

Magazine
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Beacon: Gerald Durrell was considered ahead of his time in the conservation potential of zoos. (Photo: Penguin Books).

be traced back to *My Family and Other Animals*. “That book and his subsequent books bred a whole generation of zoologists,” says Lee Durrell. And although captive breeding has its critics, there is no doubt for some species it has been crucial. A report last month from BirdLife International described the existence of 31 bird species in conservation efforts, including captive breeding. Californian condors now number more than 100 through such a programme and the Bali starling was reduced to an estimated six in the wild, but is now breeding successfully in a number of captive programmes, and available for release when conditions permit.

The need for captive breeding programmes is greater than it has ever been, says Lee Durrell. “The situation is probably more alarming than when he started.”

On Jersey, an initiative between Ottakar’s bookshop and Penguin is encouraging every teenager and adult on the island to read *My Family and Other Animals* with a donation of £1 to the Durrell Wildlife Trust for each book sold. And the Durrell Wildlife Conservation Trust continues to be run according to the principles he laid down in the early days. Lee Durrell believes her late husband would be overwhelmed at the new flurry of attention but would hope it has a positive outcome.

Q & A

Nicholas Wade

Nicholas Wade worked for Nature from 1967 to 1971 and for the news staff of Science until 1982, when he joined the New York Times. He is the author of several books including The Nobel Duel (Doubleday, 1980), Betrayers of the Truth (Simon and Schuster, 1982, written with William J. Broad), A World Beyond Healing (Norton, 1987), Lifescript (Simon and Schuster, 2001) and Before the Dawn (Penguin Press, 2006).

What first got you interested in science? Greek iambics. Being forced to write them as the major focus of my education for five years gave me the idea of studying something completely different at university.

How did you get into writing about science? I was working unhappily at a publishing company and saw an ad one day for a job at *Nature*. John Maddox, the editor, managed by maelstrom, sweeping up new projects and rapidly discarding them into the hands of almost anyone standing nearby. I soon found I had been delegated the task of generating a daily column of science news which he had contracted to write for *The Times* of London. This provided the opportunity to continue my science education, though unfortunately under conditions in which all one’s mistakes were made in public.

What was the best advice you ever had? It came my way when through a confusion in dates I arrived early one morning at *Nature*’s printing plant in St. Albans. John Maddox, who sought to avoid boredom by running things close to the wire, liked to write *Nature* editorials against the roar of the printing press. This afforded him the rush of a real, tangible deadline, such as that the entire weekly print run might be lost, or a

prominent blank page appear, if he didn’t finish on time. He would shout out his editorial musings to his loyal secretary, Mary Sheehan, with the printer’s foreman hanging at the door to snatch each paragraph from her typewriter. When I arrived unexpectedly he told me to make myself busy by taking over one of his editorial themes that day, the performance of the world’s first heart transplant by Christiaan Barnard. I protested that I didn’t know anything about heart transplants. “That,” he said, “is the best possible qualification for writing an editorial.”

Quelling my doubts, I did the best I could as the presses rattled the room. John threw in a few paragraphs and my faltering words were rushed into hot metal. I was astonished the next week to see the editorial quoted in *Scientific American*, “As the distinguished scientific journal *Nature* has observed...”. Later in life, during the ten years I spent writing editorials for the *New York Times*, I had many occasions to reflect on John’s advice. Of course, it wasn’t really a prescription for ignorance but for not being afraid to tackle hard subjects. I think.

What is the hardest thing about writing about science? That the prettiest ideas are the most perilous. It’s not that nature is deviously setting traps for us, but that scientists are optimists, the rigors of basic research having culled the pessimists at an early age. So everyone wants to believe that neat ideas, like gene therapy, or the Onyx-015 adenovirus that targets tumor cells, or cell therapy, will actually work. Scientists are skeptical by nature, but even they are not always skeptical enough.

What gave you the idea of your recent book, Before the Dawn? In writing stories about human population genetics, I saw that not only had DNA opened a rich new window into prehistory, but the many other disciplines bearing on the human past had also made great strides in recent years. Since specialists rarely write outside

their disciplines, it seemed a possibly useful contribution to write a book that would draw from all the relevant disciplines about the past, from primatology to historical linguistics, with genetics as the common thread to weave all these findings together into a coherent narrative. I was amazed at how much detail can now be filled in on the largely blank pages of human prehistory extending from 50,000 to 5,000 years ago, much of which one might think was utterly beyond recovery.

Were you surprised at the reaction to the book? Yes. The human past is a touchy subject because many people use it — quite misguidedly in my view — to reason from what was to what ought to be. You mustn't say people practised cannibalism in the past because that would justify cannibalism today. Despite its absurdity, this argument makes almost every attempt to reconstruct the past controversial.

In my book I tried to let the facts speak for themselves, a somewhat more original idea than it may sound because some writers about the deep past, like the otherwise very readable Jared Diamond, start with explicitly political premises and adduce facts to support them. I cannot see that this is a justifiable scientific procedure, the popularity of *Guns, Germs and Steel* notwithstanding. Having compiled my apolitical account, I figured the conclusions that had emerged would be about equally vexatious to the right and the left. But so far, which I hadn't expected, the book has had more attacks from the left, particularly for the *lèse-majesté* of saying our recent ancestors, far from being noble savages, were a lot more savage than we are.

What has been the reaction of the scientific community? Many people have been kind enough to tell me they liked the book, though I wasn't sure how to interpret the comment of one biologist who said he read it on nights when he couldn't get to sleep. I've been a little disappointed it

hasn't received more reviews from scientific journals because it has enough references for scientists to follow the technical background. Both *Nature* and *Science* assigned the book for review, but to dreary ideologues who assailed my failure to discover that political correctness has been evolution's guiding principle all along, though fortunately they managed to find no other errors. I think these journals would have served their readers better with apolitical reviews.

Do you enjoy talking to scientists? Yes. They are people doing interesting things and who have created a common way of looking at the world, a sort of meta-language that enables everyone to see a problem in the same way. The community is egalitarian in many ways, a meritocracy in others, with no barriers to entry save effort and intellect. Which is not to pretend that scientists are freer of human failings than any other profession. Think Woo-Suk Hwang, on the one hand, and the failure to detect his fraud on the other.

Do science journalists do a good job of reporting science to the public? Yes and no. In the past few decades coverage became a lot more professional, from a perhaps lowish start. But I now feel that we are seriously failing to capture the richness of progress, particularly in biology, for our readers. Post-genome biology is making greater strides than ever before. But the techniques and the findings are both complex, and really hard to explain to a general reader with little scientific knowledge. How do you say "chromatin remodeling complex" in newspaper English? It takes so much space there's room for little else, so many important developments never get reported. It's a temptation to blame readers for not being more familiar with the few basic concepts that give access to biology. But I will resist it.

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Quick guide

Sea turtles

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What is a sea turtle? Sea turtles belong to an ancient group of reptiles which has adapted to life in the ocean. In place of the clawed feet of their terrestrial counterparts, sea turtles have evolved large, paddle-like flippers for swimming. Their carapaces or 'shells' have become reduced and streamlined and no longer accommodate withdrawal of the limbs and head. The sea turtles are, nonetheless, limited by their land-dwelling ancestry; they breathe air and must nest on dry land.

Different systems of classification recognize seven or eight species of sea turtles, many of which are found worldwide throughout both tropical and temperate oceans. Most sea turtle species are well-known for their impressive long-distance migrations. The journey that loggerhead turtles (*Caretta caretta*) take from their nesting beaches in Japan to their feeding areas near Baja California and back is the longest migration known for a marine animal.

What sort of research is done on sea turtles? Most of the research on sea turtles falls into three broad categories. Much work has been done simply to document the life cycles and populations of these animals, an undertaking that presents special challenges because most of a turtle's life is spent below water. Such information has special importance in sea turtle conservation.

A second body of research involves the unusual physiological features of sea turtles. For example, leatherback turtles (*Dermodochelys coriacea*) are capable of diving to astonishing depths for an air-breathing animal, and they can also tolerate