

no critical distance from his own paradisiacal tropes, nor any apparent awareness that these ideas also have a history that matters.

If paradise lies in the past, it logically follows that it is lost in the present. Similarly, what is missing in the present constituted paradise in the past. This is history as elegy, and makes Nicholls's stories about catastrophic crashes in wildlife populations sound like the same "inevitable trajectory" of decline. At one point, he even apologizes for the "all too familiar pattern".

The problem is that such stories are not all the same. Some species are so successful today that they are an ecological nuisance — for example, mute swans, zebra mussels and white-tailed deer. Population size is not everything; it depends on habitat. Humans take up a lot of habitat, but we have also created new habitats, and many small populations can survive just fine. To his credit, Nicholls does not hide these complications, but he doesn't make much of them either. This makes *Paradise Found* the kind of history that undermines itself on close reading: so much complexity spills out of this bounteous tome that the narrative cannot hold it.

And that points to a much bigger problem. There is no new historical narrative to replace the simplistic story of shifting baselines and paradise lost. As a result, many ecologists are simply

abandoning history. This is not good: ecology is a historical science, and history is not just data for constructing a baseline for ecological models. It unpacks everything that goes into making the baselines and models themselves — ideas, scientific theories, social practices, industries, economies, ecological conditions and species that together shaped the environment at any given time in the past. Historical narratives also frame how we think about moving forward. So they must adjust to new information, open up new inquiries, force us to rethink data and question conventional wisdom.

In many places, we have only fragments of the abundant ecosystems that once existed, and only fragments of their history. The point is not to assemble those fragments as gospel, showing the way to a past to which we might return. The point is to put this history in conversation with ecological possibilities for the present and in the future. The devil, as they say, is in the details. And we might find some useful history there too, if we could just stop searching for paradise. ■

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movement". Groups that support intelligent design, doubt global warming, claim that vaccines cause autism, argue that cigarettes are safe, believe that the terrorist attacks of 11 September 2001 were an intelligence-agency plot or deny the Holocaust all use similar tactics.

Kalichman asserts that influential groups within the AIDS denialist movement include academics, pushers of 'quack' cures and supportive journalists. He describes the academics involved as "deranged and disgruntled university professors who turn to pseudoscience as a platform to gain attention", noting that pseudoscience may include "sightings of UFOs, alien abductions, astrology, psychic predictions ... [and] outlandish claims about the cause and cure of diseases".

Kalichman describes how quacks, like some of the academics involved, misrepresent their qualifications to create an illusion of authority. One, he claims, treats AIDS with hyperthermia, massage, oxygen, music, colour, gem, aroma, hypnosis, light and magnetic fields, each word followed by "therapy". Another allegedly distributed a product in Zambia called Tetrasil, a pesticide used in swimming pools, until the Zambian government intervened. Kalichman concludes that "taking money from the poor for bogus treatments is beyond criminal" and castigates journalist supporters of the denialist viewpoint for neglecting their professional obligations to verify facts and avoid sensationalist stories. In a powerful ending, Kalichman claims that extreme right-wing politics influences the AIDS denialist movement.

Professional institutions continue to tolerate the conduct of academic denialists, despite the suffering that has resulted. The standard excuse for inaction has been freedom of expression — the First Amendment of the United States Constitution. But free speech has recognized limits, and causing death is one. In 2006, as Kalichman records, a group of concerned scientists and activists created a website, AIDSTruth ([www.aidstruth.org](http://www.aidstruth.org)), to provide evidence to counter the denialists' words. The international legal and human-rights communities should now investigate the deadly impact of AIDS denialism. Action might have widespread benefits: Paul Offit's tour de force, *Autism's False Prophets*, claims that pseudoscientists and quacks have used similar tactics to parasitize the suffering of desperate parents by persuading them that vaccines cause autism. As Kalichman says, denialism "will not break until the public is educated to differentiate science from pseudoscience, facts from fraud". ■

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## The dangers of denying HIV

**Denying AIDS: Conspiracy Theories, Pseudoscience, and Human Tragedy**  
by Seth Kalichman

Springer: 2009. 205 pp. \$25

Inadequate health policies in South Africa have reportedly led to some 330,000 unnecessary AIDS deaths and a spike in infant mortality, according to estimates by South African and US researchers. This carnage exceeds the death toll in Darfur, yet it has received far less attention. Seth Kalichman, a US clinical psychologist, shows in *Denying AIDS* how words can kill. His marvellous book should be read alongside Nicoli Nattrass's *Mortal Combat*, covering similar ground but from the perspective of a South African.

The tragic events in South Africa have been exacerbated by AIDS 'denialists' who, Kalichman alleges, assert that HIV is harmless and that antiretroviral drugs are toxic. The author discusses the psychology of denialism, which he says is "the outright rejection of science and medicine". He recounts the history of an HIV-infected US woman whose daughter died from an AIDS-related disease, and



**South Africa's high rate of HIV infection has spurred protesters to demand action to treat it.**

who recently died herself, to demonstrate the downward path from "ordinary psychological denial to malignant denial to denialism". Kalichman dismisses denialists' attempts to portray themselves as intellectually honourable dissidents who question accepted wisdom. He draws clear distinctions between dissidence and denialism; the latter, he says, is merely a destructive attempt to undermine the science.

These attitudes are not unique to HIV. Denialism, notes Kalichman, is "partly an outgrowth of a more general anti-science and anti-medicine

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