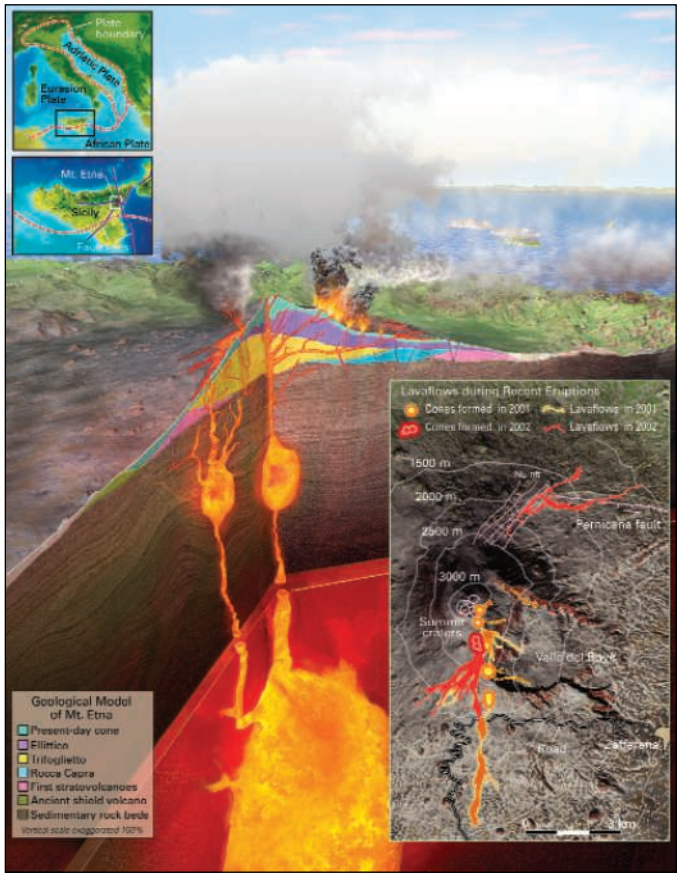
INFORMATIONAL GRAPHICS

MOUNT ETNA

David Fierstein,
David Fierstein Illustration, Santa Cruz, California



Science illustrator David Fierstein cuts to the core of one of the world's most unusual volcanoes in his illustration of Mount Etna. The image merges the latest scientific data with state-of-the-art 3D modeling software to give a comprehensive view of the volcano's rich and violent history.

Located on the east coast of Sicily, Mount Etna is Europe's largest volcano and one of the most productive in the world. Eruptions in the past 3 years alone have destroyed tourist complexes and threatened nearby towns. New evidence suggests that Mount Etna is growing increasingly violent and may someday rival Mount St. Helens and Pinatubo in ferocity.

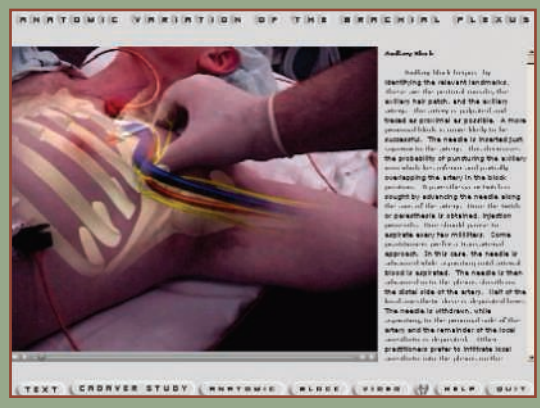
Fierstein's graphic documents the changing nature of the volcano by combining this new evidence with prior research. The insets at the upper left illustrate how the unique geological location of the volcano allows it to produce large volumes of magma, and the panel at the lower right provides details about recent lava flows and eruptions. The central image chronicles the evolution of Mount Etna from a relatively flat shield volcano to the mountainous cone that looms over the countryside today. Fierstein says the large, glowing magma pools in this image are the most salient part of the graphic, in that they highlight Mount Etna's hypothesized "dual plumbing system," which may give clues to the volcano's future activity.

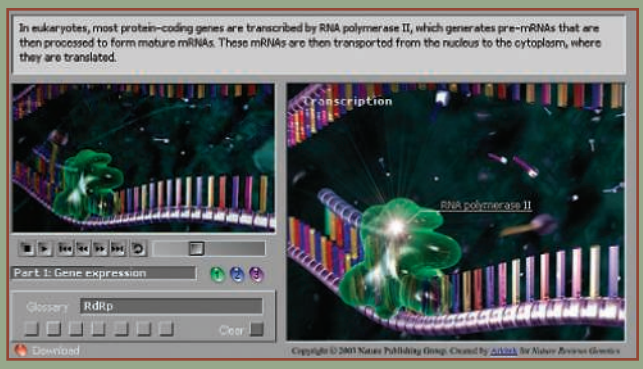
"This image is a great example of how to illustrate a complex set of relationships," says panel of judges member Thomas Lucas. Fellow panelist Boyce Rensberger agrees: "It shows you everything you'd want to know," he says, "except, perhaps, for the people screaming down below."

MULTIMEDIA—INTERACTIVE: HONORABLE MENTION

BRACHIAL PLEXUS

Doctors who inject anesthetic to numb selected body parts literally take a shot in the dark. Many of the body's nerves lie so deep that anesthesiologists must use unreliable cues, such as pulse and bone position, to guide them. But now physicians may be able to improve their accuracy by using anesthesiologist Paul Bigeleisen's interactive DVD. The presentation combines ultrasound, virtual-reality animation, and see-through videography to provide a detailed road map of the peripheral nervous system in a living patient. Bigeleisen, who practices at Strong Memorial Hospital in Rochester, New York, endeavored to make the tutorial visually appealing so users would look forward to learning the material.





RNAi—A BALLET OF MOLECULAR MACHINES

It slices, it dices, and it may someday turn genetic disease into a thing of the past. RNA interference is a complex set of cellular processes that converts a foreign piece of double-stranded RNA into a potent gene blocker. Science animators Doug Huff and Beth Anderson of Arkitek Studios in Seattle, Washington, shed light on these processes in a narrated interactive video that takes viewers inside a living cell as double-stranded RNA is introduced. Viewers can toggle among three different acts of the ballet and get more information on each of the machines from a pop-up glossary. The animators placed equal emphasis on beauty and detail, so that the video would both satisfy molecular biologists and capture the attention of a wide audience.

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