Jezebel Productions presents

NO DINOSAURS IN HEAVEN

A new documentary film by Greta Schiller
(U.S.A., 2011, 53 min.)

www.nodinos.com
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SYNOPSIS

A new film about the Grand Canyon, Noah’s Flood, and the battle to keep science in and religion out of our public school science classrooms.

*No Dinosaurs in Heaven* explores the crisis in science literacy in America. The film weaves together two central strands: the problem of creationists who undermine the teaching of evolution in public schools with a stunning raft trip down the Grand Canyon, where the creationist and evolutionary explanations of this natural wonder are juxtaposed. Evolution versus creationism is framed through the lens of geology, biology, and the scientific method. The film exposes the tactics used by Christian fundamentalists to undermine the separation of church and state, argues why science education is crucial in a healthy democracy, and documents the ongoing struggle to keep pseudo-science out of the science classroom.

ABOUT THE FILM

“When science permeates everything from stem cell research to use of water, science education is crucial to a healthy democracy.” – *The New York Times*

*No Dinosaurs in Heaven* is a film essay that examines the hijacking of science education by religious fundamentalists, threatening the separation of church and state and dangerously undermining scientific literacy. The documentary weaves together two strands: an examination of the problem posed by creationists who earn science education degrees only to advocate anti-scientific beliefs in the classroom; and a visually stunning raft trip down the Grand Canyon, led by Dr. Eugenie Scott, that debunks creationist explanations for its formation. These two strands expose the fallacies in the "debate," manufactured by anti-science forces, that creationism is a valid scientific alternative to evolution.

Emmy Award-winning director (*Before Stonewall, Paris Was a Woman*) and science educator Greta Schiller uses her own experience—with a graduate school biology professor who refused to teach evolution—to expose the insidious effect that so-called “creationist science” has had on science education. *No Dinosaurs in Heaven* intelligently argues that we must steadfastly resist the encroachment of religion into public school science education, in the form of anti-evolution creationism, and that science literacy is crucial to a healthy democracy.
DIRECTOR’S STATEMENT

In the midst of a prolific career as a documentary filmmaker, I read an article in The Herald Tribune reporting that as many Americans believed the biblical story of the creation as accepted the theory of evolution. With a young daughter at home, I was looking for a second career that did not require so much travel and time away from her. So, returning to a childhood passion for science, I went back to school to earn a Masters of Science Education at The City College of New York.

Then, one day, while sitting in a graduate level biology class discussing what constitutes life, my Professor said, “Evolution has not been proven— it is just a theory. Those who compare the embryos of fish, chicken and humans are pushing propaganda for evolution.” Did I hear him correctly? I fired off an angry email to my classmates: how can we take seriously a man with beliefs so far from accepted scientific knowledge? My frustration with the lack of definitive action by the administration, and accusations from the professor charging me with racism and religious intolerance, led to the proverbial straw breaking the camel’s back.

The incident stuck in my mind as emblematic of the crisis in science education. The more research I did, the more motivated I became to make a film that explored the impact of the infiltration of religious fundamentalist teachers in science classes of all age groups. When did this start? How far and wide is the problem? Why do thousands of individuals hide their deepest religious beliefs in order to get degrees in a field of endeavor they seek to undermine? How did liberal education lingo, such as “encouraging critical thinking” and “teaching the controversy”, become rallying calls of the Creationist/Intelligent Design movement? As a lifelong liberal I was particularly disturbed by the incredible ignorance among otherwise well-educated people about the centrality of evolution to all the sciences.

Many of the precedent-setting battles over creationism in the science classroom are well documented, notably in the NOVA film “Judgment Day,” which recounts the recent landmark court case in which the Bush-appointed Judge Jones ruled: "Intelligent design is a thinly veiled attempt to introduce creationism into the public schools and as such violates the Establishment Clause separating state and religion.” But what has not yet been looked at are the much more subtle, insidious and even dangerous ways that science is being hijacked. From Louisiana to New
York City, narrow religious ideas coupled with liberal relativism create a climate in which non-scientific explanations for the natural world are tolerated.

Governor Bobby Jindal (R) of Louisiana recently signed an education bill that allows individual teachers to undermine the very definition of science, rattling its foundation. On a visit to the Grand Canyon National Park Service souvenir shop I saw books on sale that offer a biblical explanation for the formation of the Grand Canyon. In 2009, the President of the National Association of School Boards was Kenneth Willard, a member of the Kansas State Board of Education that denies the evidence for evolution. The Director of Science Education in Texas was fired for not remaining “neutral” on the question of creationism vs. evolution. And so on.

Oftentimes, students argue that science precepts violate their religious beliefs and, as such, learning about evolution violates their religious freedom. A recent poll of middle and high school science teachers finds that 57% of them tone down or eliminate evolution from their classes in fear of administrative or parental retribution. Another research study reveals that 20% of biology teachers outright deny the evidence for evolution. How can an ignorant cultural deluge drown out this overarching, highly validated scientific body of knowledge?

As a filmmaker I felt it was imperative that I make a film that weaves together, in a comprehensive, thought provoking visual essay, ideas about what science is, how it is taught, why it can be celebrated as a creative human endeavor and why it is crucial that evolution is put front and center of science education. Filmed in the public schools of New York City and the stunningly beautiful Grand Canyon, this is a story for anyone interested in one of the most important issues of our time.

**PRODUCTION NOTES**

**4,000 or 4 Billion: You Decide.**

I had been dreaming of a film shoot in the Grand Canyon with the National Center for Science Education for over a year. When Dr. Eugenie Scott sent me an email in June 2009 saying the group agreed to let us in on the journey to the canyon core I forwarded the email on to Octavio Warnock-Graham, project cinematographer, asking if he would come along on spec. The electrons sped back to me with a loud, “Yes!” As he began to draw up a gear list, I began to think about finding a third crew member. When a cancellation opened up a place on the trip, David Behl, a still photographer who had worked on the project when we filmed interviews in NYC’s Central Park, signed up. I don’t think he intended to become a full fledged crew member, but as the three of us scrambled to pack the gear into water tight boxes, packing and unpacking, creating self contained shooting kits in cases labeled Itchy and Scratchy, it became obvious that David was central to our endeavor. Octavio trained David up as a boom/sound mixer and we were set to go. With me on second camera we were a high-def camera crew of two with a soundman and still photographer.
Eight days on a raft with no electricity posed a problem: we needed to recharge camera batteries every day and have power to run my laptop and hard drives for data card downloads. Octavio came up with a brilliant solution, utilizing pretty basic applied science: solar panels. Richard at Moki Mac, the outfitters, was game to the idea of allowing us to tie solar panels to the raft. Although Octavio tested the solar panels in NYC and felt confident they would provide the power we needed, we could not be 100% sure until we got onto the river.

Melissa Cahill, Associate Producer, organized an event at the Ms. Foundation to screen some footage “in the can” and get feedback from attendees, including one of our central characters: a biology teacher in an East Harlem High School. The gathering was a great way for me to present my ideas to supporters, field questions and energize myself for the trip. With this core group of supporters, we raised enough money from this event and on line donations to fund the solar panels.

We hit the rafts on July 2nd, barely coming up for air or food for the next eight days. Working conditions were grueling — hot and very dry — so dry that sweat evaporated before you could see or feel it! These are the conditions that create dehydration. Our fabulous riverman chanted a mantra, “Drink water, drink Gatorade” — but nothing prepared us for how much liquid that actually meant. For those of us who were not accustomed to these conditions we learned a lot about how our bodies adapt to extreme conditions — some more rapidly than others.

The physical challenges of the Grand Canyon raft trip were later matched by creative challenges in the post-production stage: how to interweave the
documentation of that journey with the New York City story of my discovering a creationist professor in my science education class. I worked closely for months with my long-time collaborator Andrea Weiss, the film’s editor, to figure out the structure and rhythm. The music was crucial in helping us knit the whole film together and give it the tone and feel we were looking for. The great composer Paul Winter had actually recorded an album at the bottom of the Grand Canyon (and generously allowed us to use his music for much less than the going licensing rate) — once we incorporated it, the rough edit was really starting to work as a film. After feedback from trusted colleagues and several fresh starts, I think we smoothly integrated these two stories into a film that is greater than the sum of its parts.

—Greta Schiller, Producer/Director

FILMMAKER BIOGRAPHIES

Greta Schiller, Producer/Director

Greta Schiller is an internationally renowned independent director and producer of documentaries, as well as, more recently, a science educator. All Movie Guide writes “Director Greta Schiller has traveled the world making extensively researched and highly informative films.” Her career was launched in 1984 with the theatrical release and PBS broadcast of her first feature documentary film, Before Stonewall. The film premiered in the Berlin International Film Festival and was showcased in over 75 film festivals worldwide. Now considered a classic, Before Stonewall won two Emmy Awards. Time Out, London, called it: “A near perfect blend of personal story and historical archive.”

In 1984, Greta Schiller co-founded Jezebel Productions, a London/ New York company. With Andrea Weiss, she produced and directed a trilogy of films about women in jazz: International Sweethearts of Rhythm, Tiny and Ruby: Hell Divin’ Women and Maxine Sullivan: Love to be in Love, all co-productions with Channel Four Television in Great Britain. The Atlantic Journal wrote that International Sweethearts of Rhythm “makes you glad documentaries were invented.” The New York Times called it “a delightful trip down memory lane.”

With funds from Channel Four in England and ITVS/PBS, she wrote and directed a short fiction film Woman Of The Wolf starring Alex Kingston (of television’s ER). It played on the festival circuit and was broadcast nationally in the U.S. and U.K.

Greta’s highly acclaimed feature-length documentary, Paris Was a Woman, premiered at the London and Berlin Film Festivals. The film went on to win many awards at international film festivals. It was released theatrically in the U.S., Germany, Spain and Great Britain, breaking house records in several cities. The film was broadcast in 16 countries.
In 2000, Greta produced *Escape To Life: The Erika and Klaus Mann Story*, with funds from the Arts Council of England, NY Council on the Humanities, Arte/ZDF, Hamburg Film Fund, YLE TV2, and The Media Programme. Prior to that she produced and directed *The Man Who Drove With Mandela*, commissioned by Channel 4 UK, the Corporation for Public Broadcasting, AVRO, Yle TV2, The British Film Fund, SABC, and The London Production Fund. Featuring Corin Redgrave in a tour de force one-man show, the film won the Teddy Bear Award for Best Documentary at the Berlin International Film Festival.

Greta subsequently directed *I Live At Ground Zero*, broadcast over German and French television, which offers a child’s eye view on September 11th, and *Recall Florida* about the recent campaign of Janet Reno for Governor of Florida.

Greta was the first recipient of the US/UK Fulbright Arts Fellowship in Film. She has been a recipient of grants from the NEA, NYSCA, NEH, New York Foundation for the Arts, London Production Fund, European Media Fund and The Arts Council of England, among others. She holds a BFA in Film/Video from the City College of New York.

In 2007, Greta earned an MA in Science Education, also from The City College of New York. She has taught informal science-by-inquiry classes for the Central Park Conservancy, The After-School Corporation (TASC) and the Audubon Society, and has done professional development for science teacher training programs.

**Octavio Warnock-Graham, Cinematographer**

Octavio Warnock-Graham is a documentary filmmaker with experience as a cinematographer, director, and producer. In 2005, while earning an MFA in film production, he shot *6 AM*, a Student Academy Award winning film. In addition he has earned cinematography credits on several documentaries including Jezebel Productions’ *U.N. Fever*. In 2007, his master’s thesis film, *Silences*, won best documentary in 5 national festivals, was a student Oscar finalist and was selected as best documentary in the College Television Awards. Currently, Octavio has started his own production company, Octave Films, produces documentary segments for CUNY-TV, and teaches video production at the City College of New York.

**Andrea Weiss, Editor**

Andrea Weiss is an internationally recognized documentary filmmaker and co-founder, with Greta Schiller, of Jezebel Productions. Her newest film, *U.N. Fever*, following three teams of college students competing in the international Model U.N. conference, was released in 2008. She is the co-writer/director of *Escape To Life*, which premiered in the 2001 Rotterdam and Berlin Film Festivals followed by a European theatrical and television release. Her previous film credits include *Recall Florida, I Live At Ground Zero, Seed Of Sarah, Paris Was A Woman, A Bit Of Scarlet,*

Andrea has been awarded fellowships from the National Endowment for the Humanities, National Endowment for the Arts, New York State Council on the Arts, and New York Foundation for the Arts. She has taught at the International Film and Photo Workshops in Rockport, Maine, New York University, and the National Film and Television School of Great Britain. She holds a Ph.D. in History and currently is Professor of Film/Video and Chair of the Department of Media and Communication Arts at the City College of New York.

Paul Winter, Composer

Paul Winter's journey started in Altoona, Pennsylvania, where he began playing drums, piano and clarinet at the age of five. In 1962 the Paul Winter Sextet was sent by the U.S. State Department on a six-month tour of twenty-three countries of Latin America which affected Winter in many ways, proving to be a true exchange of musical and social ideas. His Sextet became one of the first groups to assimilate the syncopations of Brazil’s bossa nova into its sound and later, at the invitation of Jackie Kennedy, it became the first jazz group to officially perform at the White House.

Winner of four Grammy Awards and six Grammy nominations, Paul Winter has performed over 2,000 concerts in major concert halls of the Americas, Europe and Asia, and in such diverse places as the White House, the Grand Canyon, the Negev Desert in Israel and the palace of the Crown Prince of Japan. In recognition of his musical contributions to the environment, Winter has received a Global 500 Award from the United Nations, the Award of Excellence from the United Nations Environment Program, the Joseph Wood Krutch Medal for service to animals from the United States Humane Society, and the Peace Abbey’s Courage of Conscience Award, among others.

CAST BIOGRAPHIES

Dr. Eugenie Scott, Ph.D.

Eugenie Scott, a former university professor, is the Executive Director of The National Center for Science Education. She has been both a researcher and an activist in the creationism/evolution controversy for over twenty-five years, and has addressed many components of this controversy, including educational, legal, scientific, religious, and social issues. She has received national recognition for her NCSE activities, including awards from scientific societies, educational societies, skeptics groups, and humanist groups. She holds eight honorary degrees from
McGill, Rutgers, Mt. Holyoke, the University of New Mexico, Ohio State, the University of Wisconsin-Milwaukee, Colorado College, and the University of Missouri-Columbia. Scott is the author of *Evolution vs. Creationism* and co-editor, with Glenn Branch, of *Not in Our Classrooms: Why Intelligent Design Is Wrong for Our Schools*.

**Steve Newton**

Steve Newton is the Programs and Policy Director of the National Center for Science Education. He first joined NCSE as a Public Information Project Director in the summer of 2008. He received a B.A. in History from UC Berkeley, with an emphasis in modern German history and early 20th century pseudoscientific movements (eugenics, forced sterilization programs). Switching gears completely, Steven then completed an M.S. in Geology from CSU Hayward, with an emphasis in paleoclimatology. Following graduation, Steven taught geology and oceanography as an adjunct faculty member at a number of Bay Area colleges, where he developed courses in the History of Science and the Geology of the National Parks. In Steven's spare 15 minutes/week (divided equally into 2:08 minute blocks per day), he enjoys racing sailboats and sculpting in marble and bronze.

**Rebecca Mattison, Ph.D.**

Rebecca Mattison is a vertebrate paleontologist interested in birds and dinosaurs. At Wellesley College she teaches labs in both the Geology department and the Biology department. Her Ph.D. dissertation was on avian hindlimb locomotion differences that correlate with lifestyles rather than with phylogeny. She used a combination of anatomical differences and statistical analysis to associate certain morphologies with varying locomotion habits of non-passerine birds. Her field work is more geology related: she is working as a sedimentologist for a large multi-institutional (Museum of the Rockies, U.C. Berkeley, U. North Dakota, Hobart-William Smith, Wellesley) multi-faceted (vertebrate paleo, invertebrate paleo, paleobotany, taphonomy, sedimentology, paleo climate) project, whose goal is to reconstruct the changes in all of the above throughout the final 3 million years or so of the Mesozoic Era.

**Femi Otulaja, Ph.D.**

Femi Otulaja received his Ph.D. in Science Education at the City University of New York. His dissertation, completed in 2010, was on "Using Cogenerative Dialogue to Afford the Learning of Biology in an Urban High School.” While completing his Ph.D. he was an adjunct professor in the School of Education at the City College of New York, where he refused to teach evolution to his students, a classroom of science teachers. He is currently a Postdoctoral Research Fellow at the Marang Center for Math & Science Education, Wits School of Education, Division of Science & Technology Education, University of the Witwatersrand, South Africa.
Rob Olazagasti

Rob has been teaching in New York City since 2003. Prior to teaching in the city, he worked in a small school in Kawangware, Kenya. He is currently the sixth grade Science teacher at School of the Future. He is a graduate of Union College, with a B.A. in Art History / Fine Arts, and holds a masters degree from The City College of New York in Science Education. His interests include (but by no means are limited to) photography, painting, illustration, singing, snow skiing, biking, reading, and playing with his dogs, Diego and Jack.

Dr. Alan Gishlick

“Gish” is a vertebrate paleontologist and is former Post Doctoral Scholar of the National Center for Science Education in Oakland, CA. His research interests include functional transitions in evolution—particularly in the origin of avian flight, the reconstruction of soft anatomy in fossils, systematics, the teaching of the history of life, and the interface of science, art, and religion.
FAQs

What was your inspiration or motivation for making the film?

While enrolled in a Masters of Science Education program, I discovered my biology professor was actually a creationist that denied evolution and refused to teach it—in one of the world’s great metropolitan cities, New York. Perhaps even more startling than hearing him say, “Evolution has not been proven, it is just a theory,” was the resulting low level of discourse from both students and administration, after he had been exposed. This firsthand experience, along with my deep, long-standing interest in the natural world, and my distress in witnessing our increasing alienation from it, inspired me to make this film. I find it untenable in the 21st Century that in our public discourse: faith is posited against reason.

How were you able to fund the film?

From the very beginning we knew this would be a truly independent film, funded by small foundations, individual contributors, and sweat equity. We were fortunate to get a grant from the Suffolk Film Commission, which really got the project off the ground. Jezebel Productions is a nonprofit company, and many generous individuals who believe in the importance of science education and the separation of church and state gave small donations that collectively enabled us to finish the film.

How did you decide how much science to include in the film without turning off potential audiences?

In terms of content, one of the biggest challenges was finding just the right amount of science that the non-science audience would be able to follow, with just the right amount of the political/social content for the science audience to understand why they need to be vigilant. I wanted all potential audiences of the film to become aware of the euphemisms and strategies that extreme religious groups are using to attack the domain of science. Not just evolution, but increasingly global warming is a target.

I struggled in the edit room with interviews, animation, and archive footage but I felt the piece needed a visual storyline to illustrate what science is and most importantly how science is done. I did not want to talk “at” the audience or tell what science is. I am a visual person, a filmmaker, not a journalist or a magazine-show producer, so the story needs to be found in the footage. And, Bingo! Why not the Grand Canyon raft trip?

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My encounter with a creationist science teacher is repeated every day in some way across the country. This is not only because of the lack of quality science education at all levels, but also because of a highly organized and well financed effort to undermine science education programs, to use school boards to manipulate standards for sectarian ends, or efforts by individuals to obtain teaching certification in order to “teach both sides” or “challenges to evolution and global warming” with degree credentials.

Education schools are the gatekeepers of quality, standards, and authenticity. They must be alert to this insidious and dangerous threat.

**How long did the project take?**

I first encountered Femi Otulaja in 2005, and it smoldered in me that he was allowed to teach science when he didn’t accept one of its fundamental tenets. I started looking into this phenomenon of creationists teaching science, and realized this was far from an isolated incident. The idea for a film percolated in my head for a while before I actually started the research and pre-production. In 2007, I went to Hampshire College to hear Dr. Eugenie Scott give a lecture, and it became clear that night that she would have to be a central character. In the summer of 2008 we interviewed my classmates and former professor to document their recollections. When I got approval in 2009 from the National Center for Science Education to be the first documentarian allowed on their “two theories raft trip” into the Grand Canyon, the film really took shape. It was another year and half until it was completed.

**What has happened to Femi Otulaja since the film was completed?**

Following the incident recounted in the film, Femi Otulaja’s adjunct teaching position at The City College of New York was not renewed, but he still was allowed to teach science on other college campuses while he finished his Ph.D. at the City University of New York. Now he is a Postdoctoral Research Fellow at the University of the Witwatersrand in South Africa. His is only one of many stories I’ve heard of creationists accruing science education credentials and teaching science unchallenged. He is the only one I personally encountered, but creationists are clearly exploiting the crisis in science education and entering classrooms and science education programs in order to promote their own religious agenda. Science teacher education programs should now ask potential students and faculty how they will teach the unifying theory of evolution rather than simply assuming that they will.
Do you have any practical suggestions for what I can do?

We encourage individuals to monitor their local and state school boards, a frequent target of creationist activists, many of whom have managed to gain control of school boards in communities across the country. Make sure they are not promoting “teach both sides” and other euphemisms for creationism. If they are, bring them to the attention of the National Center for Science Education, which can help mount an effective response. Concerned individuals can join and/or make donations to the National Center for Science Education, National Science Teachers Association, and Americans for the Separation of Church and State, as well as state and local grassroots organizations. Of course we would love for you to ask your local library, high school and university to purchase *No Dinosaurs in Heaven* and organize local screenings to raise awareness in your community.