

EMBARGOED UNTIL THURSDAY, OCT. 24, 2019 AT 2 P.M. EDT

NOVA AND HHMI TANGLED BANK STUDIOS DOCUMENT EXTRAORDINARY FOSSIL DISCOVERY REVEALING HOW LIFE ON EARTH 66 MILLION YEARS AGO RECOVERED AFTER GIANT ASTEROID IMPACT

NOVA “RISE OF THE MAMMALS”

Premieres On-Air Wednesday, October 30, 2019 at 9 p.m. ET/8C on PBS

**Full film to Stream on pbs.org Thursday, October 24, 2019 at 2 p.m. ET/1C to Coincide with Science
Magazine Publication of Paper from the Denver Museum of Nature & Science**

Boston (Oct. 24, 2019)—66 million years ago, a giant asteroid struck Earth, wiping out the dinosaurs in a fiery global catastrophe, but what happened next? How did life rebound? **“Rise of the Mammals,”** a **NOVA production by HHMI Tangled Bank Studios for WGBH Boston**, chronicles the discovery of an astonishing collection of fossils by scientists from the **Denver Museum of Nature & Science**, revealing a strikingly detailed picture of how the world and life recovered after this cataclysmic event. Described in a peer-reviewed scientific paper published in this week’s issue of **Science magazine**, the unprecedented find—exceptionally preserved animal and plant fossils from the critical first million years after the asteroid impact—sheds astonishing light on how life resurged after Earth’s darkest days.

Timed with the publication of the scientific paper in Science magazine, NOVA “Rise of the Mammals” will begin streaming online at (<https://www.pbs.org/nova/video/rise-of-the-mammals/>) and across PBS platforms and mobile apps Thursday, October 24, 2019 at 2 p.m. ET/1C, followed by its broadcast premiere Wednesday, October 30, 2019 at 9 p.m. ET/8C on PBS.

Dr. Tyler Lyson, the Denver Museum of Nature & Science’s Curator of Vertebrate Paleontology and lead author of the Science magazine paper, and **Dr. Ian Miller**, the Museum’s Curator of Paleobotany and Director of Earth and Space Sciences, led the team that announced the discovery.

“This story about the recovery of life reminds us of the incredible tenacity of life on Earth. It also reveals a different kind of tenacity—that of the dogged persistence of the scientists and volunteers who worked so hard to make this discovery,” said **NOVA Co-Executive Producer Chris Schmidt**. “Now, thanks to them, we have a vivid picture of how our scorched planet came back to life.”

“NOVA is so proud to share this story with our viewers,” added **NOVA Co-Executive Producer Julia Cort**. “This film truly represents our mission to stoke curiosity and help people everywhere appreciate the role science plays in shaping our understanding of ourselves and the world we live in.”

“It’s not every day you get a phone call asking if you want to send a film crew to document the discovery of a lifetime, but when you get that chance, you take it,” said **Head of HHMI Tangled Bank Studios Sean B. Carroll**. “Telling the story of this momentous discovery has been a three-year odyssey that we hope will inspire viewers of all ages to realize that there is still so much to discover about our world.”

Dr. Lyson grew up in fossil-rich North Dakota and by his teens had become a seasoned dinosaur-hunter. As a child, he became fascinated by the mystery of the fate of the dinosaurs. There was a well-known pattern where dinosaurs were and where they weren't: above a certain boundary, there appeared to be no more dinosaurs. This boundary layer, he would later learn, was the mark of an event that changed the world forever—an asteroid slammed into the planet, blasted a crater 20 miles deep and more than 100 miles wide in the Yucatan Peninsula and showered the planet with molten rock and white-hot beads of glass. Creatures on the surface roasted, skies darkened, fires gave way to frost. During the aftermath, plants withered, forests collapsed, and all of the dinosaurs—except the birds—perished.

For years, Dr. Lyson and others searched for fossil remains of vertebrates close to the asteroid impact layer. They targeted the rock just above the boundary, with virtually no luck—until 2016. That summer, a moment of serendipity pointed the way to the fossils, which had been lying in plain sight. Inspired by a fossil that had been filed away in a drawer of the museum collection, he stopped looking for glinting bits of bone and instead zeroed in on egg-shaped rocks called “concretions.” This was a moment he called a “game changer.”

In one of the most dramatic sequences in the film, Dr. Lyson teams up with Dr. Ian Miller in the Corral Bluffs region of the Denver Basin outside of Colorado Springs, Colorado. Here, they crack open concretions—time capsules filled with clues. Inside are mammal skulls from the early generations of survivors of the mass extinction. Finding even a single skull from this era is incredibly rare. According to Dr. Lyson, “You could go your entire career as a paleontologist and not find a single skull from this time period.” In the months that follow, they unearth thousands of fossils—including plants, reptiles, and sixteen different mammal species.

What creatures had they unearthed? And how did they establish a foothold in what had been a planetary wasteland? Dr. Lyson and Dr. Miller team up with experts to piece together what the ecosystem would have looked like and what the animals may have really been like as living, breathing creatures.

The discovery adds powerful evidence to the idea that the resurrection of plant and animal life were intricately linked after the asteroid impact. Ingenious fossil sleuthing allowed the team to link millennia-long warming spells to global events, including massive volcanic eruptions where India is today. These events may have shaped ecosystems half a world away in a now vanished North America, brought to life with the help of the film's eye-opening animation.

“**Rise of the Mammals**” is a NOVA production by HHMI Tangled Bank Studios for WGBH Boston. Writer, Director, and Executive Producer is Geoff Luck. Executive Producers for HHMI Tangled Bank Studios are John Rubin and Sean B. Carroll. Executive Producer for NOVA is Chris Schmidt. NOVA Series Co-Executive Producers are Julia Cort and Chris Schmidt.

For photos and clips from the film, please contact Jennifer Welsh at NOVA/WGBH: 617.300.4382; jennifer_welsh@wgbh.org.

National corporate funding for **NOVA** is provided by Draper. Major funding for **NOVA** is provided by the David H. Koch Fund for Science, the Corporation for Public Broadcasting and PBS viewers.

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About NOVA

NOVA is the most popular primetime science series on American television, demystifying the scientific and technological concepts that shape and define our lives, our planet, and our universe. The PBS series is also one of the most widely distributed science programs around the world, and is a multimedia, multiplatform brand reaching more than 55 million Americans every year on TV and online. NOVA's important and inspiring stories of human ingenuity, exploration, and the quest for knowledge are regularly recognized with the industry's most prestigious awards. In addition, science educators across the country rely on NOVA for resources used in the classroom as well as in museums, libraries, and after-school programs. NOVA is a production of WGBH Boston; more information can be found at pbs.org/nova, or by following NOVA on Facebook, Twitter, or Instagram.

About HHMI Tangled Bank Studios

HHMI Tangled Bank Studios is a mission-driven production company established and funded by the Howard Hughes Medical Institute (HHMI) as an extension of its longstanding commitment to science education. The Institute is the largest private, nonprofit supporter of science education in the United States. HHMI Tangled Bank Studios' award-winning films address important contemporary issues and capture compelling stories of discovery across all branches of scientific inquiry. Recent films include Emmy award-winning "The Farthest – Voyager In Space," film festival favorite "The Serengeti Rules," which debuted on PBS/Nature in October, and "Inventing Tomorrow," which premiered at Sundance and aired on PBS POV in July. Broadcast productions include the Smithsonian Channel's "Mass Extinction: Life at the Brink," NOVA special "Vaccines—Calling the Shots," and the Emmy award-winning three-part PBS series "Your Inner Fish." HHMI Tangled Bank Studios extends the experience of its films with extensive outreach, promotion and education efforts. For more information, please visit www.tangledbankstudios.org.

About PBS

PBS, with nearly 350 member stations, offers all Americans the opportunity to explore new ideas and new worlds through television and digital content. Each month, PBS reaches nearly 100 million people through television and nearly 28 million people online, inviting them to experience the worlds of science, history, nature and public affairs; to hear diverse viewpoints; and to take front row seats to world-class drama and performances. PBS' broad array of programs has been consistently honored by the industry's most coveted award competitions. Teachers of children from pre-K through 12th grade turn to PBS for digital content and services that help bring classroom lessons to life. Decades of research confirms that PBS' premier children's media service, PBS KIDS, helps children build critical literacy, math and social-emotional skills, enabling them to find success in school and life. Delivered through member stations, PBS KIDS offers high-quality educational content on TV – including a new 24/7 channel, online at pbskids.org, via an array of mobile apps and in communities across America. More information about PBS is available at www.pbs.org, one of the leading dot-org websites on the internet, or by following [PBS on Twitter](#), [Facebook](#) or through our [apps for mobile and connected devices](#). Specific program information and updates for press are available at pbs.org/pressroom or by following [PBS Pressroom on Twitter](#).

About WGBH

WGBH Boston is America's pre-eminent public broadcaster and the largest producer of PBS content for TV and the web, including *Frontline*, *Nova*, *American Experience*, *Masterpiece*, *Antiques Roadshow*, *Arthur*, *Curious George* and more than a dozen other primetime, lifestyle, and children's series. WGBH also is a major supplier of programming for public radio, and oversees Public Radio International (PRI). As a leader in educational multimedia for the classroom, WGBH supplies content to PBS LearningMedia, a national broadband service for teachers and students. WGBH also is a pioneer in technologies and services that make media accessible to those with hearing or visual impairments. WGBH has been recognized with hundreds of honors. More info at www.wgbh.org.

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pbs.org/pressroom

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