



ANGEL EVENT: A YEAR EXPLORING
THE WIKO ARCHIPELAGO
JIM COSTA

A New Yorker by birth, I have called the Blue Ridge Mountains of North Carolina home since 1996. I studied biology and philosophy at Cortland College, New York (B.S., 1985), and insect ecology (M.S., 1988) and population genetics and social evolution (Ph.D., 1992) at the University of Georgia. Following four years at Harvard's Museum of Comparative Zoology, I joined the faculty at Western Carolina University in 1996 and became Executive Director of UNC's Highlands Biological Station in 2006. My main research interests over the years have focused on insect social evolution (seen from a caterpillar's point of view) and the history of evolutionary thinking. My 2006 book *The Other Insect Societies*, completed while a Fellow of the Radcliffe Institute for Advanced Study at Harvard, aimed to challenge the prevailing social evolution paradigm, while in *The Annotated Origin* (2009) I aimed to make Darwin's landmark book accessible to a broader readership. At the Wiko I completed complementary books on the naturalist Alfred Russel Wallace: *On the Organic Law of Change* (2013) and *Wallace, Darwin, and the Origin of Species* (forthcoming), are my homage to the unsung co-discoverer of evolution by natural selection. – Address: Highlands Biological Station, 265 N. Sixth Street, Highlands, NC 28741, USA. E-mail: costa@email.wcu.edu

I.

As a field biologist and a student of the history of evolutionary thinking, my admiration of the great explorer-naturalists convinced me that Marcel Proust was incorrect when he said, "The real voyage of discovery consists not in seeking new landscapes but in having

new eyes". New eyes are important, but the comparative perspective afforded by new landscapes can inspire new ways of seeing even more profoundly. And what a gift my year here has been, a full immersion in the Wiko, Berlin, Germany, Europe, providing a comparative perspective nonpareil. Between cityscape and "Wikoscape", my year has been one of delight and frustration, insight and puzzlement, admiration and sadness, inspiration and false starts – all felt at one time or another as I explored the facets of this endlessly interesting city, pondered our colloquia, enjoyed myriad conversations, and was transported by our musical interludes at the Wiko.

I sit in the Villa Walther as I write this, looking out on the sun-dappled and breeze-swayed trees crowding the banks of the Herthasee. (Contrary to general belief, the sun *does* shine in Berlin on occasion, albeit on rare days and even then only briefly.) In little more than twenty-four hours, BA flights 983 & 227 will jet me and my family home from this continent to ours – from the Old World to the New, but from our "new world" to old: our new Berlin home of the past year to our old and familiar one. It's a bittersweet departure – we look forward to being reunited with family and friends and our comfortable home in the Blue Ridge, yes, but Leslie and our boys and I will miss Berlin and the Wiko, each in our own way. For Leslie it might be our new friends, Wiko conviviality, great public transportation, and Nazar. For our kids it would likely be friends, *Fußball*, noodle boxes and Döner Kebabs, and the freedom of a car-free existence and a city navigated by bus and S- and U-Bahn with ease. Me? Ah, I will miss my fellow Fellows, the blissful cocoon of my book-strewn office in the Neubau, Bruce dropping in for a chat. I will miss the ready smiles of Ursula, both Veras, and Funda, the convivial and delicious meals cooked up by Lena, Daniela, Yves, and their team, and the good cheer, conversation, and helpfulness of Sonja, Anja, Marianne, and Kirsten in the library, ever-ready to procure obscure literature. I will miss being able to throw myself into my work with abandon, fueled by the divine coffee machine of the restaurant, and I will miss our pleasant *Pausen*: lunch, colloquia, chats over coffee, our weekly dinners and long after-dinner conversations, all manner of angel and non-angel events.

My comrades alternately delighted, intrigued, puzzled, and dismayed me with their varied presentations: Middle Eastern socio-politics and history, quantum entanglement, reproductive physiology, *Bildtheorie* ... and we learned where the love was.

II.

Where did the year go? I devoted much of it to the naturalist Alfred Russel Wallace (1823–1913), the inveterate traveler, collector, and naturalist who, rather like Tom Paine, had a hand in not one but two revolutions (albeit scientific and not political): founding modern biogeography and co-founding modern evolutionary biology. What was to have been my Darwin year at the Wiko – work on a book on Darwin’s experiments – turned into my Wallace year, putting me in the venerable and sizable company of Wiko Fellows who for one reason or another ended up working on something *other* than what they had planned on. In my case, the shift was not wholly unexpected. My Wallace project, initially undertaken with friend and colleague Andrew Berry, consisted of an annotated transcription of Wallace’s most important field notebook from his epic journey in the “Malay Archipelago” (mainly modern-day Indonesia), spanning the years 1854 to 1862. The project was already underway, and I had expected it to be completed before my arrival at the Wiko. Early last summer, however, my co-author suddenly found that he had to drop out, leaving me with the option of completing the book solo or letting the project wither. I was determined to carry on not simply for the sake of the time and effort already put into it, but in an odd way, perhaps, for Wallace’s sake: intended as a celebration of Wallace’s evolutionary insights pre-*Origin of Species*, with a planned release at the culmination of the Wallace Centennial in late 2013, I was convinced from the time that I proposed the project in 2011 that this notebook would be of immense interest to historians and biologists, prompting, I hoped, a reassessment of the remarkable scope of Wallace’s insights and labors in pursuit of a solution to “the species question” – the origin of species.

Wallace’s contrast with Darwin is remarkable. Unlike Darwin, who came to his own understanding of evolution (then called “transmutation”) almost reluctantly soon after the conclusion of his voyage round the world, Wallace had actually set out to travel precisely to solve the species question. That he succeeded in this little more than a decade after setting out to do so is astonishing, given the obstacles: Wallace was self-educated, relatively poor, and had no social standing or connections – nearly the opposite of Darwin’s circumstance in every respect. Yet he was also tenacious, clever, resourceful, and determined. By a curious twist of fate, having hit upon the principle of natural selection, Wallace ended up sending his announcement of the discovery to Darwin, of all people. Had he sent it directly to a journal we might be speaking of “Wallaceism” today, but as it

turned out Darwin's friends rallied to ensure that his own priority-preserving private writings on the subject would be presented alongside of Wallace's paper.

In our time, biologists, historians, and others seem to hold contrasting views of Wallace and his legacy. Some lionize Wallace and maintain that he is the true discoverer of natural selection, one whose ideas were unfairly appropriated by Darwin and his circle. Others detract from his legacy by dismissing him as a mere collector who got lucky, one who himself said that he was glad that it fell to Darwin to give the world a book like the *Origin of Species*, as he would not have been up to the task. The one camp lauds Wallace by undermining Darwin, while the other lauds Darwin by knocking Wallace. Both camps are wrong, I believe, and do a disservice to both naturalists. Darwin and Wallace each deserve laurels, and while there is no question about this in regard to Darwin, it seemed (unfairly or not) that a case had to be made for burnishing Wallace's star. I became convinced that Wallace's hitherto unpublished "Species Notebook", as one historian labeled it, is the single most important document we have showcasing Wallace's far-ranging creativity.

The notebook project has come to fruition, and then some. Leslie took on completing the transcription while I worked on annotations and analysis, burning the noontime oil (this was Berlin in winter, remember). In fall 2013, Harvard have published the notebook in facsimile with transcription and commentaries. Along the way, some interesting side-projects arose: a companion volume with a more detailed analysis of the notebook is in the works (titled "Wallace, Darwin, and the Origin of Species", it is scheduled for a June 2014 publication with HUP), as are several papers. One, an exploration of Wallace's creative proposals to make life easier for working naturalist-taxonomists, was published in the *Bulletin of Zoological Nomenclature*. Wallace was ahead of his time: he would be delighted to know that several of the proposals he made in the Species Notebook (for example, his plan for a cooperative inter-institutional "library of natural history" and the idea of an international panel to regulate the naming of new species) have been realized.

In another paper, published in *Theory in Biosciences*, I argue for a reassessment of Wallace's intention behind his two most important "evolutionary" papers, from 1855 and 1858. The notebook supports the hypothesis that Wallace wrote these papers in a dialog, of sorts, with the eminent geologist Charles Lyell, who had published the most effective attack on the idea of species change at the time. It is now clear that Wallace aimed his papers at Lyell, with some of the same arguments against Lyell also found in the Species Notebook. There is no question that Lyell recognized the power of Wallace's arguments: he initiated his own series of private notebooks on the species question as a result of

Wallace's 1855 paper, and urged his friend Darwin to publish, recognizing that Wallace was hot on his trail. Ironically, when Wallace sent his famous 1858 paper on natural selection to Darwin, it was so that Darwin would pass it on to Lyell. In another twist, Wallace's critique of Lyell in the notebook also reveals Wallace's own plan for a pro-transmutation book: a book that was not to be, since the events put into motion by his 1858 paper resulted in Darwin going public and hastily editing down his planned tome on the subject into a more manageable size: his "abstract" that we know as *On the Origin of Species*, published in November 1859. Wallace received his copy while still deep in Southeast Asia, lavished praise on it, and quietly shelved his own plans for a book arguing for transmutation. One historian suggested that Wallace might have titled his unrealized book "On the Organic Law of Change", and following his cue I adopted this as the title for the published version of the Species Notebook. In its way the publication of the Notebook, made possible by my Wiko year of immersion thinking, reading, discussing, and writing, is in spirit a realization of Wallace's "book that should have been" – an homage to Wallace in this centennial year of his death.

III.

It may be easy to wax nostalgic now that summer is safely here, forgetting the frigid and sun-starved state of the place most of the year. But even at its bleakest, Leslie and our boys and I enjoyed navigating the city and culture – usually, but not always, successfully. Maybe because Wallacean voyages of discovery were often on my mind, I sometimes fancied that we were explorers in our own fashion, from the "Wiko Archipelago" (invoking Wallace and not Solzhenitsyn) to more distant lands on the "Berliner See". In the exploring tradition, here are a few entries from my field notebook (curiously similar to Wallace's in layout) as we struggled to understand the natives and the place:

[7]

15 Sept. 2012

Beware check-out @ Lidl; check-out person apoplectic *very unhappy* if more than ~5 microseconds taken to bag groceries *plus icy stares from customers in line*

Local custom: throw all groceries back into cart as quickly as possible after scanning, sort out pile and bag groceries elsewhere. – schnell

NB – on doors, “Drücken” = PUSH

Common blackbird (*Turdus merula*, Linn. 1758) sleek black cousin of American robin – large chirpy flocks at Wiko; lovely

[28]

6 Oct. 2012 – Hackescher Markt S-Bahn

Just before departing platform in the train “Einstein, bitte” announced. ?Why? Seems unlikely to be advertising for the coffee shop – otherwise the announcement should be made on arrival, not as the doors are closing and the train leaving. Perhaps Oct. is a month of celebration of Einstein — his B-day? check this. **could be educational – a public service message, to learn about the great scientist?* or, Hackescher perhaps Einstein’s home or birthplace? [note: could be *Einsteigen?*]

– ? Zurück kein Bitte ? check this.

[40]

23 Dec. 2012

– Dark, *dark*, DARK. No sun. Endlessly overcast, bleak. Check latitude **Berlin 52.52° N, 13.41° E* – In future AVOID this lat. in winter. (?what are symptoms of vitamin D deprivation?) Christmas Markts & lights everywhere – festive. I suspect tho designed to distract from miserable climate.

**** Döner kebabs !!!** These help get through winter; Glühwein too.

Fresh snow on iced-over ponds – fox tracks, bird tracks, squirrel tracks. What dramas do their intersections reveal?

[55]

10 Jan. 2013

Attended lecture at Wiko, in Deutsch; curious knocking on tables at conclusion –

??Pretzels & wine? Inquire into origins of this odd combination

[62]

25 Jan 2013

Restaurant's coffee machine – would anyone mind if I moved this to my office for awhile? { must have it.

Ping-pong ^{table tennis here} = blood sport at Wiko / careful who you play
[*]g. umbrella is useful as shield when walking thru during match*]

[69]

28 Feb. 2013

R. T. – exceptional organism. “genau in your genauishness”??

der Bus M19 ist unser Freund!! (**beware stairs careening around Koenigsallee curve!)

Humboldt statue @ Unter den Linden glorious; note nice cerambycid, & sphingid caterpillar

Cupid & Psyche at Altes Museum – insectan and avian.

– Pilgrimage to see Berlin Archaeopteryx, Museum für Naturkunde — Wunderbar!!

Flowers @ Empfang – lovely!

[85]

Ides of March 2013

Villa Walther metaphor for Berlin; past half obliterated, eras grafted

Happiness = flowers from Adenauerplatz U-Bahn!

Thanks ≠ danke; always add schön, sehr ^(helpful tip from Hubertus)

Deutsch incomprehensible to ossified brains like mine. Ursula is a saint.

Practical Deutsch to use with teenage boys:

nein, Junge ^(very handy with Addison & Eli)

genau!

kein, nicht, nay, nein ^(so many ways to say NO)

Ich weiß nicht.

Bitte?

Ja

Kinder, essen! (schnell!)

“Raus” gets better response than “Vamoose”

Layers of history here - like geol. strata. Records of upheaval, erosion, continuities, breaks. Difficult to map. There is tragedy in the unconformities.

IV.

Yes, in many respects our Berlin year brought out the anthropologists in us – keen to observe and understand, compare and contrast, gain insight into context. Thinking about the odd reversal of new and old worlds for my family and me puts me in a mind of Alessandra Russo's colloquium, reflecting on how worlds new and old, continents apart, rejuvenate and inspire one another. Looking back on this Wiko year and all that I have seen, heard, experienced, pondered, discussed, and accomplished, biological metaphors along these lines inevitably come to mind – I am a biologist, after all. One such metaphor relates to the interesting interplay between isolation and interchange. On the one hand we biologists understand that, by and large, isolation is necessary for the evolution of new species, since contact and admixture bind individuals and populations together and prevent their divergence. And by analogy so too may novel ideas and traditions arise and develop in striking ways through the isolation experienced by individuals, groups, or even whole communities. But on the other hand we also see the benefit of mixing things up: cross-pollination as the fruitful intermixing of different ideas and perspectives.

In a curious roundabout way, this idea relates to another colloquium – that of Sonia Sultan on “nature” and “nurture” – and my own work on Darwin, Wallace, and the history of evolutionary thinking. The question of the relative importance of “nature” (via genetics, in modern terms) or “nurture” (learning, experience) in shaping behavior has been around for centuries (Pope touched on it in 1734, in his *Essay on Man*: “*Whether with reason, or with instinct blest | Know, all enjoy that power which suits them best*”). Aiming to undermine the natural theology tradition that Pope reflected, Darwin tended to focus on instinct and its variations, and so leaned toward the “nature” end of the spectrum. Wallace, on the other hand, was thinking more along the lines of cross-pollination, admixture, cultural interchange: sometime in the late 1850s he wrote in his *Species Notebook* that “a race remaining isolated will ever remain stationary, and this is the case with birds. Each species is generally confined to a limited district in which the circumstances are similar and give rise to no diversity of habits.” Modern biologists would agree with

Wallace, recognizing the importance of learning and experience in interplay with genetics. In this regard Wallace was once again ahead of his time. He certainly would have appreciated the Wiko philosophy of interdisciplinary and intercultural interaction and engagement: a discipline, institution, or scholar remaining isolated “will ever remain stationary”; mix things up, promote cross-pollination, spark new ideas, collaborations, currents ...

Our “Angel Event” in the Wiko Archipelago this year has been magical indeed, but all too brief, alas. Wallace got to explore his archipelago over eight years, to good effect. Hmmm ... I wonder if Luca might consider ...

Works completed at Wiko

- Costa, J. T. (2013). *On the Organic Law of Change: A Facsimile Edition and Annotated Transcription of Alfred Russel Wallace's Species Notebook of 1855–1859*. Cambridge, Mass.: Harvard University Press, 559 pp.
- Costa, J. T. (2014). *Wallace, Darwin, and the Origin of Species*. Cambridge, Mass.: Harvard University Press. (Forthcoming spring 2014)
- Costa, J. T. (2013). “Synonymy and its Discontents: Alfred Russel Wallace’s Nomenclatural Proposals from the ‘Species Notebook’ of 1855–1859.” *Bulletin of Zoological Nomenclature* 70: 131–148.
- Costa, J. T. (2013). “Hamiltonian Inclusive Fitness: A Fitter Fitness Concept.” *Biology Letters* 9, 6: 20130335.
- Costa, J. T. (2013). “Engaging with Lyell: Alfred Russel Wallace’s Sarawak Law and Ternate Papers as Reactions to Charles Lyell’s *Principles of Geology*.” *Theory in Biosciences*, 132(4): 225–237.
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- Costa, J. T. (2013). “Wallace on the Evolutionary Trail.” *Current Biology* 23(24): R1069–R1071.