

access to evidence for scientific knowledge. He borrows from the late US evolutionary biologist Stephen Jay Gould, who argued that the “need for direct witnessing is what separates scientific practice from religious faith”.

So films serve as the descendant of the theatrical public science lecture, such as those implemented in the nineteenth century by Britain’s Royal Institution, in which luminaries like Michael Faraday demonstrated experiments to a live audience. The public could verify the outcomes with their own eyes. Cinema can have a similar effect, even when the viewer is witnessing a simulated experiment on the screen.

Kirby also explores the concept of the “diegetic prototype” — inventions demonstrated in the fictional world that catalyse developments in the real world. For example, the imagined prototypes for rockets and lunar exploration presented in Fritz Lang’s 1929 film *Woman in the Moon* and the 1950 film *Destination Moon*, whose technical adviser was science-fiction writer Robert A. Heinlein, helped to lay the foundation for the political, public and scientific acceptance needed to move space endeavours forward.

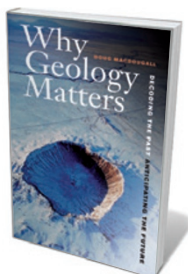
Yet, as most researchers are aware, science regularly suffers at the hands of a good story. From the extremes of weather to vaccines and autism, anecdote frequently trumps data. The response of the scientific community is often to seek new and better data. But on the landscape of knowledge, what society needs is not a better map, but a better description of how to navigate the terrain. Science is best conveyed to the public in a compelling narrative.

Love it or hate it, Hollywood remains influential. We may, as scientists, be disappointed that society prefers character over content. As Carl Sagan remarked in his 1996 book, *The Demon-Haunted World*: “if, for whatever reason, people dislike the stereotypical scientist, they are less likely to support science”. But a good on-screen portrayal of science and scientists allows us to incorporate valuable facts and ideas into entertaining stories. And as Kirby details, new mechanisms for collaboration are emerging. Over the past three years, the National Academy of Sciences’ Science and Entertainment Exchange (go.nature.com/pcxgsm) has connected film-makers with scientists to brainstorm about how to use good science to build a better story.

Lab Coats in Hollywood provides a framework for scientists to better understand how to influence good storytelling with accurate information. We don’t all wear lab coats, but a few more beakers behind the scenes could go a long way towards enhancing critical thinking in modern society. ■

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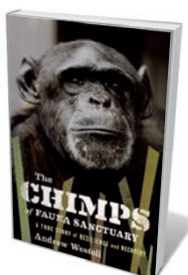
Books in brief



Why Geology Matters: Decoding the Past, Anticipating the Future

Doug Macdougall UNIVERSITY OF CALIFORNIA PRESS 304 pp. \$29.95 (2011)

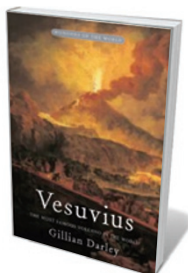
From mountain ranges to meteorite craters, the story of our planet is embedded in its rocks. In a wide-ranging and entertaining overview of the field, geologist Doug Macdougall explains how Earth scientists have unravelled the secrets of geological time, plate tectonics, volcanoes, earthquakes, past climates and the fossil record. He also muses on the role of geology in addressing pressing problems such as climate change and the continued provision of energy.



The Chimps of Fauna Sanctuary: A True Story of Resilience and Recovery

Andrew Westoll HOUGHTON MIFFLIN HARCOURT 288 pp. \$25 (2011)

Biologist-turned-writer Andrew Westoll relates his experience as a volunteer at Gloria Grow’s chimpanzee sanctuary near Montreal in Canada. In a vivid narrative, he describes how he got to know the rescued chimps. Many of them had come from a biomedical facility or were kept as pets, and some showed psychological problems as a result. He tells how the more time he spent with the animals, the more he learned about their behaviour and the stresses they endured in their captive lives.



Vesuvius: The Most Famous Volcano in The World

Gillian Darley PROFILE BOOKS 224 pp. £15.99 (2011)

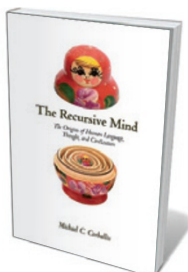
Looming over the bay of Naples, Vesuvius is the only active volcano on the European mainland. It has mesmerized locals and visitors alike for two millennia with its majestic beauty, geological treasure trove and vicious eruptions — although none has since matched the devastation of the explosion that destroyed Pompeii in AD 79. In an elegant exploration of the volcano’s allure, author Gillian Darley recounts how Vesuvius has inspired literature, imagery and science, from the first serious studies of volcanic activity during the Enlightenment to paintings by Andy Warhol.



Listed: Dispatches from America’s Endangered Species Act

Joe Roman HARVARD UNIVERSITY PRESS 368 pp. \$27.95 (2011)

In his tour of the places where rare species have stood in the way of dams and developments across the United States, ecologist and writer Joe Roman analyses the impact of the 1973 US Endangered Species Act. Using examples such as the whooping crane, North Atlantic right whale and the purple bankclimber — a freshwater mussel enmeshed in a water war with the city of Atlanta, Georgia — he argues that protecting biodiversity benefits economies and well-being alike, showing that species extinctions have a tangible impact on humans.



The Recursive Mind: The Origins of Human Language, Thought, and Civilization

Michael C. Corballis PRINCETON UNIVERSITY PRESS 288 pp. \$29.95 (2011)

What makes us human? Psychologist Michael Corballis argues that it is our ability to embed thoughts in other thoughts — known as recursion — rather than language that allows us to conceive of ourselves and others, and to witness the passing of time. He suggests that recursive minds were crucial to the survival of our Pleistocene ancestors and led to the emergence of societies, toolmaking and culture as well as communication.