



FOUNTAIN HILLS DARK SKY FESTIVAL

PRESENTATIONS

The Impact on Wildlife of Artificial Light at Night: Light Has a Dark Side

There is increasing evidence that artificial light at night has pervasive effects on wildlife including aspects of development during early life, immunity, behavior, seasonal functions, and migration. Collectively, these effects have the potential to disrupt natural cycles and to negatively affect wildlife populations. The presentation will provide an overview of recent scientific research related to the diversity of artificial light-at-night effects in a variety of wild organisms ranging from insects to mammals.

DR. PIERRE DEVICHE

About the Presenter: Dr. Pierre Deviche is a Professor of Environmental Physiology at Arizona State University. He studied in Belgium, did post-doctoral work in Germany, and has published 120 peer-reviewed papers and 10 book chapters. His teachings and research focus on the effects of environmental, behavioral, and biological influences on wildlife ranging from insects to mammals. He currently chairs multiple ASU committees, serves on a number of editorial boards, and conducts manuscript and grant reviews for journals and agencies based in the U.S. and abroad.

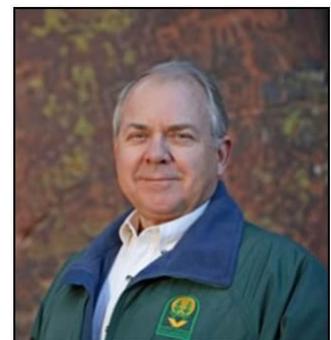


From Sun Rise to Meteor Falls: Cultural Astronomy of the Prehistoric Southwest

Throughout history, the ability of a people to survive and thrive has been tied to environmental conditions. The skill to predict the climatic change of the seasons was an essential element in the ability to “control” those conditions. Seasonal calendars thus became the foundation of early cultures: hunting and gathering, planting and harvesting, worshiping and celebrating were activities dictated by specific times of the year. In addition, celestial events such as eclipses and falling stars would have profound effects on belief systems.

KENNETH J. ZOLL

About the Presenter: Ken is currently the Executive Director of the Verde Valley Archaeology Center and Museum and is a certified instructor in cultural astronomy with the Arizona Archaeological Society. He holds B.S. and M.B.A. degrees from Loyola University of Chicago. After 35 years of Federal service in Chicago and Washington, D.C., including assignments as a Chief Information Officer and an appointment to a presidential advisory commission for President George H.W.



Bush, he retired in Sedona and developed a passion for ancient Native American astronomy practices. He has authored several books, including *Sinagua Sunwatcher*, *Understanding the Rock Art of Sedona and the Verde Valley*, and *Heart of the Sky: Ancient Astronomy Practices in Central Arizona*.

A Planet, By Any Other Name:

The Recent History of Pluto

The “demotion” of Pluto to a dwarf planet, combined with the spectacular 2015 flyby of NASA’s New Horizons mission, has ignited intense public interest in this small and distant world. Besides sharing fantastic images of this remote, Kuiper Belt object that was discovered in 1930 at the Lowell Observatory in Flagstaff, we’ll take a look at what we’ve learned about Pluto from New Horizons, discuss what we mean by “planet,” and cover how scientific classification works (or ought to work).

DR. JEFFREY HALL

About the Presenter: Dr. Jeffrey Hall, Director of Lowell Observatory has a B.A. in Physics from Johns Hopkins University and Ph.D. in Astronomy and Astrophysics from Penn State. He joined the staff at Lowell in 1992 as a postdoctoral research fellow, specializing in variations of the Sun and Sun-like stars and solar effects on terrestrial climate. He has served as the Director of Lowell Observatory since 2010 and presently serves as chair of the American Astronomical Society’s committee on Light Pollution, Radio Interference, and Space Debris. He serves as a member of Flagstaff’s leadership group, the Northern Arizona Leadership Alliance, and is a former member of the Board of Directors of the Flagstaff Symphony Orchestra.



A Magical Night Sky Masterpiece:

The 150,000 Mile Journey That Created a Stunning, Award-Winning Visual Experience

After 150,000 miles traveled and 3,000,000 pictures taken, there are not enough superlatives to describe the stunning visuals that Harun Mehmedinovic and Gavin Heffernan captured for the SKYGLOW project. These amazing, award-winning astrophotography images and time-lapse videos support their discussion and stories about North America’s remaining magnificent night skies and the grave threat of light pollution to our fragile environment. SKYGLOW journeys through the history and mythology of celestial observation, the proliferation of electrical outdoor lighting that spurred the rise of the phenomenon known as “skyglow,” and the Dark Sky Movement that’s fighting to reclaim the night skies.

HARUN MEHMEDINOVIC

About the Presenter: Harun Mehmedinovic earned a Bachelor of Arts degree at UCLA, where he studied screenwriting and theater directing, and a Master of Fine Arts degree in Film Directing from the American Film Institute. He is the co-creator of Skyglow Project, and has contributed photographs and videos to National Geographic, Vogue Italia, Astronomy Magazine, BBC Travel, and Discovery Science. His photography has been featured in many media outlets and his videos featured at events such as The Rolling Stones concerts and in productions such as the National Park Service’s “100 years” centennial video. Recently, Harun has begun work as the cinematographer for *Ice on Fire*, a Leonardo DiCaprio-produced documentary for HBO.

GAVIN HEFFERNAN

About the Presenter: Gavin Heffernan is a Canadian filmmaker, photographer, and screenwriter and is a graduate of McGill University and the American Film Institute. In addition to his recent notable credits as a

screenwriter for movies including *The Taking of Deborah Logan* and *Paranormal Activity: The Ghost Dimension*, Gavin is known for directing experimental visual works, including concert visuals for The Rolling Stones and Pink Floyd's Roger Waters. Heffernan's time-lapse art has been featured on BBC Earth, the National Park Service's "100 Years" Centennial Video, and many other press and TV outlets, including The New York Times, CNN, TIME Magazine, National Geographic, CBS News, and Wired, among others. Borrego Springs, California named the 2014 edition of their annual town festival after Heffernan's "Borrego Stardance" astro time-lapse and October 25 was subsequently named "Gavin Heffernan Day" in San Diego County by Senator Joel Anderson.