



DO SPECIES DIFFER IN VALUE?
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En 500 años, esta época podría ser vista como la última en la que nuestra biodiversidad pudo ser estudiada realmente, como si hubiéramos tenido un breve momento en nuestra máquina del tiempo para hacer lo que pronto será paleontología (Maddison and Perez, 2001).

The Tree of Life is an evocative description of our interrelatedness. From what was likely a standing start, evolution has given rise to all the living variation we see around us: the nightingale, the oak tree she calls home, and my gleefully craning baby daughter are literally kin. This is a pretty trite observation, but it is also the basis of my professional life. Actually, it is worse: in my mind's eye I see the threads that trace back through time, linking me to the mushroom I meet on the path I walk for recreation. (Fungi are more closely related to animals than are plants, so I feel a special affinity towards them.)

Mass extinction is another powerful phrase. The appropriation of an inordinate and increasing amount of the earth's resources by our single species means a significant portion of the other leaves on the Tree of Life are currently withering – tens of thousands of species (maybe many more) are doomed to premature extinction. Direct and indirect effects of global climate change are very likely accelerating this loss. The large, charismatic species that we refuse to give up on just yet, the tigers and the orangutans, are already nursed and coddled in some netherworld existence.

These are the two facts that motivated my project here at the Wiko this past year. I was asked in 2001 by Prof. Wayne Maddison to consider applying to be a member of a group he was organizing; he and I had strong overlapping interests in quantitative ways to infer the past using only data from the present, interests we have explored further here in Berlin. In the intervening years, though, I became very interested in how biodiversity is valued by society: I started a new course called “biodiversity” at my university, and, somehow or other, became involved in lobbying efforts to strengthen a nascent Canadian Endangered Species Act. Studying for my course led me to the sobering fact that we do not actually know to what extent more species offer more direct value to humans, or indeed, how we would go about measuring such value. Discussions of how legislation should actually protect species in Canada led to some difficult questions: should Canadians invest in species that are rare at home, but common elsewhere (a distinct possibility, since many species just make it into southern Canada from the US)? Should some bits of biodiversity be sacrificed in order to better manage other bits? If so, how should one decide which bits?

The opportunity to interact with researchers from other disciplines, some who have thought deeply about why humans do the things they do, seemed to be a wonderful opportunity to explore this idea of value further. Of course, since my hammer was evolution, the nail I was most interested in was whether one potential value might be how distinctive a species is on the Tree of Life. The conjecture was that species with fewer relatives might be considered more valuable, either for this fact alone, or because these species were special in other ways.

As alluded to elsewhere by two-time Wiko Fellow Prof. Steve Frank, one rarely knows what the effects of an academic experience are, even after the fact. Nevertheless, three somewhat unexpected events stand out for me this year.

The most important was my involvement in a brand-new endeavour at the London Zoo on species distinctiveness. My graduate student David Redding and I had written a short paper (ref. 1) suggesting a ranking scheme for conservation that incorporated evolutionary

distinctiveness, and this paper appeared in print in late Fall. It was a scientific paper, and so I expected little immediate response (or perhaps little response at all). As luck would have it, though, the London Zoo group had had the same idea at much the same time, but they actually launched a conservation program based on the idea (to great fanfare) in January. I was invited to London to give a talk and discuss collaboration. All of a sudden, conservation money was involved, and vague notions had to be made operational and robust; Prof. Maddison was a great help here, contributing creative new ideas, helping clarify my thinking, and also writing a flexible software application to explore the issue.

Also in the new year, a paper I had helped organize on government bias in species protection was published (ref. 2). We highlighted that the imperiled animals that Canadians were likely to identify with most strongly – caribou (which graced our 25-cent coin for decades), beluga whales (the biggest attraction at my local aquarium), codfish (a species with deep cultural significance on the east coast), salmon (ditto, but for both coasts), and polar and grizzly bears (iconic the world over) – were also the imperiled species that had been refused legal protection under Canadian law. Though one never knows why governments do what they do, this seemed to be a strong case of conflicting values. Our message was that better mechanisms for weighing different types of species value were needed. The paper's purpose was to start a national discussion, and the media did engage in a short conversation on how Canadians might value species. Taking part in this conversation was a new and exhilarating experience. Interestingly, my reading and discussions here at Wiko through the autumn had left me unsatisfied with the recommendations for a mechanism that we had alluded to way back in the summer of 2006. This made public commentary a bit tricky, but suggests the Wiko experience was a success.

Finally with regard to unexpected tasks, I was asked to write an editorial (ref. 3) on a study that illustrated how one would choose different areas for conservation depending on whether one chose areas based on species richness or on evolutionary richness. This result was as exciting as the South African setting. I suggested that the data highlighted an additional quandary: the ranking would change again depending on whether South Africans valued lineages that were unique to their own country more highly than lineages shared with other countries. This was one of the issues I had had with Canada's Endangered Species Act, and since the publication of this commentary, I have been increasingly engaged in this area such that I expect it to become a major part of my work next year.

I had not anticipated these events; far from a year of quiet scholarly contemplation, I found my mental energy taken up for the first time with fairly practical issues involving conservation, value and evolution. That said, the year did end with a planned academic event. A symposium concerning evolutionary history and conservation that I had organized with Dr. Dan Faith (who, as it turned out, had been to the Wiko in the early 90's) took place in New Zealand in late June, and Dr. Faith also came to visit and collaborate with Prof. Maddison and me in July, just as we were packing up.

I end this short report with three loosely related observations. First, the academic luxuries of the Wiko are as fantastical and seductive as advertised; an article in the newspaper this year referred to the institution as a “Jugendherberge für Egg-heads”, which only gets it half-right. My discussions with the other Fellows were often inspiring, were very often useful (particularly a series on cultural diversity), and were always of the sort that made me feel like a student once again, happily adrift in warm seas of ideas. Second, I underestimated how hard it was going to be to combine this seductive immersion with the practicalities associated with a working academic partner and our baby. The Wiko harkens back to an era of long lunches, sherry before dinner, and evening events for Fellows. Of course, that era was also one of nannies and casual patriarchy; time will tell how the past and present can best be reconciled.

And finally, to one particularly memorable evening event: Prof. Fuad Rifka, an august Lebanese poet, translator and Wiko Fellow, gave a reading of his work just the week before my colloquium. In it, he repeatedly expressed a deep and explicit love of the natural world. (At least, I think he did, it being in Arabic with German translation and so popular that I was crammed into an antechamber.) Distracted by my impending presentation, I was grateful to be able to attend this reading, but in the end, I was saddened. I fear his worldview also harkens to a bygone era. Nature – one synonym for the full spectrum of variation brought forth by evolution – is literally and daily receding from us. The simulacrum that is the “Grunewald” will be the only Nature most of us will experience in the not-too-distant future. The park that gives our area its name has most amazing restorative power and I don't know what I would have done without it. But I do wonder what sort of poetry it can inspire.

References

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