Abstract

Using the figure of the web as an organising metaphor, this reflective essay explores a vibrant but little-known ecosystem of juvenilia created by members of the Darwin-Wedgwood family. The first part, which provides an evaluative overview of the texts, including works created by Charles Darwin, his children, and grandchildren, identifies three distinct, but organically connected, subsets of the juvenilia. In the second section, I focus on representations of nature in visual art and fiction produced by Darwin's children, including texts created on Darwin's rough manuscript pages. Drawing on the texts' unique proximity to Darwin's life and work, I offer reflections on their representations of relationships between wildness and domesticity, art and science, and innocence and progress. Their child creators' resourceful and creative capacity to find wonder in a natural world already under pressure, I suggest, offers a hopeful paradigm for children today.

Wonderful Webs: Nature, Art and Science in The Darwin Family Juvenilia

Jude Piesse

Webs, Charles Darwin recognised, are things of wonder. The "glittering" threads created by spiders on a sunny day in Santa Fé, Argentina, "might be compared", he observed during his voyaging years on *The Beagle*, to "diverging rays of light … like films of silk blown by the wind" (*Journal of Researches*, 1839, 170). Later, in *The Descent of Man* (1871), the spider is extolled for its capacity to weave its "wonderful web" as perfectly "the first time it tries, as when old and experienced" (69). Such sensitive observations of webs in nature informed one of Darwin's most significant and enduring images: the "inextricable web of affinities" connecting all organic beings and their environments that, in *On the Origin of Species* (1859), cushions evolutionary theory's crueller implications (44).

Deeply interwoven with Darwin's conception of this great web was an infinitesimally smaller but perhaps no less wonderful ecosystem: a network of lively childhood drawings and writings, beginning with the boyhood sketches, jottings, and letters Darwin produced in his riverside home at The Mount in Shrewsbury and branching, by descent, into the artwork and stories created by the many children with whom the mature naturalist shared his life, research practice, and sometimes even rough manuscript pages. Spanning at least three generations, this overlooked "web in childhood" – to borrow a term Charlotte Brontë used to describe her family's subsequently far better-known imaginary worlds – has much potential value for scholars of childhood, Darwin enthusiasts, and the public alike (Brontë, qtd. in Alexander and McMaster 15). This brief essay provides an evaluative introduction to the Darwin family juvenilia and offers more closely focused, but still exploratory, reflections on representations of nature in the works created by Darwin's children in the 1850s.

The Darwins' Childhood Web

Contemporary children, even in a digital age, are creators of vast paper archives. Prolific writers and artists, their poems and paintings can be wildly interdisciplinary or narrowly focused, collaborative or secretive, treasured or throwaway. Such plenitude is, however, a modern development. Nineteenth-century juvenilia, dependent on literacy as well as access to materials, was an exclusively "middle- and upper-class phenomenon" (Alexander 11). The Darwin family juvenilia, though similarly limited in terms of its class provenance, is therefore valuable in the first instance simply by virtue of its existence and survival as a rare and chronologically expansive record of juvenilia from the period.

Though the Darwin family juvenilia has not been catalogued as one collection, it is mostly available in one place, Cambridge University Library. Many of the texts are also available online, following recent digitization efforts that, in Cambridge as elsewhere, are working to redress the frailty and fortuity of historical paper trails. This makes it easier to explore links between texts that are clearly rooted in the same family history, locations, and intellectual contexts.

I would like to propose three distinct, but organically connected, subsets of the juvenilia.

The first, as I have noted, comprises Charles Darwin's own juvenile writings and sketches, encompassing letters to schoolfriends, records of games played with siblings, a diagram of himself in a tree, and assorted notes.[1] As I have suggested elsewhere, it is instructive to trace in these early jottings the seeds of the naturalist that Darwin was to become: the boy who collected birds' eggs at The Mount, fished in the River Severn, and counted flowers grew into the naturalist who conducted experiments on visits to this same family garden and who completed his first sketch of evolutionary theory at his childhood home (Piesse 1).

The second, much larger, set of surviving manuscripts, which I will term the Down House juvenilia, after the name of the subsequent family home in Kent where they were created, was produced by Darwin's children. Totalling 111 drawings and stories, the texts were digitally published in 2015 by the Darwin Manuscripts Project, an American Museum of Natural History initiative in collaboration with Cambridge University Library. They have since been usefully collated on the museum's "Children's Drawings & Stories" webpage, which features accompanying contextual information and links to the texts in Cambridge University's Digital Library. Spanning from c1853-1860, several are initialled F. D. for Francis Darwin, and others have been attributed to George Darwin and Horace Darwin. Most are anonymous and may feasibly have been created by any of Darwin's surviving children, by several children in collaboration, or by other young visiting relatives. The corpus includes short story, "The Fairies of the Mountain", and dozens of artworks, often combining pencil drawing with water-colour, and covering themes including heraldry and the military, fantastical creatures and figures, and, as I shall discuss below, engagements with the natural world. A number of these images were made on the back of loose manuscript leaves of *On the Origin of Species* and other key manuscripts that were kept, in a cupboard under the stairs, for the children to draw on (Keynes and Kohn).

Latterly, and least well-documented of all, is juvenilia created by Darwin's grandchildren and possibly great-grandchildren. These include letters sent by Bernard Darwin to his aunt, Darwin's daughter Henrietta Darwin, and children's art featuring on studies of fungi produced by Darwin's granddaughter, and Horace's daughter, Nora Barlow.[2] No doubt there are also other texts by descendants of this and subsequent generations in the various private and public collections relating to the family. Where, after all, does the web ever end? And where does it really begin?

Whether created by Charles Darwin or by his descendants, Darwin family juvenilia has primarily, and logically, been of interest to Darwin scholars and enthusiasts. Darwin's own outputs, as I have noted, help us understand the formative influence of childhood places, interests and people on the development of his life and work. The preservation of children's drawings on loose leaves of Darwin's manuscripts that would otherwise have been destroyed, meanwhile, has captured the imagination of both Darwin scholars and the public by touchingly demonstrating the interpenetration between family life and scientific enquiry that was central to Darwin's research (McKenna; Popova).

However, the texts also hold distinctive points of value beyond their obvious links to Darwin and the sheer unlikely fact of their survival. Unlike the juvenilia associated with individuals who went on to become famous writers, including the Brontës, Jane Austen, and William Thackeray, Darwin children, though highly literate, were not – at the risk of generalisation – predominantly literary by inclination or background. This presents rare opportunities to explore texts, genres, and perspectives that are less well-represented in more literary archives. For example, in Darwin's own outputs and the Down House juvenilia, we see little, if any, of the mode of "imitation" – that is, the mimicry or spoofing of adult literary genres and styles – that is prevalent in more writerly collections (Alexander 17). Instead, and as I shall discuss below in greater detail, texts reveal their creators' broad and recurring interests in the natural world, at times demonstrating an observational approach to nature that might be deemed "scientific" and that clearly connects to the family context in which they were produced as much as to the children's innate interests. Conversely, the Darwin family juvenilia is also distinctive by virtue of *not* having been produced in an overbearing institutional setting. Neither, with the exception of some letters, does it appear to have been created with a view to dissemination to adults. The texts' capacities to open relatively clear windows onto "authentic" children's perspectives is compounded by a high prevalence of visual art, a form often judged

to be amenable to the expression of unconscious dynamics and the inner lives of child creators at play.[3]

Nature, Art and Science in the Down House Juvenilia

Some of the Down House juvenilia, as I have noted, was created on Darwin's original copy of *On the Origin of Species*, leading to the preservation of manuscript pages. Yet, as Keynes and Kohn observe, the survival of these now treasured pages was incidental from the family's point of view: it was, touchingly, the children's artwork that they sought to keep. What insights might be gained by considering both sides of the story together – that is, by appraising the Down House juvenilia both as a valuable record of childhood in its own right, as I have begun to do above, and in relation to its unique and imaginatively engaging circumstances of production? In what follows, I allow space for some wondering of my own, sowing three seeds of thought on this fertile ground to explore relationships between nature, science, and art, and between the past and the present.

Nature is Domestic

One of the most striking images in the Down House juvenilia, dubbed "Family Home: Down House" and attributed to Francis Darwin on the American Museum of Natural History website, depicts a curious outside-in house.[4] Apparently modelled on the children's home, the image combines familiar realism with impossible fantasy elements visible in the house's glimpsed interior. The open front door reveals a winding hillside path crowned with trees and birds in flight. A church steeple and a fox keep company with pots and pans behind magic windows.

This striking image constitutes a remarkable unification of what David Owen and Lesley Peterson have argued are the twin pulls of "Home" and "Away" in the child's imagination (xv), combining the stability of the known domestic world with terrains extending beyond its security. The image is also neatly indicative of the Down House juvenilia's recurring tendency to explore the natural world through domestic frameworks. In the six lovely drawings in the "Battle of Fruits and Vegetables" series, for instance, little soldiers are depicted riding a selection of the vegetables that would have grown in Down's ample kitchen gardens. Words such as "plum", "apple", "carrot", "acorn", "turnip", "pear" and "carrot" provide a rudimentary poetics accompanying the action – the ingredients of a dinner set loose. In "The Fairies of the Mountain", a fantasy story about flying to the moon and the sun, eating a humble meal of currant, almond and raisin cake, and then planting little bumps in the earth to yield fruit, provides sustenance as the protagonists escape various assailants. Similarly, the children's animal drawings, including "Birds and Butterfly", often depict ordinary garden creatures as well as animals from fantastical or exotic domains.

Darwin's children, presumably like many nineteenth-century children with access to gardens, appear to have understood nature as predominantly domestic and everyday rather than wild or exotic, and to have found it no less imaginatively stimulating as a result. Indeed, this was also largely the case for Darwin: the notes about pigeons that are on the other side of "The Fairies of the Mountain" are products of the specifically domesticated approach to scientific research at Down House that was an extension of his earlier approaches at The Mount and an enduring hallmark of his methodology (Piesse 269-70).

Recognising the frequently domestic coordinates of nature in the Down House juvenilia offers a useful corrective to our tendencies as adults to romanticise children's engagements with an irretrievably lost 'wild' or to lose hope in view of our ever-diminishing access to green spaces. Nature, these drawings remind us, has always been experienced by children in small,

limited and ordinary ways: as present in a currant cake as in a rare bird, and as wonderfully vivid in houses, gardens, supermarkets and lunchboxes as on any grander scale.

Art can be Science

The Down House juvenilia reveals its creators' familiarity with ways of observing the natural world that are ostensibly "scientific." For instance, the pencil sketch "2 legs" is the product of an attentive eye striving for objectivity and trained on what would appear to be insect legs and a claw. Likewise, the pairing of vegetables and plants with sparse nomenclature seen in the "Battle of Fruits and Vegetables" series – "apple", "pear", "carrot", "fir-cone" and so on – seems to reflect the techniques and preoccupations of botanical illustration. Indeed, Francis Darwin, a candidate for attribution, became a botanist, and was from a long line of official and unofficial horticulturalists on both the paternal Darwin and maternal Wedgwood sides of the family.

What is perhaps more surprising than the texts' periodically scientific orientation is the fact that science should so often share space with more artistic and creative modes and epistemologies. Expressive art sits side by side with approximations of botanical plates, just as the wonderful birds of the "Fanciful Animals" images keep company with more faithful representations of everyday English wildlife, including foxes (in "Family Home"), brimstone butterflies (in "The Fairies of the Mountain"), and eel ("Watercolour Drawings"). Flights of fancy repeatedly accompany observational approaches to nature, communicating the vivid impressions that nature can make in the imagination as well as on the eye.

In an age before the strict disciplinary specialisation that has now fatally severed the sciences from the arts, links between a child's instinctive interdisciplinarity and an adult's intellectual life were more fluid. Darwin's own scientific writings, as Gillian Beer has

observed, are highly literary and sensitive to the power of imagery, repeatedly drawing on his classical education and facility with metaphor to communicate complex ideas through recurrent figures such as the web, the tree, and, as I have suggested, the garden (Piesse 256-57). Indeed, disciplines such as botany and zoology traditionally have strong affinities with the visual arts, requiring close observational skills, and, in an age before the widespread use of photography, considerable draughtsmanship.

Looked at both as a collection in its own right and in view of its connection to Darwin's writing and research, the Down House juvenilia reminds us that science, art, fact and fancy can provide complementary approaches to nature. We are reminded that art and science need not be adversarial: that art can be science, and science art too.

Wonder isn't Innocent

In my book about Darwin's childhood garden, *The Ghost in the Garden*, I outline a reading of "The Fairies of the Mountain" that argues for levels of nascent ecological awareness in the story echoing those in *On the Origin of Species* – notes for which can be found on the other side of the story's manuscript pages (Piesse 269-70). It is an attractive reading, and yet not without its weak points. As Clémentine Beauvais has argued, it is easy to invest juvenilia with visions of innocent wisdom that are essentially adult constructions (65). Who would not want to see in Darwin's children visions of the Romantic infant in instinctive communion with nature's deepest truths?

An examination of the full range of Down House juvenilia reveals a slightly different picture. While the drawings often demonstrate both insight and wonder, their vision cannot be entirely innocent. In "Wind-mill House," tunnelling creatures share space with sketches of tools, weapons, and a windmill, perhaps as much an emblem of technology's capacity to

transform our traditional relationship with the land as a figure of whimsy. In the children's forensic sketches of insect legs and drawings of ravishing birds, meanwhile, we see small-scale iterations of both the anatomising gaze and fascination with the "exotic" that were complicit in the history of colonisation and the concomitant extraction of species for menageries, botanical gardens, and naturalists' collections.

Read as such, the texts can be seen to reflect, however lightly, much larger tensions between nature and the forces of industrialization and colonisation that were permanently transforming it in the nineteenth century; changes in which the Darwin-Wedgwoods – as naturalists, explorers, and industrialists – were deeply implicated. The Down House juvenilia provides an impression, not of innocence after all, but of what it felt like to be a child in the midst of it, as well as a reminder that wonder might prevail.

Conclusion

The wonder of the spider's web, Darwin suggested, lies partly in the spider's capacity to weave as perfectly "the first time it tries, as when old and experienced." In these brief reflections, I have attempted to thread some parallel lines of thought across generations: connecting the formative influences and outputs that linked the Darwins, and the attitudes of the past with the inheritances and possibilities of the present. In its rich and imaginative engagements with nature, the Darwin family juvenilia is above all a hopeful collection. It reminds us of the possibility of finding wonder in ordinary and inevitably tainted places, and of the endlessly generative links between nature and childhood, and childhood and maturity, which can still be the making of our world.

Words: 2824

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[1] Charles Darwin. "Charles Robert Darwin: juvenilia and Darwin family letters, c.1818-1959." Darwin Manuscripts. Cambridge University Digital Library. DAR 271.1. https://cudl.lib.cam.ac.uk/view/MS-DAR-00271/1

[2] I am grateful to Elizabeth Smith, Digital Curator of 19th Century Science Collections, Cambridge University Library, for drawing these and other items to my attention in response to an email enquiry I made in September 2025. Smith's reply helped shape my thinking about ways of gaining an overview of materials created by Darwin family children across generations.

[3] For debates about children's visual art, institutional contexts, and authenticity see Tomsic 140-43 and Eldén 67-68.

[4] All titles are given as devised for the Darwin Manuscripts Project and listed on the American Museum of Natural History website.