

rotunda

VOL. 32 NO. 6 DECEMBER 2007

MEMBERS' NEWSLETTER



AMERICAN MUSEUM OF NATURAL HISTORY



Science Bulletins Go Global

“Today people expect information to be current, and they bring that expectation to a museum,” says Vivian Trakinski, Director of the Science Bulletins program at the American Museum of Natural History. A related Museum imperative, brought to the fore by the renovation of a series of permanent exhibition halls, is to present science as a dynamic, ongoing endeavor. The award-winning Science Bulletins fulfill both sets of expectations with dazzling high-definition video, mesmerizing



Photo caption to come. | Photo credit to come

time-lapse visualization, and good old storytelling.

By pairing the latest scientific research with visualizations based on satellite data, Science Bulletins show how scientists “do” science today. “The Bulletins are a direct fit with the Museum’s educational mission, which is to interpret and communicate scientific understanding of the natural world. The program is powerful because it really lets the science speak,” comments Ro Kinzler, Senior Director of the National Center for Science Literacy, Education, and Technology, which extends the resources of the Museum beyond its walls.

Taking visitors from the inner Earth to the edge of the universe

The Science Bulletins program was launched by the Department of Education when the Hall of Biodiversity

opened in 1997. Now four in number (Earth Bulletin, Bio Bulletin, Astro Bulletin, and the new Human Bulletin), each is shown in its respective hall on large plasma screens and touch-screen kiosks. Each Bulletin presents cutting-edge science in three formats: documentary feature stories, data visualizations, and biweekly news updates of science-related events and discoveries, all of which loop nonstop.

For the updates, a scientist and a writer-producer review a selection of scientific journals and other primary sources for relevant stories that can be effectively communicated within the format’s 90- to 120-second time frame. Recent updates document new hominid fossil finds in Kenya; the discovery of a billion-light-year-wide bubble in the expanding universe; and scars from summer wildfires outside Athens, Greece. Feature stories, which consist of five- to seven-minute documentary video segments, are selected through an editorial process that begins when the relevant Museum science department proposes topics. These scientists then confer with the production group and present the top contenders to an editorial board comprising curators and the provost of science.

Showing scientists at work in real time

To make the grade as a feature story, the science must be important, the public must be interested, and the logistics of video production have to be manageable. “These stories are an opportunity to show science in action, so we look for ones that are unfolding,” Trakinski explains. “For instance, for a week in July we flew around Alaska with eight or nine Earth scientists studying how tectonic activity and climate are interacting to create the St. Elias mountain range.” The team has been to the South Pole to cover how astrophysicists study the Cosmic Microwave Background, to the Greenland ice sheet for a story on rising sea levels, and to plenty of warmer places as well.

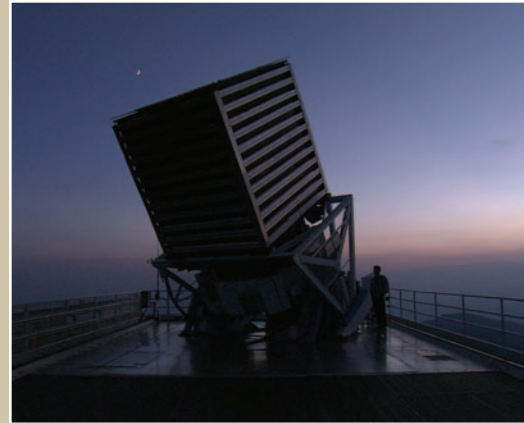


Photo caption to come. | Photo credit to come

Translating esoteric data into a shared visual language

The most significant change across the Bulletins has been the growing integration and visualization of satellite data—also a trend in science at large. The Data Viz component was introduced in 2002 with a two-and-a-half-minute visualization of changes to the ozone layer, which have been monitored continuously since 1979. Biogeographer Dr. Ned Gardiner points out, “a major advantage of these global data sets is the ability to visualize and depict the whole Earth.” Access to multiple views of the planet over time has revolutionized the way Earth and biodiversity scientists monitor our planet. For example, routine monitoring of global ocean temperature helps meteorologists predict future effects of El Niño and other climate cycles. Visualizations like this Earth Viz convey



Photo caption to come. | Photo credit to come

both the dynamic nature of scientific research and of Earth itself.

As the team’s Senior Geographic and Ecosystems Specialist, Gardiner works directly with other scientists to interpret the satellite and remote sensing data, then collaborates with the team’s animator to visualize it accurately and meaningfully. “Satellite data provide something that ecologists, biologists, and conservationists cannot replicate any other way: an image of the way humans are transforming ecosystems in every corner of the planet,” he says. “That is the dominant force of change for life on Earth, and people need to see it.”

Different disciplines call for different approaches

Astrophysicists, on the other hand, have always dealt in images rather than collecting samples or conducting experiments. Evidence consists of data about energy emitted by objects in space, which is then converted to high-resolution imagery. As a high-definition science program, AstroBulletins can present these images in rich detail.

When the Spitzer Hall of Human Origins was renovated, the team knew that remote sensing data would play a smaller role in depicting current research, “though we do have some data woven into the storytelling, because some scientists are using it to find fossils or make maps,” Trakinski points out. Since Science Bulletins can complement as well as augment the contents of a hall, the Museum decided that the brand new Human Bulletin should focus on health. The first feature is on avian flu and the second discusses stem cell research. A story about the evolution and origin of our species based on the discovery of fossils in a South African cave that are evidence of early human cognition is also in the pipeline.

Coming soon to a country not near you

The Science Bulletins program extends well beyond its four screens at the Museum. Subscriptions to single or multiple Bulletins and to some or all of their components are available as an automatically updated stream of high-definition content delivered online. The subscriber base has now grown to 41 informal science centers, including universities and colleges. A recent email from Bruce Marsh, a professor of Earth and Planetary Science at John Hopkins University, described how the Bulletins have become part of the entire department’s daily life. “We each drift by for updates, almost like turning on NPR for breakfast . . . [or] bring some chairs, get a coffee or a beer, turn up the sound, and settle in for a good session. We couldn’t live without it!”

Over the past four years, with support from NASA, the Museum’s Business Development department has worked hard to expand the reach of the Science Bulletins: the Bulletins can now be viewed in Australia, Canada, and Malaysia, and demos are available in Mandarin and Spanish. The Museum is now investigating ways for them to become increasingly independent. “This year we’re opening them up to collaboration, the way we’ve done with our special exhibitions,” explains Jan English, Assistant Director of Traveling Programs. Collaborators will have a role in shaping the material for their audiences, but the Museum will manage the process in New York.

Packed with essays, glossaries, and educational resources, the new Science Bulletins Web site (www.amnh.org/sciencebulletins/) features the program’s high-quality videos, which can be downloaded for free. As broadband access grows, these current science stories will reach not just students and visitors to informal science centers, but anyone with an internet connection.

Credit tk: The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

The Museum is now seeking new partners, in addition to the founding support provided by NASA, to continue the expansion of Science Bulletins. Sponsorship of this special program offers a unique opportunity to underscore a donor or company’s major commitment to and leadership in science and technology and science education for the public. The Museum’s Development Office would be happy to work with a potential donor or sponsor to create prominent acknowledgment in the credit loop of each of the four Science Bulletins at AMNH and all subscriber venues, as well as credit on the Science Bulletins Web site.

Science Bulletins offers an incomparable venue for translating and disseminating current scientific information to a broad public audience. Through its combination of spectacular imagery and cutting-edge content, the programs engage visitors across the country and around the world in the nature and scope of ongoing scientific discovery of the highest caliber. Please call Caralynn Sandorf in the Development Office at 212-769-5220 if you are interested in learning more about this special donor/sponsorship opportunity.



Photo caption to come. | Photo credit to come