

REVIEW

Forces of Nature: A Scientific Antidote to The Day After Tomorrow

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Do you cringe when watching the latest disaster movie? Not because of the drama, but because the science and the scientists bear little resemblance to the real thing?

Would you rather watch a movie that translates the wonder and excitement of Earth's natural forces onto the silver screen, so that people other than ourselves could see those raw forces for what they are? And perhaps learn a little about why they occur?

You can.

On the same weekend that Hollywood released its disaster movie, *The Day After Tomorrow*, to

thousands of theaters with very small screens, a different disaster movie called *Forces of Nature* appeared in just a few theaters with very large screens. In the Hollywood movie, we watch climate changing really rapidly (about the same time required to read your typical *Eos*), while the real attraction is a fictionalized tale of passionate heroism, with bits of bad science thrown in to torture scientists in the audience. *Forces of Nature*, instead, focuses on three real scientists, who, with real passion, study three real phenomena: a volcano erupting, an earthquake, and tornadoes.

Forces of Nature is a large format (often called IMAX®) movie produced by National

Geographic and Graphic Films, and sponsored in part by the U.S. National Science Foundation and Amica Insurance. Marie Edmonds of the Hawaii Volcano Observatory describes the Soufrière Hills volcano on the island of Montserrat, against the spectacular backdrop of the erupting volcano. Ross Stein of the U.S. Geological Survey discusses the current understanding of the North Anatolian Fault across Turkey in the context of the 17 August 1999 earthquake that destroyed the city of Izmit—complete with computer imagery of fault movements and stress propagating along the fault. Lastly, severe weather specialist Joshua Wurman, University of Oklahoma, attempts to record the birth of a tornado with Doppler radar through a combination of preparation, perseverance, timing, and luck.

In each segment, the movie mixes the right amount of dramatic imagery: real footage combined with computer-generated images to capture and retain viewers with short attention spans, while the scientists and narrator leaven in the science (movie actor Kevin Bacon narrates

in a nicely understated role). The blend of outstanding cinematography, stupendous natural events, and a cool mix of scientific description works. I am betting that most people will learn and retain what they learn about these phenomena despite themselves. Scientists in the audience can lean back and feel good.

National Geographic hosts a Web site (www.nationalgeographic.com/forcesofnature) that provides a preview of the movie, a few facts and exercises, lesson plans, and—very important—a list of cities and locations where the movie will be showing over the year. The list of theaters is expected to grow.

Forces of Nature may not be in your city the day after tomorrow, but go see it when you can. It is worth the wait.

—PETER FOLGER, AGU Outreach, Washington, D.C.