



AMERICAN MUSEUM OF NATURAL HISTORY

Media Inquiries: Aubrey Gaby Miller, Department of Communications
212-496-3409; amiller@amnh.org
www.amnh.org

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THE AMERICAN MUSEUM OF NATURAL HISTORY ANNOUNCES *NATURE'S FURY: THE SCIENCE OF NATURAL DISASTERS*

**EXPLORING THE IMMENSE FORCES OF NATURE THAT SHAPE OUR PLANET
OPENS NOVEMBER 15, 2014**

NOTE: MEDIA PREVIEW—10 am, Wednesday, November 12

From earthquakes and volcanoes to tornadoes and hurricanes, nature's forces shape our dynamic planet and often endanger people around the world. Opening at the American Museum of Natural History on November 15, *Nature's Fury: The Science of Natural Disasters* will uncover the causes of these natural disasters and explore the consequences. The exhibition will also examine how individuals and communities cope and adapt in the aftermath of these events. The exhibition is overseen by Curator Edmond Mathez in the Museum's Division of Earth and Planetary Sciences. Interactive displays and animations will help visitors understand how these natural phenomena occur. In the exhibition, visitors can monitor earthquakes worldwide, in real time, manipulate a model earthquake fault, generate a virtual volcano, stand within the center of a roaring tornado, and watch the power of Hurricane Sandy via an interactive map of New York City. As visitors engage with and explore these interactive exhibits, they will learn how scientists are helping to make better predictions, to plan responses, and to prepare for future events. The exhibition will close on August 9, 2015.

The exhibition highlights the link between plate tectonics and volcanoes, and earthquakes, and tsunamis. Visitors will learn how Earth's crust is made up of vast rock plates in constant motion, grinding against each other as they move, and creating deep fissures called faults. Over time, immense amounts of strain build up, causing the plates to give way and the rocks on either side of a fault to slip past each other creating an earthquake.

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They will also learn how the great San Francisco quake of 1906 launched the serious study of earthquakes. Although quakes cannot yet be predicted with precision, geologists *can* calculate the probability of a quake happening in an area based on how often quakes have struck there in the past. By using the Global Positioning System (GPS) and thousands of seismometers around the world, they can study minute details of Earth's day-to-day movement to the millimeter. The exhibition will discuss the 2009 tsunami in Samoa, which occurred in the aftermath of an earthquake, and feature Museum artifacts from the Samoan àva ceremony. This ceremony brings together representatives of each of the families in a village to share the drink àva from a single bowl and cup; it reinforces the strong community bonds that characterize Samoan society and are essential to tsunami recovery.

The exhibition also explains the genesis of volcanoes. Massive volcanic eruptions can alter Earth's climate for years. For instance, the 1883 eruption of Krakatau sent a column of gas and ash an estimated 30 miles into the sky. Gases high in the atmosphere reacted with water vapor to form tiny particles that blocked sunlight, causing global temperatures to drop for several years. Although clearly hazardous to humans, volcanoes have also been harnessed for our own benefit. Volcanic soil is some of the most fertile in the world for agriculture and volcanoes can power our lives with geothermal energy. Included in the exhibition are Museum artifacts and amazing geological samples from the Mt. Pelée eruption of 1902 on the Caribbean island of Martinique. These astonishing items were collected by a scientist from the American Museum of Natural History, who was on one of the first ships to arrive after the eruption.

Violent destructive winds accompanied by a funnel-shaped cloud are called tornadoes. Exhibits within *Nature's Fury* will explore "Tornado Alley," an area covering eight states in the central United States where 75 percent of all tornadoes in the world take place. Tornadoes start from thunderstorms, and this area is a veritable thunderstorm factory with warm, humid air colliding with cool, dry air. As a result, "Tornado Alley," spawns more than 600 tornadoes every year. After a tornado, meteorologists look at the damage caused to estimate its wind speeds and assign it a numerical ranking of F0 through F5 (F5 being the strongest). The "F" stands for Fujita, the name of the tornado researcher, Tetsuya Theodore "Ted" Fujita, who developed the original scale in 1971. (Since 2007, an Enhanced Fujita (EF) Scale, which now accounts for variables such as the type and quality of a building's

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construction, has been used to rate the severity of tornadoes.)

Hurricanes, also known as cyclones or typhoons depending on where you live, are defined as rotating storms that form near the equator in the tropics and have winds of at least 74 miles per hour. Since the 1960s, satellite photos of cloud movement have helped track developing storms with infrared sensors revealing information about temperature and humidity. The interactive map of New York City exploring the power of Hurricane Sandy won't simply allow visitors to relive the storm but to understand why Sandy affected different areas of the city so differently, and how we might mitigate the effects of future storms.

In addition, the Museum is home to the Gottesman Hall of Planet Earth, which combines touchable rock specimens with computer interactives, video, and soundscapes to convey the power and beauty of planet Earth, and the Museum's Department of Earth and Planetary Sciences. Scientists in the department conduct research that explores the nature of terrestrial and planetary processes.

Nature's Fury: The Science of Natural Disasters was originally created by The Field Museum, Chicago, with additional content developed by the American Museum of Natural History (amnh.org).

Nature's Fury is proudly sponsored by **Travelers**.

AMERICAN MUSEUM OF NATURAL HISTORY (AMNH.ORG)

The American Museum of Natural History, founded in 1869, is one of the world's preeminent scientific, educational, and cultural institutions. The Museum encompasses 45 permanent exhibition halls, including the Rose Center for Earth and Space and the Hayden Planetarium, as well as galleries for temporary exhibitions. It is home to the Theodore Roosevelt Memorial, New York State's official memorial to its 33rd governor and the nation's 26th president, and a tribute to Roosevelt's enduring legacy of conservation. The Museum's five active research divisions and three cross-disciplinary centers support 200 scientists, whose work draws on a world-class permanent collection of more than 32 million specimens and artifacts, as well as specialized collections for frozen tissue and genomic and astrophysical data, and one of the largest natural history libraries in the Western Hemisphere. Through its Richard Gilder Graduate School, it is the only American museum

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authorized to grant the Ph.D. degree. In 2012, the Museum began offering a pilot Master of Arts in Teaching program with a specialization in Earth science. Approximately 5 million visitors from around the world came to the Museum last year, and its exhibitions and Space Shows can be seen in venues on five continents. The Museum's website and collection of apps for mobile devices extend its collections, exhibitions, and educational programs to millions more beyond its walls. Visit amnh.org for more information.

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