock's concern about geology was prescient, as Lyell's work provided Darwin with the timescale necessary for his own theory of transmutation.

Dickinson and Darwin both resisted orthodox religious perspectives relatively early in their young adulthoods, adopting a more materialist stance rooted in science. Dickinson's relationship to religious faith, particularly in response to the Second Great Awakening, has received significant critical attention. Richard Brantley perhaps best summarizes the dual impulses in Dickinson's poetry: "Her poetic personae faithfully practice empirical procedures and rigorously put evangelical principles to the test, as distinct from patiently observing the former or devoutly following the latter" (12). For Brantley, the conflicts between religion and science in the nineteenth century did not create an "unhealable rift in her thinking or an unresolvable conundrum for her imagination" (18). Yet the tension between these poles is the impetus for much of her work. From within the rift, she interrogates all sides. This tension is present in the short poem: "'Faith' is a fine invention / For Gentlemen who see - / But Microscopes are prudent / In an Emergency" (J185, Fr202C, ca. 1860-2). Dickinson's claim that "Faith" is an "invention" is repeated formally by her use of quotation marks around the term, while the underline of "see" suggests a kind of second religious sight common in Protestant rhetoric. The poem hinges on the "But" that claims the need for yet another kind of sight (yet "Another way - to see -") as in the previous poem about squirrels; here, that of the microscope. This short poem reveals the rising tensions between religious and scientific epistemologies, which reached a fever pitch after Darwin's landmark 1859 publication of *Origin*.

Dickinson's correspondence likewise shows her awareness of the ongoing controversies between religion and science, including Darwin's *Origin* and later *The Descent of Man* (1871), which likely deepened her already skeptical stance on religious orthodoxy. Indeed, Dickinson characterizes Darwin in her letters much the same way she represents death in her poems: as a thief who robs one of religious belief. In "I had some things that I called mine -", Death is figured as God's "Bailiff" who takes away the flower from her garden (line 8, Fr101A, J116), while "Of nearness to her sundered" (J607, F337A) concludes more positively when "The Grave yields back her / Robberies -" (lines 16-17). In a letter to Otis Lord in April 1882, Dickinson alludes to the dissension between Darwin and religion of which she would have been aware by this late date, particularly from articles in *The Atlantic* including Asa Gray's reviews of *Origin* that attempted to reconcile the theory with natural theology (beginning in July 1860). In response to someone mentioning "The Redeemer," Dickinson wryly comments, "We thought Darwin had thrown 'the Redeemer' away" (L750). Indeed, several of her poems imagine God, the great Redeemer, as either injured or dead, as in "This is a Blossom of / the Brain -" (J945, Fr1112A) which imagines "the funeral of God" (line 11).

Dickinson's other direct reference to Darwin in her letters describes him in a similar way, namely, as an agent of loss. In a note to Mrs. J.G. Holland, Dickinson writes with characteristic wit: "Why the Thief ingredient accompanies all Sweetness Darwin does not tell us / Each expiring Secret leaves an Heir, distracting still" (L359). In both instances in her letters, the poet strikes at the key difficulties of Darwin's theory: without a Redeemer, there is no redemption from the "Thief" ingredient of death in nature. In the second letter, she laments that the beauty of nature ("Sweetness") is always haunted by loss and impermanence ("Thief"). "Secret" could stand in for "Species" here, since "expiring" and "Heir" suggest Darwin's theory of descent and the role of extinction. Again, Darwin is almost characterized as Death himself, as the "Thief" who robs and takes away. In another letter to Mrs. Holland (from Sept. 1873) about railroad closures, Dickinson, in half-joking tone, alludes to controversies surrounding extinction, science, and a belief in the afterlife: "Possibly she perished? /

Extinction is eligible. / Science will not trust us with another World. / Guess I and the Bible will have to move to some old fashioned spot where we will feel at home" (L395). Written with the line breaks of a poem, Dickinson swiftly displays her knowledge of the crisis of faith surrounding Darwin's work, which by 1873 included his more controversial *Descent* (1871). In this letter, Dickinson seems to identify with the Bible as "old fashioned" in the face of a modernity defined by the railroad, extinction, and science. Her poems and letters reveal this ongoing conflict between science and religion, belief and doubt – a dissonance all too familiar to Darwin, which will be discussed further in the following section.

### **Beyond Mammals (Parts I and II)**

Darwin directly names suffering and death in nature as reasons why he cannot subscribe to natural theology or theology more broadly. The more he studied nature as a scientist, the more he concluded that its creatures and laws were not designed but evolved. Darwin still found a kind of morality in this form of nature which improved fitness and survival over time, but it was a far cry from natural theology's belief in a beneficent creator who endowed each individual species with life. Darwin could not reconcile this religious view with the immense losses that were, at best, the cost of gradual improvement. Moreover, for Darwin, humans were not specially protected in any way from these same processes. Death and suffering were part and parcel of nature without exception.

In response to this belief, Darwin and Dickinson extend their sympathy beyond mammals to include birds, amphibians, and insects. This breadth reflects their understanding of the universality of nature's laws. Both directly compare humans and non-mammalian creatures to argue that they are united in brutal kinship. The way each states this fact is remarkably similar when writing about death; for example, Darwin states "I believe that the man and the gnat are in the same predicament" (*Correspondence* 275), while Dickinson concludes "Why swagger, then? The Gnat's supremacy is large as Thine -" (J583, Fr419A, lines 6-7). Beyond coincidence, both the scientist and the poet choose an extreme example, an infinitesimal creature as far from the human as can be imagined, to illustrate the depth and range of their senses of kinship.

In his letters to the American botanist Asa Gray, Darwin explains how he came to disavow religious views of nature as a product of design. (I first came across these passages from Darwin's correspondence in Randall Fuller's *The Book that Changed America: How Darwin's Theory of Evolution Ignited a Nation*). Darwin was disturbed particularly by death, as he wrote to Gray: "An innocent & good man stands under a tree & is killed by flash of lightning. Do you believe (& I really shd [should] like to hear) that God *designedly* killed this man? Many or most persons do believe this; I can't & I don't" (*Correspondence* 496). He continues, "Do you believe that when a swallow snaps up a gnat that God designed that particular swallow shd [should] snap up that particular gnat in that particular instant? . . . I believe that the man and the gnat are in the same predicament. – If the death of neither man or gnat are designed, I see no good reason to believe that their first birth or production shd [should] be necessarily designed" (*Correspondence* 275). For Darwin, death suggests chance not design, therefore design cannot be the foundation of nature, nor can nature be evidence of an intelligent designer. Darwin continues to cite death and its attendant suffering as the main cause for his disillusionment with the idea of a beneficent nature/creator: "I cannot persuade myself that a beneficent & omnipotent God would have designedly created the Ichneumonidae [parasitic wasp] with the express intention of their feeding within

the living bodies of caterpillars, or that a cat should play with mice" (*Correspondence* 224). Here, Darwin specifically turns from death to suffering more broadly. While the randomness of death suggests to Darwin that species' origins, like their ends, were not designed, particularly cruel deaths further confirm this belief.

### Part I. Birds and Suffering

In the above passages, Darwin turns to a host of observable animals and insects as primary examples of the role of chance in suffering and death to place humans in the same condition. For Dickinson, too, small creatures in particular were everyday figures of plight. For Dickinson birds are most often associated with hunger at both the literal and symbolic levels, as we saw in "I had been hungry, all the / Years" (J579, Fr439). In the "Struggle for Existence" section of *Origin*, Darwin opens with birds as his primary example. His attention to birds is not surprising considering how his close observations of the finches of the Galapagos became central to his theorizing, which was deepened later by his experiments breeding pigeons. In the above quote, Darwin uses birds to shift the way we look at nature to account for death as a driving force in species change. Darwin consistently tries to soften the blow of this shift:

We behold the face of nature bright with gladness, we often see  
superabundance of food; we do not see, or we forget, that the birds which are  
idly singing round us mostly live on insects or seeds, and are thus constantly  
destroying life; or we forget how largely these songsters, or their eggs, or  
their nestlings, are destroyed by birds and beasts of prey. (62)

The repetition of "we do not see, or we forget," and "we forget" recalls what Dickinson names "Another way - to see -" (line 28, J627, Fr696) that attends to the brutal side of nature that ends in death. Both Darwin and Dickinson attempt to shift the romantic notion of the songbird away from the "Sweetness" of nature to acknowledge instead the brutal side of existence.

While Darwin uses the example of the swallow in his aforementioned letter, Dickinson often characterizes the sparrow as suffering because of its diminutive size and Biblical allusion. In Psalm 84:3 both the sparrow and the swallow find homes among God's altars (RSV). In the gospels, however, the sparrow is trapped, plucked, killed, bound, and traded as a commodity (Matthew 10:29). This sentiment is expanded in Luke 12:6-7 (RSV): "Are not five sparrows sold for two pennies? And not one of them is forgotten before God. Why, even the hairs of your head are all numbered. Fear not; you are of more value than many sparrows." Often in direct allusion to these passages, Dickinson identifies herself as like a bird in relation to God, not to illustrate his care, but rather his indifference. Consider the poem "Of course - I prayed" (J376, Fr581A): "And did God care? / He cared as much as on the Air / A Bird - had stamped her foot - / And cried 'Give me'" (lines 2-6). Just as Darwin disavows a "beneficent & omnipotent God," based on suffering in nature, so too does Dickinson question traditional religious belief in a responsive, caring God for birds and humans alike.

Dickinson expands on the bird as sufferer in "Victory comes late" (J690, Fr195A) to include a biological sense of competition between bird species for food, enacting Darwin's alternate vision in the above passage in which birds are prey for other birds. At the same time, this poem echoes the language from the gospels. At once physical and metaphysical, as well as allusive to the Civil War, the poem first appeared in a letter to Samuel Bowles in late 1861. In the 1863 Fascicle copy (Fascicle 34, sheet 5), Dickinson darkens the poem dramatically by changing "dazzles" to "strangles":

Victory comes late,  
 And is held low to  
 freezing lips  
 Too rapt with frost  
 To mind it!  
 How sweet it would  
 have tasted!  
 Just a drop!  
 Was God so economical?  
 His table's spread  
 too high  
 Except we dine on tiptoe!

*Crumbs* fit such  
 little mouths -  
*Cherries* - suit *Robins* -  
 The Eagle's golden  
 breakfast -  
*dazzles [strangles] them!*  
 God keep his vow [Oath]  
 to "*Sparrows*"  
 Who of little love -  
 Know how to starve! (*Emily Dickinson's Poems 357*)

The first half of the poem agonizes over the denial of "victory," doubly allusive to war and religious salvation, to the "freezing lips," which underscores the corporeality of the death. Dickinson's inclusive "we" at the end of the first stanza refers to the struggle for creatures both human and nonhuman. The second half turns to the ability of the birds to survive on small quantities of food, likening the "little mouths" to the earlier image of the frozen lips. Despite God's "vow" in the Gospels, the sparrows suffer just the same as the corpse of the first stanza. Further, Dickinson's change of "vow" to "Oath" creates a slant rhyme with "mouth" to heighten the physiological undercurrent in the poem (an oath made by a mouth). Here the robin is also a figure of suffering, no longer simply jealous of the eagle, but consumed by it as prey. While these lines have been read as a critique of war with the eagle representing either America or a sovereign, Dickinson also describes here an ecological process similar to that which Darwin recounts of predator-prey cycles in which the robins eat cherries and the eagles eat the robins. Birds are often poetic symbols, but in this poem Dickinson also acknowledges the creatures at a physical and biological level beneath that symbolism. She likens their suffering to that of humans, undercutting the tendency to view birds as exclusively symbolic in and of poetry. Instead, birds become vulnerable bodies.

In her later work, Dickinson sometimes uses birds as a metonym for nature as indifferent to human suffering, altering the symbolism of an uncaring God in "Of course I prayed" (J376, Fr581A) to that of an unfeeling nature. Yet, for Dickinson, there is a moral obligation to feel for nature. In a late letter (summer 1875) to her Norcross cousins, written one year after the death of her father when her mother had become paralyzed, Dickinson reiterates the ending lines of "Victory comes late" (J690, Fr195A) about the sparrows starving:

The birds that father rescued are trifling in his trees. How flippant are the saved! They were even frolicking at his grave, when Vinnie went there yesterday. Nature must be too young to feel, or many years too old.

Now children, when you are cutting the loaf, a crumb, peradventure a crust, of love for the sparrow's table. (L442)

Dickinson recognizes that nature, represented by the birds, is indifferent ("flippant") to her dead father and her own suffering. Yet even as she marks the birds' happy survival after her father's death, she immediately insists in the next paragraph that the sparrows be given a portion of the food, their own "table," in order to survive. She finds a childlike innocence in the birds' indifference to their savior's death ("too young to feel"), yet also allows for the fact that nature's scale vastly exceeds the individual ("too old"), following Lyell and Darwin. Continuing her lifelong debate with religion, "saved" here has a double meaning for both the birds and those who believe in Christian salvation. Dickinson's letter obliquely considers the implications of death and suffering for religious belief, as Darwin wrote to Gray more explicitly.

## Part II. Insects and Human Exceptionalism

As Dickinson's and Darwin's earlier sentiments about "man and gnat" suggest, both view insects as a powerful blow to any fantasy of human mastery over nature or death. For both, insects were associated with predation, suffering, and death. Darwin was fascinated by insects: he became an avid collector of specimens, especially beetles, and read widely in the growing field of entomology (Remington and Remington 1). He used insect behavior as support for his theories in both *Origin* and *Descent*, but faced significant opposition from entomologists to his claims (Clark 111). As J.F.M. Clark explains in *Bugs and the Victorians*, "Endowed with an utterly alien morphology, insects highlighted inherent tensions between animality and humanity within studies of natural history" (7). For Darwin, as for Dickinson, this tension offered yet another opportunity to reject claims of human superiority: "People like to talk of the wonderful event of intellectual man appearing – the appearance of insects with other senses is more wonderful" (*B Notebook* 66). Further, Darwin understands insects as integral to all forms of life, including the human. In *The Voyage of the Beagle* (1839), he acknowledges both the difficulty of and need to attend to insects:

The often repeated description of the stately palm and other noble tropical plants, then birds, and lastly man, taking possession of the coral islets as soon as formed, in the Pacific, is probably not correct; I fear it destroys the poetry of this story, that feather and dirt-feeding parasitic insects and spiders should be the first inhabitants. (10)

Darwin here hints at the fact that poetry and narrative are primarily anthropocentric, but Dickinson is akin to Darwin in recognizing the poetic in different forms, including the wonder of insects. As Beer observes, "Lyell, and later Darwin, demonstrated in their major narratives of geological and natural history that it was possible to have plot without man – both plot previous to man and plot even now regardless of him" (17). For Darwin, much of this plot is populated by creatures other than humans. In literary study, Darwin is most commonly discussed in relation to the Victorian novel, but the strange kinship of ideas with Dickinson's plotless lyrics deserves further critical attention as she decentres the human radically in her poetics.

For Dickinson, the gnat and the fly, both considered "pests," are the primary insects that undercut the arrogance of human exceptionalism. Even more than a small bird like a sparrow or a robin, the fly and the gnat are infinitesimal in size and farther from the human on any taxonomic scale. In "A Toad, can die of Light -" (J583, Fr419A), the first stanza enacts Darwin's claim that "the man and the gnat are in the same predicament":

A Toad, can die of Light -  
 Death is the Common Right  
 Of Toads and Men -  
 Of Earl and Midge  
 The privilege -  
 Why swagger, then?  
 The Gnat's supremacy is large as Thine - (lines 1-7)

The poem establishes the vulnerability of the toad in the opening line, which describes an unexpected form of mortality akin to Darwin's reference to a lightning strike as a form of random death in his letter to Gray. While light generally is considered conducive to life and often serves as a classical metaphor for knowledge in Dickinson's work, here it becomes a form of death, enacting a similar reversal to that of man's and gnat's expected status. The opening line relies on Dickinson's scientific knowledge of how amphibians can dehydrate from too much heat. Numerous scientific experiments were conducted on amphibians in the nineteenth century because of their highly porous skin. In one such study, described in *Harper's Weekly* in January 1857, frogs' deaths were timed when immersed in strychnine and nicotine (43). Dickinson employs this scientific knowledge to undermine the language of human economic and cultural capital: right, privilege, swagger, supremacy. This theme is likewise reflected in the poem "Color - caste - denomination" (J970, F836) in which death undoes all forms of classification. Notably in that poem, Dickinson turns to a more familiar entomological metaphor: the metamorphosis of a caterpillar to butterfly, "Chrysalis of Blonde - or Umber - / Equal Butterfly - / They emerge from His Obscuring -" (lines 13-15) to reflect on Death's indiscriminate nature.

Dickinson's line, "Of Toads and Men," alludes to the poem "To a Mouse" by Robert Burns subtitled "*On Turning up in Her Nest with the Plough, November, 1785.*" Well before John Steinbeck popularized Burns' line "The best laid schemes o' Mice an' Men" (line 39), Dickinson radicalized the idea that all life ends in grief and pain regardless of species. Burns' speaker identifies himself as the mouse's "earth-born companion, / An' fellow-mortal!" (lines 11-12) connecting them in physical vulnerability. Dickinson's choice of the toad and gnat here rather than Burns' mouse is significant: by choosing non-mammalian creatures, she eliminates some of the "natural" affinity that Burns finds with the female mouse who attempts to make a home. Instead, Dickinson and Darwin reach well beyond our own genus and phyla to connect to amphibians and insects.

Dickinson uses the gnat again in an enigmatic poem influenced by her scientific knowledge (J422, Fr415) to illustrate the biological vulnerability to death:

More Life - went out - when  
 He went  
 Than Ordinary Breath -  
 Lit with a finer Phosphor -

Requiring in the Quench -

A Power of Renowned Cold,  
The Climate of the Grave  
A Temperature just adequate  
So Anthracite, to live -

For some - an Amplifier Zero -  
A Frost more needle keen  
Is necessary, to reduce  
The Ethiop within.

Others - extinguish easier -  
A Gnat's minutest Fan  
Sufficient to obliterate  
A Tract of Citizen -

Whose Peat lift - amply  
vivid -  
Ignores the solemn News  
That Popocatepetl exists -  
Or Etna's Scarlets, Choose -

This poem relies heavily on the poet's knowledge of chemistry and geography. The traditional vital spirit or soul of the deceased is recast in scientific terms as phosphorescent, while the conventional image of the frozen corpse is reimagined with precise scientific measurements of "Climate" and "Temperature." While the latter half of the poem seems to contrast the virile deceased beloved and "Some" with less robust "Others," the poem turns to the precariousness of all life to natural processes symbolized by the potential eruptions of the two volcanoes in the last two lines. There are numerous studies of Dickinson's volcanoes, most notably by Adrienne Rich in the essay "Vesuvius at Home," and this poem is likely influenced by Dickinson's awareness of the ruins of Pompeii. The last word, "Choose," should belong to "Etna's Scarlets" for parallelism with the previous line, but instead the comma and capitalization potentially shift agency to readers to make a decision about whether they will "Ignore" nature's power. Dickinson sets up lines 15 and 17 as shocking parallels in both form and content in which something as minute as a gnat could destroy the powerful democratic figure of the citizen. More than even the gnat, or its wings, its "minutest" motion, is represented as powerful in contrast to a whole group of citizens, with "tract" doubly meaningful as an extension of space/land, as well as a religious or political document. Indeed, enacting the very process Dickinson describes, the abstract "tract" becomes the physical "peat" in the similar structure of the lines as it covers the dead bodies beneath it. The peat that contains the dead could have been burned for fuel, which here pales in comparison to the volcanic eruptions that could have helped form the peat itself. In this same vein of privileging the natural over the human, the gnat in this poem undoes some of the most powerful markers of human exceptionalism including rhetoric and politics, just as Dickinson uses the gnat to rob humans of socio-economic power in "A Toad, can die of Light -". In this way, Dickinson pivots from the Romantic sublimity of the volcano: humanity is miniaturized not by the mountain, but by the "minutest" gnat.

Beyond the gnat, Dickinson represents insects more broadly as symbols of death. In the poem "I think to Live - May be a / Bliss" (J646, Fr757A), the poet imagines a life with "No Goblin - on the Bloom" (line 14). Here, the "Goblin" is an insect that stands in for suffering and death where life is "the Bloom." Dickinson also figures death as an insect in the late poem "Death is like the insect / Menacing the tree," (J1716, Fr1783) in which the tree, like the human, is subject to "the vermin's will" (line 12). The use of "will" suggests that the insect reigns supreme, even over the philosophical concept of will so often applied to humans (free will) and God (God's will). At the same time, Dickinson links insect and human life as fleeting. In a letter to her childhood friend Abiah Root from late 1850, in which Dickinson positions herself outside of religious belief, she claims: "I think we grow still smaller - this tiny, insect life the portal to another; it seems strange - strange indeed" (L39). Dickinson recognizes a fundamental similarity between insect and human life, both described as small, in relation to the vastness of nature. Scientifically, insects were considered too distant from humans to have any meaningful analogy in the late eighteenth century (Clark 7), but Darwin "deployed insects – specifically ants and bees – as polemical tools" in *Origin* to make the case for humans as highly intelligent primates (just as ants and bees are highly intelligent insects) (Clark 109). In her letter, Dickinson recognizes not just mutual intelligence, but also shared vulnerability, undercutting any sense of human supremacy.

Dickinson repeats the sentiment from the two gnat poems in "I heard a Fly buzz - when / I died" (J465, Fr591), where the fly becomes the portal to this strangeness she describes in her letter. In this poem, she more famously signals death through the symbolism of a fly rather than a gnat. That both insects are considered "pests" reflects the poet's characterization of death as a figure that is unwelcome, yet inevitable, like Darwin in her letters. Dickinson may have read the article on the house fly in *Harper's* from Nov. 1862 in which the author claims "The incontrovertible laws of Nature, upon which all alike depend, – the Man as well as the Fly" (Peel 322). Perhaps more than the gnat, the fly represents the materiality of existence in all its uncertainty and precariousness. It is representative of decay and digestion, of the cycle between life and death. The fly famously enters the action of the poem just before the final stanza: "There interposed a Fly - / With Blue - uncertain - stumbling Buzz - / Between the light - and me -" (lines 14-16). Here is a clear parallel to the gnat in "More Life - went out - when" (J422, Fr415) in which the insect's wings signal a type of unexpected death and destruction. Many readings of "I heard a Fly buzz - when / I died" call attention to the fly as symbolic, as when Helen Vendler suggests that the fly replaces an absent king figure. For her, the fly has the power "to insist on his gross material finality of color and sound" (90). Death is the most direct confrontation with material vulnerability, but Dickinson uses her poetry to remind us of the constancy of this state even in life. For her, to imagine otherwise is an arrogant fantasy built on empty rhetoric.

The human capacity for seeing and knowing ceases in this poem in relation to the buzz of fly's wings as it does in relation to sound in "I felt a Funeral, in my Brain," (J289, Fr340). In that famous poem, death comes through a series of sounds that ends in silence. It is significant that Dickinson chooses the more biological term "brain" over "mind" in the title in order to emphasize the bodily experience of death, just as she underscored the physicality of hunger in "Victory comes late" (J690, Fr195A). Notably, Dickinson's original word choice repeated "brain" in place of "Soul" in the line "And creak across my Soul," which could suggest a more materialist perspective. Darwin made a note to himself to downplay his materialism (*M Notebook* 57) and speculates, "May not idea of God arise from our confused idea of 'ought,' joined with necessary

notion of 'causation'" (*M Notebook* 151). While Dickinson may not go as far as Darwin here, her poems remain skeptical about received religious beliefs that demarcate humans from all other species. Darwin recognizes the biological interconnection of mind and body, or the mind embodied in the brain: "Experience shows the problem of the mind cannot be solved by attacking the citadel itself. – the mind is function of body" (*N Notebook* 5). Dickinson's poem foregrounds the brain in the title, suggesting more intimate connections between brain/body and mind/soul as Darwin speculates. In both the poems about funerals, the speaker of the poem is not simply imagining her own death, but rather the poet attempts to represent in language the materiality of dying. In this way, the poems are grounded in the material, as represented by the fly's buzz, as sound replaces sight as the dominant sense before the end of sensory experience in both poems. This then is the end of knowing as the poem's final lines state: our brutal kinship with the fly.

Through their close observation of the natural environment around them, both Dickinson and Darwin found startling similarities to humans across a gamut of creatures that led them to question the prevailing ideas of natural theology which claimed a vaunted status for the human species alone. They conceived of a nature that was more violent and random, but all the more interconnected for these facts. Rather than allot each species special creation, or endow the human species with special status, they found instead that vulnerability cut across all life with no exception. As they grappled with the growing tensions between religious culture and burgeoning scientific discoveries, they pursued a deep knowledge of nature even to difficult and painful conclusions. While this feat is perhaps well recognized in science studies for Darwin, Dickinson is more often celebrated for the uniqueness of her form than her content. Yet Dickinson's form, of course, is inseparable from her content. As she moved between religious and materialist ideas, her poems decentre the human to study the vulnerabilities of all creatures. Dickinson's animal and insect poems in particular call attention to related biological and physiological experiences, none more so than the ever-looming possibility and ultimate certainty of death. More than any other factor, death and its attendant suffering across nature convinced both the poet and the scientist that human exceptionalism was a comforting but false belief unsupported by their own observation and experience.

Darwin's and Dickinson's radical perspectives on human-animal kinship remain vitally relevant to us today. While religious arguments against evolution continue even in our own time, the greater controversy in belief is now over climate change. Recognizing our brutal kinship as Dickinson and Darwin did is the first step to understanding that as humans drive the vast majority of other species into extinction, we dig our own graves. Recent studies predict that around forty percent of all insect species and over one million plant and animal species will face extinction due to human activity (Fears, pars. 21, 4). In order to have any hope in this era of environmental crises, we must take Dickinson's famous line "'Hope' is the thing with / feathers" more literally (J254, Fr314B, lines 1-2).

## Notes

1. All citations for Dickinson's writings refer to the number in the sequence in the 1998 Franklin Variorum edition (Fr), 1955 Johnson edition (J), and (L) for the collected letters, as is the convention for Dickinson scholarship. Where there are discrepancies in the poems between the two editions, the Franklin edition is used.

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