

fictitious professor Diane Cassell, who studies sea-level change in the Maldives. Her data suggest that there is no rise — putting her at odds with her department and making her a target for death threats from an environmental activist group. She infuriates her colleagues even further when she defends her views on a television show hosted by BBC *Newsnight* presenter Jeremy Paxman — playing himself in a pre-recorded video cameo — leading to a dramatic turn of events.

Cassell also tutors a student with strong environmentalist leanings and helps her own daughter, a Greenpeace member, to battle anorexia. One section draws on the e-mail hacking controversy of November 2009 at the University of East Anglia, UK. Cassell's student hacks into another university's mainframe and discovers e-mails in which the author was keen to 'bury the downturn' — a reference to "hide the decline", a phrase in the real hacked e-mails that was seized upon by climate sceptics.

The problem with *The Heretic* is that although the 'science' presented is sloppy in places, its mouthpiece, Cassell, is likeable, witty and compelling — perhaps enough to convince the audience that the science is sound. Cassell argues, for instance, that the research on sea levels that went into reports from the Intergovernmental Panel on Climate Change "used a single tide gauge", rather than the many records that climate scientists actually collected. Interviewed after the play, environmental economist Dimitri Zenghelis of the London School of Economics, who consulted on *Greenland*, voiced concerns about the misinformation that Cassell's character helps to propagate.

Both plays do a good job of portraying their scientific protagonists as people. In *Greenland*, climate scientist Ray worries whether it is irresponsible to start a family given future climate risks. Cassell in *The Heretic* grapples with family and romantic dramas as well as her scientific dilemma. Zenghelis says one helpful aspect of *The Heretic* is that Cassell's character identifies "the problem of objective scientists without an agenda struggling to be heard". But in the real world, it is not the sceptics who have trouble getting their message out: "[*The Heretic*] got things the wrong way around," he says.

On the evidence of these two plays, climate science and theatre do not seem to be natural bedfellows. But like the Iraq War or the Enron financial scandal (both subjects of recent plays), complex topics that affect everyone should be dramatized. They just need to be accurate as well as entertaining. "People said to us, 'For God's sake make it an interesting play! Don't lecture us,'" Power admits of *Greenland*. In the end, *The Heretic* meets this target. *Greenland* falls short. ■

Kerri Smith edits Nature's podcasts.

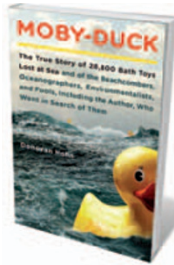
Books in brief



The New Cool: A Visionary Teacher, His FIRST Robotics Team, and the Ultimate Battle of Smarts

Neal Bascomb CROWN 352 pp. \$25 (2011)

Robot-building competitions are 'the new cool' in high schools across the United States. Writer Neal Bascomb follows a team of California teenagers and their inspirational physics teacher as they try to win the coveted FIRST (For Inspiration and Recognition of Science and Technology) contest, a nationwide annual project instigated 22 years ago by inventor Dean Kamen. In relating the team's travails, Bascomb shows how children are enthused by hands-on approaches to science and technology.



Moby-Duck: The True Story of 28,800 Bath Toys Lost at Sea and of the Beachcombers, Oceanographers, Environmentalists, and Fools, Including the Author, Who Went in Search of Them

Donovan Hohn VIKING 416 pp. \$27.95 (2011)

After hearing about thousands of plastic toys washed up on Alaskan shores after the loss of a container from a Chinese ship, journalist Donovan Hohn set out to learn about ocean currents. Retracing the journey of the plastic ducks, frogs and turtles across the Pacific, he reveals how floating markers have been used to map the circulation of the seas. And he questions the globalized economic system that sends cheap novelty products on such odysseys in the first place.



Driven to Extinction: The Impact of Climate Change on Biodiversity

Richard Pearson STERLING 264 pp. \$22.95 (2011)

Global warming will result in winners and losers among species, explains Richard Pearson, a biogeographer at the American Museum of Natural History in New York. Offering a balanced assessment of case studies of animals and ecosystems that are already affected by environmental degradation — such as Madagascan geckos, coral reefs and polar bears — he relates how climate change will sever links between organisms. This will lead to inevitable extinctions, he admits. But new niches will emerge in which other species might flourish.



The Beautiful Invisible: Creativity, Imagination, and Theoretical Physics

Giovanni Vignale OXFORD UNIVERSITY PRESS 320 pp. \$34.95 (2011)

Physics is much more than just dry mathematics, argues physicist Giovanni Vignale. Its abstract concepts, such as energy and atoms, are products of the imagination that call for a creative approach, and are best viewed as cultural hand-me-downs that have developed from philosophical ideas throughout the ages. In his thoughtful and wide-ranging book, Vignale explores the esoteric side of the discipline, which he sees as "the military academy of liberal arts" owing to its mix of rigour and creativity.



The Kaguya Lunar Atlas: The Moon in High Resolution

Motomaro Shirao and Charles A. Wood SPRINGER 174 pp. \$39.95 (2011)

Lunar landscapes take on a new realism in this atlas of photographs taken by the high-definition television camera aboard the Kaguya (SELENE) spacecraft, operated by the Japanese space agency JAXA. The oblique views, snapped by the low-flying probe from just 100 kilometres above the Moon's surface, show the terrain as it would be seen by astronauts descending to its surface, rather than the vertical views presented by other satellites.