

Postgraduate English

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Issue 24

May 2012

Editors: Kaja Marczewska & Avishek Parui

A New Species of Biography: The Darwin Poetry of Ruth Padel and Emily Ballou

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Introduction

2009 was the bicentenary of Charles Darwin's birth and 150 years since the first publication *On the Origin of Species*, Darwin's most famous work, which describes his theory of evolution by natural selection.¹ There were hundreds of events around the world to mark the anniversary, including exhibitions, academic symposia, specially-composed musicals, new anthologies of scientific papers and packs of 'Darwin' playing cards.² The influence of Darwin has been felt across disciplines and literature is no exception: his bicentenary year also saw the publication of two poetry collections responding to his life, Emily Ballou's *The Darwin Poems* and *Darwin: A Life in Poems* by Ruth Padel.³

Darwin has already been long-associated with literature through 'literary Darwinism' and 'evocriticism': these theories are forms of literary criticism that seek to understand literature through evolutionary psychology. However, my concern is not with how reading and writing poetry can be understood through Darwin's work on evolution, nor in examining the enormous impact of Darwin's theories on culture – extensive work has already been done in this area, notably by

¹ Its full title was *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*. For the sixth edition of 1872, the short title was changed to *The Origin of Species* and I refer to the text as *Origin of Species* or *The Origin of Species* for ease of expression.

² Steve Shapin, 'The Darwin Show' in *London Review of Books* Vol 32 no. 1 (January 2010) at: <http://www.lrb.co.uk/v32/n01/steven-shapin/the-darwin-show> Consulted on 5th December 2010 at 12.05

³ Ruth Padel, *Darwin: A Life in Poems* (London: Chatto & Windus, 2009) and Emily Ballou, *The Darwin Poems* (Crawley, Western Australia: University of Western Australia Press, 2009)

Gillian Beer, and more recently by John Holmes.⁴ Rather, my focus is on Darwin as a subject for poetry and what a poetic response can contribute to our understanding of Darwin, a man who has become a subject of academic research in his own right.

In addition to his many published works, Darwin left journals, notebooks, a slim autobiography intended for his family, and thousands of letters. The academic and creative output connected with Darwin is so vast that it is known as the 'Darwin industry'. There are dozens of biographies of him and even articles considering why so much has been written about him compared with other major scientific thinkers.⁵ Recent online projects such as www.darwin-online.org.uk and www.darwinproject.ac.uk have made many of his personal papers more readily available and will no doubt serve to increase the volume of Darwin scholarship.

A poetic response to Darwin is one of the more unusual contributions to the 'Darwin industry' and Ballou and Padel approach their subject from different perspectives. Emily Ballou is American-born but lives in Australia and Scotland. A screenwriter and novelist, she has written poetry for many years, although she has not previously published a collection. *The Darwin Poems* has been extremely well-received, winning prizes and accolades across the globe. She was inspired to write about Darwin when she was walking in the Blue Mountains of Australia and saw a sign that read 'Charles Darwin passed this way'. After writing a few poems about this walk from Darwin's perspective, she decided to make the poems part of a bigger project and undertook two years of research into his life and work, visiting the Darwin archives at Cambridge University and Down House, Darwin's

⁴ Gillian Beer, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction* (London: Routledge & Kegan Paul Plc, 1983) and John Holmes, *Darwin's Bards: British and American Poetry in the Age of Evolution* (Edinburgh: Edinburgh University Press, 2009)

⁵ Richard J. Wassersug and Michael R. Rose, 'A Reader's Guide and Retrospective to the 1982 Darwin Centennial' in *The Quarterly Review of Biology* Vol 5 (1984) pp.417-37

home in Kent.⁶ It was during the writing process that Ballou realised the bicentenary year of Darwin's birth was approaching.⁷

Ruth Padel is a British writer with an extraordinarily varied literary output. As well as books on Greek myth and tragedy, eight collections of poetry and several books of poetry criticism, she recently published her first novel, *Where the Serpent Lives* (2010). She has also written an acclaimed non-fiction book, *Tigers in Red Weather* (2006), which describes conservationists' struggles to protect tigers from extinction. Padel is in the unusual position of being both a Fellow of the Royal Society of Literature and of the Zoological Society of London, so she is well-placed in terms of expertise and authority to write literary works that respond to scientific topics. She has a further kind of 'authority' for writing on Darwin since she is his great great granddaughter, a connection that is rarely omitted from reviews. Indeed, six of her Darwin poems were published in the science journal *Nature* under the headline 'Poems from Darwin's descendent'.⁸ Padel has commented, 'somebody said that whoever works on Darwin falls in love with him' and Padel's sympathetic depiction of him certainly suggests that this has been the case for her.⁹

Both poets engage not only with Darwin's life but with his ideas and thought processes. Padel is interested in Darwin's creativity and his detailed observations of the world around him; she relies heavily on Darwin's own words, taken from journals, letters and notebooks.

Ballou relies less on direct quotation from Darwin, instead re-imagining the details of his life, 'ventriloquising' his voice and recreating his inner thoughts. She is interested in Darwin's notebooks in which he speculates about evolution: he takes great leaps of imagination as he moves from one idea to another and makes use of analogy and metaphor in his thinking. She realised that,

⁶ Ballou, interviewed by Dr Paul White of the Darwin Correspondence Project on 28th May 2009 at: <http://www.darwinproject.ac.uk/interview-with-emily-ballou>
Consulted on 26th November 2010 at 13.28

⁷ Ballou, interviewed by Vicky Paine, 20th January 2011 (unpublished transcript)

⁸ Padel, 'Poems from Darwin's descendent' in *Nature* Vol 457 (12 February 2009) pp.794-5

⁹ Padel, interviewed by Vicky Paine, 9th November 2010

‘Poetry, with its imagined worlds, its variety of forms, its ability to jump time and perspective, and its use of metaphor, extended metaphor and simile, could perhaps examine the life and mind of this man without closing him in.’¹⁰

I will begin by considering the biographical qualities of these poetry collections, and how they can be understood in relation to the category of ‘scientific biography’. I will then examine what the collections contribute to our understanding of Darwin, and finally I will consider how these collections negotiate the boundary between poetry and scientific biography, and perhaps, more broadly, the boundary between literary writing and scientific writing.

Poetry as Scientific Biography

In a review of Padel’s book Richard Holmes wittily suggests that Padel has devised a ‘new species of biography’.¹¹ Both poets insist that their collections are not biographies - Padel dismisses the idea, saying,

I didn’t mean to write a biography and I never would, because I respect scholarship too much and you’d really have to do the full scholarship.¹²

She evidently considers biography an entirely separate discipline from poetry, one with strict scholarly requirements. Ballou prefers the term ‘portrait’ to ‘biography’, an artistic term that brings with it suggestions of imaginative interpretation rather than scholarly accuracy.¹³

However, there is much about these collections that suggests they are a form of biographical writing. To call them simply ‘poetry’ fails to take into account of their rootedness in the life of a real man, the research behind them, the

¹⁰ Ballou, ‘Darwin as Metaphor’ in *19: Interdisciplinary Studies in the Long Nineteenth Century* Vol 11 (2010) at www.19.bbk.ac.uk p.2 Consulted on 7th December 2010 at 12.14

¹¹ Richard Holmes, ‘Giving to a blind man eyes’ in *The Guardian* (Saturday 14 March 2009)) <http://www.guardian.co.uk/books/2009/mar/14/darwin-life-poems-ruth-padel> Consulted on 22nd December 2010 at 15.00

¹² Padel, interviewed by Vicky Paine, 9th November 2010 (unpublished transcript)

¹³ Ballou ‘Some Notes on the Text’ in *The Darwin Poems* p.193

marginalia and the endnotes - features which distinguish them from many other lyric poetry collections. Indeed, both volumes conform remarkably closely to expectations of more traditional prose biographies, such as veracity, sequence, entirety and verifiability.¹⁴ The two poets have written a series of fairly short, discrete poems, jumping from one event to another. As a sequence these form a chronological narrative and although this might be described as a 'snapshot' approach, even the most comprehensive prose biography contains only a fraction of events and must considerably compress the subject's life.

Both collections begin with Darwin's boyhood, end with his death, and arguably include all the major events of his life in between. Ballou was conscious of wanting to convey this sense of 'entirety' and wrote some poems specifically to fill in points of his life where she felt she had left gaps.¹⁵ Although these poems are imaginative responses, neither poet has knowingly made up significant events or characters.

The collections also resemble academic biographies in their referencing: Ballou provides comprehensive endnotes, providing exact quotations and manuscript sources whenever Darwin's or others' words are used in the poems. Padel doesn't reference each quote but she gives a list of sources that she consulted at the start of her collection and then 'nests' her poems within factual information in the margins.

I am not suggesting that these poetry collections are interchangeable with prose biographies of Darwin, but it is productive to consider the role that scientific biography plays in wider society and how these collections can be understood in relation to this role. Thomas Söderqvist notes that there has been surprisingly little analysis of the genre of scientific biography, although his volume *The History and Poetics of Scientific Biography* seeks to address this.¹⁶ However, some clear trends emerge in biographers' approaches to scientific figures in the last hundred

¹⁴ These criteria are set out by Mott T. Greene in 'Writing Scientific Biography' *Journal of the History of Biology* Vol 40 (2007) pp.730-1

¹⁵ Ballou, interviewed by Vicky Paine, 20th January 2011

¹⁶ Thomas Söderqvist, (ed.) *The History and Poetics of Scientific Biography* (Aldershot: Ashgate Publishing Limited, 2007) p.2

years or so – the hero worship of canonical figures, the ‘humanizing’ biography - giving the scientist a ‘personal’ life and making him (rarely ‘her’) a more rounded, sympathetic character - and finally the ‘warts and all’ approach.¹⁷

It seems surprising that this genre has received so little academic interest, even from historians and philosophers of science, since Söderqvist suggests, ‘life writing constitutes a literary corpus with a strong presence and a strong impact on the public understanding of science’.¹⁸ Biographies of Darwin certainly stimulate public interest with copies of Adrian Desmond and James Moore’s *Darwin* selling approximately one hundred thousand copies.¹⁹ Of course, the market for poetry is a tiny fraction of this, but Padel’s publication in *Nature*, a major science journal with a large international readership, brought her poems to a new audience.

Neither poet is interested in the ‘warts and all’ approach to Darwin, especially Padel who is, after all, writing about her own family. ‘Hero worship’ is perhaps too strong for these poetry collections, although both poets present Darwin as an appealingly eccentric, but extremely admirable character. Padel quotes from one of Darwin’s letters to his wife Emma as her epigraph: ‘I believe you will humanize me’, and Padel’s collection participates in this ‘humanizing’ process.²⁰ Several of her poems about Darwin’s youth describe humiliations, firstly at the hands of an older sister:

Caroline says he’s ugly. His feet smell.
Everyone’s do, but his are worse –²¹

Padel also includes the much-quoted comment from Darwin’s father:

“You care for nothing but shooting, rat-catching and dogs!
You’ll be a disgrace to yourself and your family.”²²

¹⁷ For examples of scientists who have suffered the ‘warts and all’ treatment see Shapin, ‘The Darwin Show’

¹⁸ Söderqvist, *The History and Poetics of Scientific Biography* p.1

¹⁹ See Söderqvist, *The History and Poetics of Scientific Biography* p.2; Adrian Desmond and James Moore, *Darwin* (London: Michael Joseph, 1991)

²⁰ Ballou makes use of the same quote, although draws less attention to it, by including it in her poem ‘Is This Not Our House?’ *The Darwin Poems* p.93

²¹ Padel, ‘Ugly’ in *Darwin: A Life in Poems* p.10

²² Padel, ‘Bliss Castle’ in *Darwin: A Life in Poems* p.16

The reader enjoys the irony of the quote, sympathising with the young man being scolded by his wealthy, successful father. In her introduction Padel claims she wanted to give Darwin ‘his voice’ but although she makes extensive use of Darwin’s own words, inevitably the ‘voice’ is the poet’s - no poet (or, indeed, biographer) can claim to speak for another. Through her selection and careful editing of his words Padel is presenting her own version of Darwin, the voice that she wishes to make audible, and her Darwin is always sympathetic.

Ballou also humanizes Darwin, but she does so by ‘inhabiting’ him. That is, although she mainly uses third person, she writes as if she actually is Darwin and the poems are re-imagined accounts of his life and inner thoughts.²³ This is not to say that she invents emotional states and incidents but she makes imaginative responses based on her extensive research. This approach means her collection is further from traditional biography than Padel’s and she acknowledges that she was interested in ‘emotional proximity’ rather than facts.²⁴ Darwin kept a notebook (the ‘M’ notebook) for metaphysical musings, in which he asked himself ‘What is happiness?’²⁵ Ballou responds to this question with a moving poem called ‘Definitions for Happiness’ in which she imagines minute details of his family life:

The rain on the roof, the distant chatter
of children in bed in other rooms
who believe they are keeping quiet.

Clean sheets. Two pairs of bare feet
meeting
under the summer quilt.²⁶

²³ Ballou, interviewed by Vicky Paine, 20th January 2011

²⁴ Ballou, ‘Darwin as Metaphor’ p.2

²⁵ Jonathan Hodge explains in Darwin’s time ‘metaphysics’ had come to mean the theory of mind including morality and sociality, rather than the theory of being [J. Hodge ‘The notebook programmes and projects of Darwin’s London years’ in Hodge, J. and G. Radick (eds) *The Cambridge Companion to Darwin* (Cambridge: Cambridge University Press, 2009) p.45]

²⁶ Ballou ‘Definitions for Happiness’ *The Darwin Poems* p.129

These are not details that Darwin himself recorded, but Ballou extrapolates from his well-documented love for his wife and family and their relaxed style of parenting. These imagined details vividly create a world for him, one which is true to what Ballou calls ‘the tone and temperatures of a life as well as its chronological events.’²⁷ Darwin becomes the mouthpiece for more universal human concerns since Ballou observes that,

Wearing the mask of Charles Darwin and transporting myself into another time and face also allowed me to explore philosophical concerns I felt otherwise unable to write-as-myself.²⁸

The poem that Ballou says is ‘closest’ to her own self is ‘The Green Need, April, 1882’. It contains little direct quotation from Darwin, but touches on some of the subjects that most concerned him: the question ‘Why is life short?’ taken from his ‘B’ notebook (on the transmutation of species) as well as another question that repeatedly troubled him – what is the point of suffering? In this poem Ballou writes of death as:

the true question at the heart
of all this fumbling

The poem is the last one in the collection written from Darwin’s perspective (the final two poems are both from his wife Emma’s viewpoint) and Ballou combines Darwin’s scientific interests with her own rendering of an old man’s philosophising:

the burning heaving heart
of the Earth, the rising crust,
the trajectories of animal time
and the sky’s cold black distance

and how none of these truths
mean anything next to

²⁷ Ballou, ‘Darwin as Metaphor’ p.2

²⁸ Ballou, ‘Darwin as Metaphor’ p.3

the truth of you.²⁹

The ‘you’ is his wife Emma and the poem emphasises the importance of Darwin’s love for her against the backdrop of vast geological and evolutionary time and the huge distances of astronomical space. Both poets root Darwin emotionally in his family life - he is never the preoccupied ‘mad scientist’, or at least never for very long.

The evident overlap of both of these collections with aspects of scientific biography has given reviewers some difficulties in categorising them. A sample of reviews quoted on Ballou’s website includes the following descriptions: ‘A mad, compressed biography’, ‘a clever interplay between fiction and non-fiction’, and ‘a half-imagined biography’.³⁰ Whilst the collections lack the historical, political and social background that prose biographies can offer, they present an interesting intervention into the genre. Laura Marcus claims, ‘disciplines, as well as genres, have histories, and [...] their boundaries are always contestable.’³¹ Not only do these collections contest the boundaries of biographical writing and poetry, they also call into question the rigidity of the boundary between science writing and literature, which I will explore in the following section.

Science in Poetry

Although Darwin is unquestioningly referred to as a scientist in contemporary scholarship, it is worth noting that he would never have referred to himself as such. The term ‘scientist’ was coined in the 1830s by the Victorian polymath William Whewell but it did not come into common usage until the 1880s - Darwin died in 1882. However, Darwin did see what he was doing as ‘science’ and in his *Autobiography* describes his ‘strong desire to add a few facts to the great mass of

²⁹ Ballou, ‘The Green Need, April, 1882’ *The Darwin Poems* p.182

³⁰ Emily Ballou’s website http://emilyballou.com/blog/?page_id=66
Consulted on 25th January 2011 at 14.38

³¹ Laura Marcus, *Auto/biographical discourses: Theory, criticism, practice* (Manchester: Manchester University Press, 1994) p.9

facts in natural science.’³² It is therefore legitimate to refer to him as a ‘scientist’ in most contexts.

However, the distinction between a modern, professionalised scientist and an amateur ‘man of science’ is relevant for Darwin’s biographers since it signifies a less defined demarcation between his life and work. If a scientific biography is to contribute to a public understanding of science, as Thomas Söderqvist suggests, then it must combine the ‘personal’ life of the scientist with details of their scientific work. This can be an awkward balancing act for a biographer but in Darwin’s case it is considerably easier to combine the life of the man with the scientific work, in part because he did not go to work in a laboratory in a university or other institution, separated from his family. Indeed, his family were involved in some of his experiments: his daughter Henrietta helped breed pigeons as part of his investigation into artificial selection, his son Frank played the bassoon as part of a series of experiments on earthworms, and Darwin wrote detailed notes on his son William’s first twelve months. Further, Darwin’s almost life-long, undiagnosed illness meant he spent a great deal of time at home, writing and experimenting, receiving visitors and corresponding with experts and friends around the world.

Padel grew up thinking about Darwin not only as an iconic thinker but as her great great grandfather and she makes explicit links between his personal life and his scientific work. In her introduction to the 2009 Vintage edition of *The Origin of Species* she writes:

Its author had just seen in the death of a third child the truth of his own argument that [...] only the individuals most apt for their environment survive.³³

³² Charles Darwin, *The Autobiography of Charles Darwin* (ed. Nora Barlow) (London: Collins, 1958) pp.80-1

³³ Padel, ‘Introduction’ in Charles Darwin *The Origin of Species and The Voyage of the Beagle* (London: Vintage, 2009) p.xix

Padel's poem 'The Devil's Chaplin' makes explicit this connection, interlacing his grief for his daughter Annie with his view of all living things competing for survival:

[...] "Oh that she could know
 how deeply we shall ever love her joyous face!"
 The harmony of nature comes direct
 from what he's witnessed. "Each form eternally destroyed

while others take its place." There's violence
 under the bright surface all the time. [...] ³⁴

In her poem 'The Orchis Bank' Ballou suggests the last passage of Darwin's *Origin of Species*, with its reference to 'endless forms most beautiful and most wonderful', are a direct reference to Annie:

And she was but one of the *endless forms*
most beautiful and wonderful
 he meant, evolved now as the worms that fed
 inside the open mouths of long-gone birds,
 so Annie lived there, in his last words. ³⁵

Writing about science and poetry John Holmes claims:

More than any other art, poetry is equipped to knit together our immediate experience and our understanding, to make us feel for ourselves the impact of the ideas that it sets out before us. ³⁶

In this sense Darwin has a poet's way of thinking about the world: he feels the meaning of his intellectual hypotheses. Although his ideas concern the impact of millions of years of evolution, he can go beyond the abstract theories and experience their meaning through the death of loved ones, as well as rejoicing in the variety of forms on earth.

³⁴ Padel, 'The Devil's Chaplain' in *Darwin: A Life in Poems* p.105

³⁵ Ballou 'The Orchis Bank' in *The Darwin Poems* p.164 [Ballou's emphasis]

³⁶ J. Holmes, *Darwin's Bards* p.x

A further reason why Padel and Ballou are able to incorporate Darwin's work into their poetry so effectively is that Darwin's writing has a literary quality, a quality that Gillian Beer has analysed in great detail.³⁷ Darwin loved poetry as a young man but he turned away from literature as he got older, something he came to regret. However, his wife Emma continued to read novels to him and the influence of literature can still be felt in Darwin's language. For the epigraph to her penultimate section, Ballou quotes a letter from Darwin to his friend Joseph Hooker in 1868: "I am a withered leaf for every subject except Science."³⁸ The beauty of his phrasing belies his meaning and Darwin's own work can be considered as both scientific writing and literature.

Padel makes extensive use of Darwin's own writing, and some poems consist mainly of Darwin's own words, edited and shaped. Richard Holmes suggests that these are 'skilful collages and paste-ups rather than true poems.'³⁹ In 'On Not Thinking About Variation in Tortoise Shell' Padel relines the observations that Darwin made at the Galapagos Islands, observations that proved so crucial for his later thinking about natural selection:

“[...] I never dreamed

that islands sixty miles apart, made of the same stone,
of nearly equal height in the same climate,
could have different tenants.”⁴⁰

Is this no longer scientific writing in the same sense as Darwin's notebooks or letters, simply because it is now part of a poem? By transposing the words into a poem, they are inevitably approached by the reader in a different way. When scientific language is transferred into poetry, new meanings are allowed to develop and the language is appreciated for different qualities – for musicality rather than accuracy, for example. The words lose their status as scientific writing

³⁷ Beer, *Darwin's Plots*

³⁸ Darwin in a letter to Joseph Hooker, quoted by Ballou *The Darwin Poems* p.165

³⁹ R. Holmes, 'Giving to a blind man eyes'

⁴⁰ Padel, 'On Not Thinking About Variation in Tortoise Shell' *Darwin: A Life in Poems* p.46

partly because of their loss of context. However, Darwin's words are not being used by Padel for their deliberate 'strangeness': she is interested in the scientific content of the words since she is making a point about the development of Darwin's theory. Their status as scientific writing is therefore still important.

Ballou's poem, 'December 27th, 1839' describes the birth of Darwin's first son, William, and she imitates Darwin's style of scientific note-taking. In this poem she combines Darwin's observations of William with his diary of observations from the *Beagle* voyage seven years earlier:

Body: *Bluish White to Skimmed Milk White*
Its eyes the most beautiful things I ever knew.

[...]

Touching
foot with sheet of paper
suddenly
produced jerk, curl of toes.

[...]

I could not exactly see the heart
but felt mine skip.⁴¹

The first section quoted is a section from Darwin's *Beagle* diary, describing a dogfish shark that Darwin has just caught. The second section is from his observations of his son William at one week old. The third section is not referenced so can be assumed to be Ballou's own rendering. The point is that it is difficult to identify the words accurately without checking Ballou's references - the first section could easily be read as Darwin's subjective description of his son and the second section is a surprisingly objective description of his new born baby. In the third section Ballou is playing with the form, conveying a profoundly moving observation as if it were a scientific one. In this way Ballou's work also troubles the boundary between scientific writing and poetry.

⁴¹ Ballou, 'December 27th, 1839' *The Darwin Poems* p.96

These collections reveal other connections between scientists and poets, such as their mutual reliance on careful observation and precise use of language. Ballou writes:

He [Darwin] was an avid collector and observer of the natural world from an early age, passions that might have made him a poet as much as they did a naturalist and scientist.⁴²

Both collections are full of the vibrant detail and specificity of Darwin's observations. Ballou describes Darwin as a young student in Edinburgh, several years before his *Beagle* voyage:

You could squat down for an hour near a tidal pool
and await the tiniest sway of cilia, or a glimpse
of feathery sea-pen, hovering at the edge
to discover a colony of tentacled polyps; [...] ⁴³

It must always be tempting for a biographer to look for signs and hints of the great scientist in the younger man. Padel stresses Darwin's boyhood passion for nature and collecting, and makes the connection between collecting and 'collecting oneself', that is, to regain control of oneself after a shock. Darwin's mother died when he was eight years old and Padel sets this poem shortly after her death:

Collecting: to assert control
over what's unbearable. To gather and to list.

"Stones, coins, franks, insects, minerals and shells."
Collect yourself: to smother what you feel,
recall to order, summon in one place;
making, like Orpheus, a system against loss.⁴⁴

⁴² Ballou 'Darwin as Metaphor' p.2

⁴³ Ballou, 'The Beach' in *The Darwin Poems* p.23

⁴⁴ Padel, 'The Miser' in *Darwin: A Life in Poems* p.5

Padel allows the multiple meanings of ‘collect’ to be considered side by side thereby illuminating one of Darwin’s characteristic activities in a new way. She makes explicit use of multiple meanings in a later poem in which Darwin takes his first steps in untouched tropical forest:

He’s walking into every dream he’s ever seen:

tasselled seedpods, trefoil, nodule;
 shrapnel of decaying trees like giant
 columns of a fallen temple, their gold-bone
 mossy architraves upwelted with lianas.
 Creepers – and a strangler ficus – crafting their way
 to the light. Relationships! [...] ⁴⁵

‘Relationships’ suggests Darwin’s realisation of the interdependency of life forms – the dead tree is intrinsic to the existence of plants growing on it which are vital for insects which are vital for birds. In *Origin of Species* Darwin describes plants and animals as ‘bound together by a web of complex relations’.⁴⁶ But there is also an irony in Padel’s use of the word ‘relationships’ - she has previously told us what Darwin has yet to discover, that Fanny Owen, with whom he had been ‘flirting’ prior to his *Beagle* trip, has married another man in Darwin’s absence.

The poem captures Darwin’s close observation and his passion for natural history, as well making use of the precise language of botany - ‘seedpod’, ‘trefoil’, ‘nodule’ - necessary for identifying and classifying the natural world, and thereby understanding it. Darwin is paying attention, an activity Padel considers crucial for good poetry. Speaking of Darwin’s attentiveness she says, ‘it reminds me of Heaney’s work – precise attention to things and how they work is where the good work comes from.’⁴⁷

Ballou suggests that it is the ‘*coralline* quality’ of Darwin’s thinking that makes poetry an excellent form for representing it: ‘the proliferation and variety of his thought, constantly branching out, unfixated, building its slow layers over

⁴⁵ Padel, ‘Lavender Light in a Leap Year’ in *Darwin: A Life in Poems* p.32

⁴⁶ Darwin, *On The Origin of Species* (Oxford, Oxford University Press, 2008) p.58

⁴⁷ Padel, interviewed by Vicky Paine, 9th November 2010

time'. The collections themselves can be seen as 'coralline', each poem adding another layer to our understanding of Darwin, not in a straightforward accumulative or linear way, but in a more complex, 'branching' manner.

For Ballou, wanting to 'examine the life and mind of this man without closing him in', poetry can allow for this openness of interpretation, permitting ambiguity and multiple meanings.⁴⁸ We are not given a description of his character but we develop a sense of him, an impression, something closer to the complexities of a real man. It is not only the depiction of Darwin the man that Ballou doesn't want to 'close in', it is also his thinking:

In order to convey it, it couldn't be a finished thing. [...] over the course of a life his thinking is evolving [...] So therefore the thoughts are unfinished. Poetry, again, is a great medium for this: for a revelation, a flash of thought.⁴⁹

The 'flash of thought' can be seen throughout both collections. Here is part of Ballou's poem 'Metaphysical Thoughts, Con't':

*if mammals have free will
as they no doubt do
it is obvious to see
then an oyster too...*

But what would be
the free will of an oyster?
he wondered
staring out at the last
of the day's light.⁵⁰

There is obviously an element of comedy here as Darwin's thoughts lead him to speculate on the nature of free will for an oyster, and the question is left unanswered. In South America, Darwin saw fresh mussel beds that had been thrown up by an earthquake above the high tide line. Although he didn't know it

⁴⁸ Ballou, 'Darwin as Metaphor' p.2

⁴⁹ Ballou, interviewed by Dr Paul White, 28th May 2009

⁵⁰ Ballou, 'Metaphysical Thoughts, Con't' in *The Darwin Poems* p.82

at the time, it was later important proof for him of the powerful changes that geological formations could bring about.⁵¹ Although the free will of an oyster might seem a ridiculous philosophical problem, it was nonetheless part of his major scientific theory.

By using his notebooks and journals which document his thought processes, rather than his final conclusions, Padel and Ballou reveal how imaginative and creative he was, his mind constantly rushing forwards to new ideas. Ballou's poem 'Ink' captures the moment when he has the thought of 'selection by death', which features in his earliest sketch of natural selection drafted in 1842:

Was it science that bound them
fish & man
so tightly together?
Or "selection by death"
(a hurricane thought
he'd have to note
in the morning)⁵²

The phrase 'hurricane thought' suggests the speed of Darwin's thoughts, unhindered by concern for the empirical proof that he will need to support the idea. Of course, Darwin does use empirical evidence and observations to make his argument, but much of the time he is observing and theorising simultaneously, the two processes sparking off each other.

Ballou suggests that the notebooks of a scientist and the notebooks of a poet have affinities:

I look at his notebooks and I think, "This is a very similar notebook to the notebook I might keep," in terms of even just the minutiae of the circling of things; the arrows; the marginalia; the way he uses similes to move forward in thought – *this* is like *this*, and why; *this* is not like *this* – and that's very similar to the way one writes a poem.⁵³

⁵¹ Ballou, 'Some Notes On the Text' in *The Darwin Poems* pp.204-5

⁵² Ballou 'Ink' in *The Darwin Poems* p.118

⁵³ Ballou, interviewed by Dr Paul White, 28th May 2009

Darwin's notebooks give unusual access to the thoughts of a man in the process of developing a major scientific theory. His mind leaps from metaphysics to biology and back again in a manner markedly different from his carefully argued, example-intensive, published works. Adam Gopnik suggests that Darwin hides this stage of his scientific method: 'Darwin's writing [...] takes speculative argument and makes it look like empirical record-keeping.'⁵⁴

Of course, one doesn't expect a scientist's notebook to be as structured or as rigorously argued as his published works. But nonetheless his notebook jottings clearly show that Darwin did not use a standardised 'Scientific Method' but sometimes devised theories *before* collecting evidence. Further, evolution by natural selection is a model for understanding the world, not a fact. His biographer Janet Browne points out, 'There never was a final conclusive experiment, evolution was not that sort of theory.'⁵⁵

In Darwin's *Autobiography* he made reference to adding to the 'great mass of facts' of science. Before Darwin, natural history *was* about gathering facts, but in 1857, William Whewell observed:

The theories which make the epochs of science do not grow gradually out of the accumulation of facts. There are moments when a spring forward is made – when a multitude of known facts acquire a new meaning.⁵⁶

Darwin valued the sort of knowledge you could acquire but he was also aware that, 'while the acquisition of knowledge was cumulative and gradual, great leaps of understanding might happen'.⁵⁷ The sort of leaps of understanding described by Darwin are those that require creativity, imagination and poetic ways of thinking.

⁵⁴ Gopnik, 'Rewriting Nature' p.52

⁵⁵ Browne, *Darwin's Origin of Species: A Biography* p.53

⁵⁶ William Whewell quoted in Rebecca Stott, *Darwin and the Barnacle* p.138

⁵⁷ Rebecca Stott, *Darwin and the Barnacle* p.138

Conclusion

I began this paper by asking what a poetic response to Darwin could add to our understanding of him, given the huge volume of material that has already been written about him. Every biography of Darwin tells a slightly different story and Ballou categorically states, ‘The Darwin in my poems is *my* Darwin.’⁵⁸ Ballou offers an imaginative recreation of Darwin’s inner life and thoughts, whereas Padel shapes Darwin’s own words to give a new version of his ‘voice’. Both poets present a ‘humanized’ Darwin by offering a series of impressions of this sympathetic, endlessly curious and passionate man, as well as by emphasising the emotional context for his work.

Although not interchangeable with traditional prose biographies, these poetry collections clearly have many characteristics in common with them and can be understood to some extent as interventions in the genre of ‘scientific biography’. Poetry offers an extremely rich way of presenting Darwin’s ‘poetic’ thought processes – his analogies and metaphors, his ‘coralline’ ideas branching out and accumulating, and his wild leaps of imagination – as well making use of the beauty of his language and the rich detail of his observations. Further, as close reading of Ballou’s poem ‘December 27th, 1839’ shows, these collections also reveal that the boundary between scientific observation and lyric poetry is also more permeable than might be expected.

⁵⁸ Ballou, interviewed by Dr Paul White, 28th May 2009