NONINTERACTIVE MEDIA
First Place

Return of the 17-Year Cicadas

Roger Hangarter, Indiana University, Bloomington

They're back. Plant biologist Roger Hangarter of Indiana University, Bloomington, knew the cicadas were coming, but he didn't intend to document the event—until they began to emerge, spectacularly, in his own backyard.

Cicadas have a life cycle of 13 to 17 years, most of which is spent underground. Related to aphids, the insects burrow into the ground almost as soon as they're born, living off the sap of trees for the majority of their existence. They surface in the last few weeks of life to transform into full adulthood, mate, lay eggs, and die. Six to 8 weeks later, the young cicadas hatch and head straight for the ground. Southern Indiana's May 2004 round of cicadas, whose lives are detailed in the winning entry, were part of "Brood X," which also surfaced in Maryland and Pennsylvania.

The Indiana cicadas were "absolutely mesmerizing," Hangarter says. They "really took over the community." They also took over his own teeming backyard, motivating him to capture the event on film for friends and family. Collaborating with Indiana University undergraduate and filmmaker Samuel Orr, Hangarter used time-lapse photography and real-time digital video to record the entire life cycle of the cicadas throughout the summer, also adding a soundtrack and descriptive text.

The resulting 5-minute film (whose original length is 17 minutes) was "a discrete, elegant package, beautifully photographed and very detailed," says panel of judges member Thomas Lucas.

& Honorable Mentions

Rip Currents: Nearshore Fundamentals

Steve Deyo, Kevin Fuell, Katharine Olson, Dan Ritter, and Seth Lamos, UCAR/COMET

Is it safe to go in the water? For the answer, weather forecasters can watch this animated guide to rip currents for the right—or wrong—combination of nearshore circulation and wave dynamics. Graphic artist Steve Deyo and colleagues at the University Corporation for Atmospheric Research/Cooperative Program for Operational Meteorology, Education, and Training in Boulder, Colorado, offer a broad range of audiences a three-dimensional peek into current formation processes both above and below the water's surface, amid computer-generated breaking waves and capping sea foam.

Forces of Nature

Leslie Ann Aldridge, National Geographic TV & Film

Deep under Istanbul, pressure is growing. In the depths of Turkey's North Anatolian fault line, tectonic plates shift and lock, periodically building and releasing stress as destructive energy. In a computer animation based on actual data and models for the fault line, filmmaker Leslie Ann Aldridge of National Geographic TV & Film in Washington, D.C., takes the viewer right down into the fault, recreating the forces behind 60 years of episodic earthquake history—and suggesting where the next earthquake will occur.

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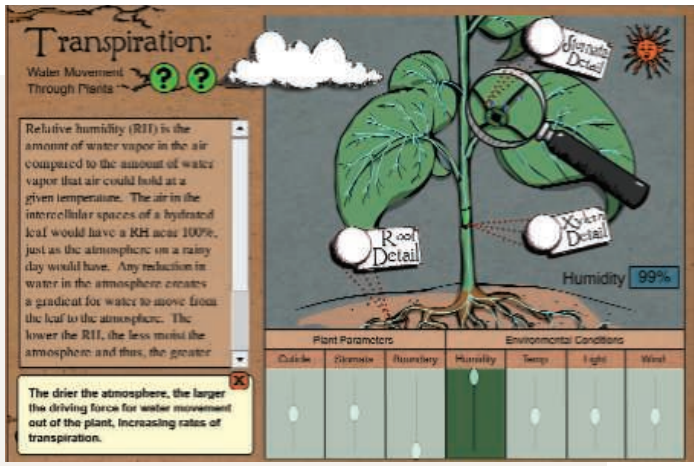
Honorable Mention

Transpiration: Water Movement Through Plants
Tracey M. Sterling, New Mexico State University

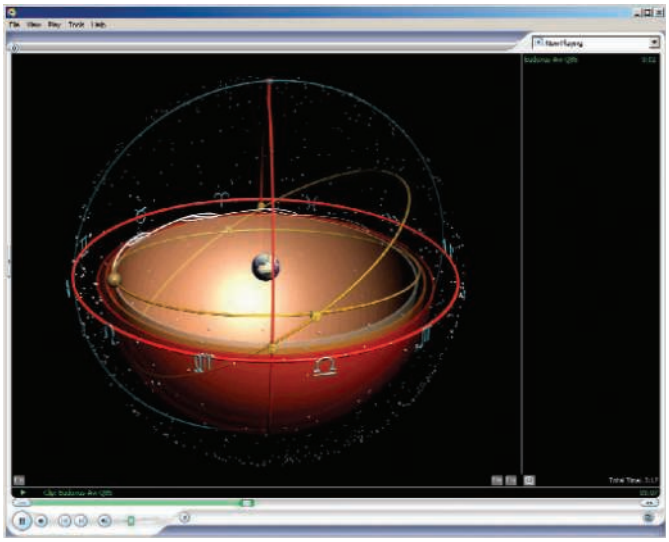
How does a garden grow? Transpiration, the transportation of water through plants from soil to leaves to atmosphere, is an essential part of the hydrologic cycle. From water absorption through a plant's roots to water vapor lost through its leaves, entomologist and plant pathologist Tracy Sterling of New Mexico State University and animator Matt Byrnes created a friendly, interactive activity with a playful design. The animation teaches plant biology basics and offers numerous interactive features, such as changes to environmental conditions that can impact the speed of water movement. And that affects how the garden will grow.



Noninteractive Honorable Mentions *cont.*

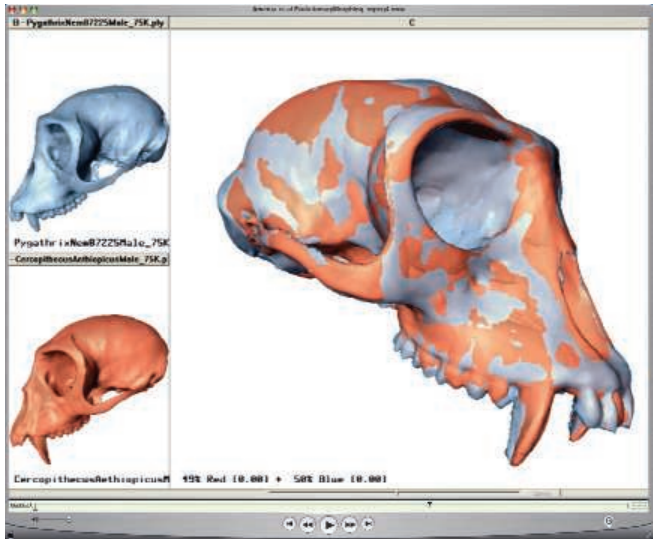
Planetary Motion From Eudoxus to Copernicus
Mogi Massimo Vicentini, Civico Planetario di Milano

Although the earliest astronomers took an Earth-centric view of the heavens, Italian graphic designer Mogi Massimo Vicentini puts the viewer at the center of a sweeping story of planetary motion. Planets rotate, oscillate, and appear to move backward as faulty ideas are rejected, until their motion is most satisfactorily explained by Copernicus's (and Kepler's) heliocentric model. Designed for general planetarium audiences at the Civico Planetario di Milano in Italy, the presentation is a twirling visual history of planetary exploration and time.



Evolutionary Morphing: Statistical Interpolation of Ancestral Morphology Along an Evolutionary Tree
Nina Amenta, University of California, Davis

Until the right bones are found, computer-visualized virtual fossils can fill in some evolutionary gaps. By precisely relating landmark points on one skull image to similar points on another, computer scientist Nina Amenta of the University of California, Davis, and colleagues calculate hypothetical, three-dimensional ancestors within an evolutionary tree. The resulting video is a transformative, graceful look into monkey morphology, culminating in the evolution of one common ancestor's cranium through five branches of descendents.



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Carolyn Gramling

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