



# Great Basin National Park Foundation

## 2019 Annual Report

### FOUNDER

Bonnie Bryan  
(1939-2016)

Senator Harry Reid,  
Honorary Director

Dave Tilford,  
Board Emeritus

Mary Simmons,  
Board Emeritus

### BOARD OF DIRECTORS

Briget Eastep  
*Chair*  
Steven Brown  
*Vice Chair*  
Robert Morrill  
*Secretary*  
Jeremy Reichenberg  
*Treasurer*  
Kenji Hakuta  
*Education & Outreach Chair*  
John Kenney  
*GBO Operations Chair*  
Senator Richard Bryan  
Rebecca Mills  
Mike Niggli  
Senator Julia Ratti  
Alicia Reban  
Kevin Robison  
Melodi Rodrigue

### ADVISORY BOARD

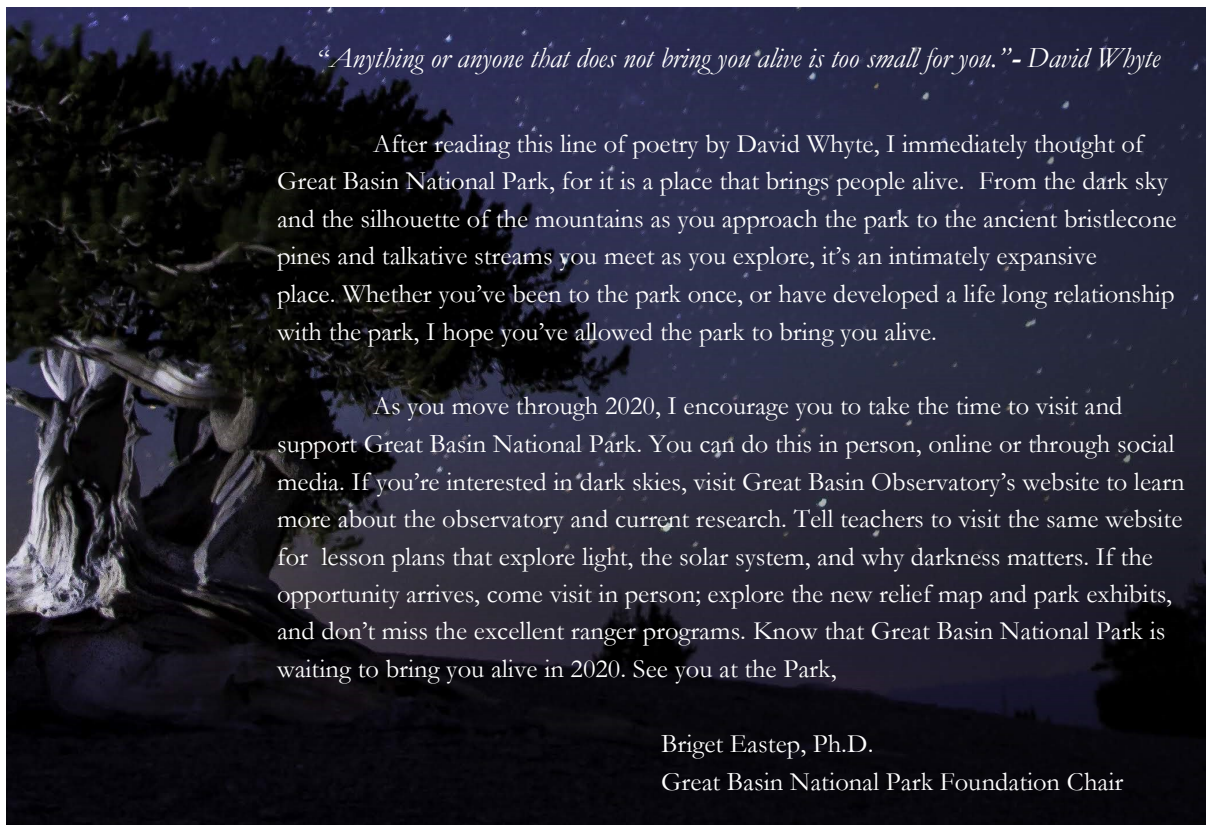
Timothy Cashman  
Mike Corum  
JaNae Johnson  
Marc Johnson  
Jerry Martin  
Caroline Bruno Meisner  
Cindy Ortega  
Robert Palmer  
Margaret Rees  
James T. Reynolds  
Mary Simmons

There's a place in Nevada that defines dimension through its natural wonder. From the deepest caves to the highest peak. From the oldest trees to the darkest skies. It's a portal to time and space, a place to marvel at the majesty of nature and sit quietly with its splendor. This special place is Great Basin National Park.

Great Basin National Park Foundation is passionately devoted to fostering people's connection to Great Basin National Park, so that its wonder can be protected and interpreted. As you will read in the following pages, our programs and projects create deeper bonds between people, the Park and the entire Great Basin area.

Whether you continued your support of Great Basin National Park Foundation in 2019, or became a new Guardian - *we thank you!* Individual gifts increased 300% this year (a total of over \$31,000). Foundation grants and corporate sponsorships remained the majority of our contributions in 2019 at \$97,000.

We heartily thank each and every one of our supporters. It is only with your support that we can preserve, enhance, and interpret the Great Basin.



*"Anything or anyone that does not bring you alive is too small for you." - David Whyte*

After reading this line of poetry by David Whyte, I immediately thought of Great Basin National Park, for it is a place that brings people alive. From the dark sky and the silhouette of the mountains as you approach the park to the ancient bristlecone pines and talkative streams you meet as you explore, it's an intimately expansive place. Whether you've been to the park once, or have developed a life long relationship with the park, I hope you've allowed the park to bring you alive.

As you move through 2020, I encourage you to take the time to visit and support Great Basin National Park. You can do this in person, online or through social media. If you're interested in dark skies, visit Great Basin Observatory's website to learn more about the observatory and current research. Tell teachers to visit the same website for lesson plans that explore light, the solar system, and why darkness matters. If the opportunity arrives, come visit in person; explore the new relief map and park exhibits, and don't miss the excellent ranger programs. Know that Great Basin National Park is waiting to bring you alive in 2020. See you at the Park,

Briget Eastep, Ph.D.

Great Basin National Park Foundation Chair

## Visitor Experience

Great Basin National Park has some of the wildest and most isolated terrain of any unit in the National Park system. From craggy peaks to gentle sagebrush-covered foothills, cemented boulder fields to magnificent limestone caves, the vastness and diversity of the park can be hard for the average visitor to grasp. Soon a new bronze tactile relief map of the Wheeler Peak cirque will facilitate visual recognition of terrain features, increase understanding through tactile exploration, and give sight-impaired visitors the opportunity to better comprehend the Park. Thanks to a grant from the Fund for People in Parks, the map which has been sculpted and poured, will be attached to a base at the Mather Overlook this upcoming summer.



Pictured Left: The relief map base with Nichole Andler and Briget Keimel at Mather Overlook  
Middle: Visitors tour the GBO during the Astronomy Festival  
Right: SUCCESS Academy students and Dr. Cameron Pace present at Starfest in Cedar City, Utah

## Great Basin Observatory (GBO)

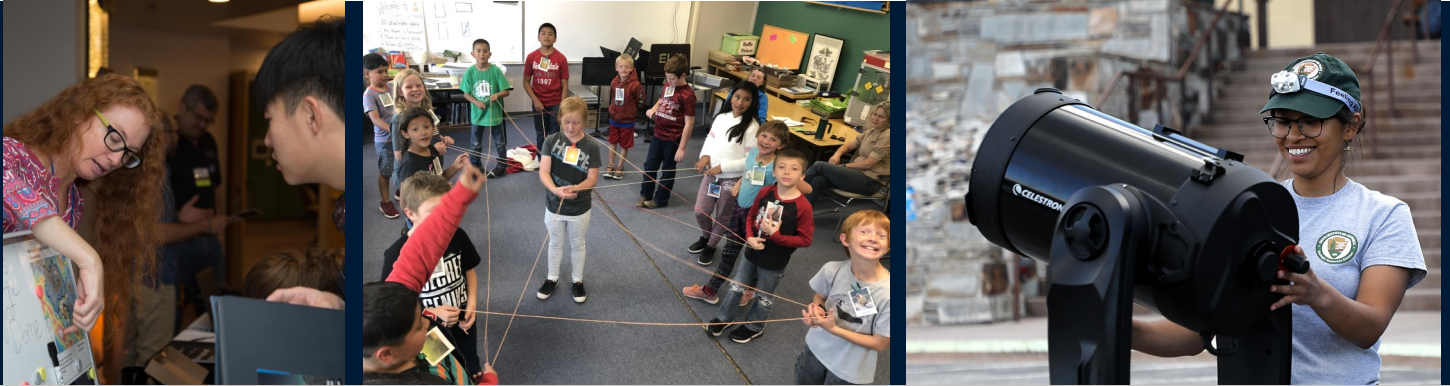
Set at an elevation of 6,825 feet with no significant man-made light for 70 miles in all directions, the GBO is the first research-grade observatory ever built in a U.S. National Park. “We have six organizations differing in size, location, and mission, working together united by a commitment to teach, learn, and discover”, says Dr. John Kenney, GBO Operations Chair and Professor at Concordia University. This year was certainly filled with stellar learning and discovery! Students used the GBO to study double stars, X-ray binary outburst and quiescence, exo-planet transits, dwarf novas, stellar spectroscopy and monitor Tabby’s star. Research resulted in three scientific papers, three posters, and two student symposiums.

The GBO is primarily used by undergraduate students, a group that rarely has access to high quality research telescopes. Cole Niebuhr, of Concordia University relates: “The vast majority of undergraduate students never get opportunities like this- to learn the ins and outs of advanced instrumentation and then use it to explore our world and universe.”

Alexis Tudor, an astronomy minor and senior at University of Nevada, Reno (UNR) used the GBO during her observational astronomy class- “When I found out we would be doing an observing project for my astrophysics class at UNR, I immediately settled on the exciting, but impractical idea of observing a transient nova. The low brightness of most of these novae would have made this impossible with smaller telescopes, but with the help of the Great Basin Observatory we were able to catch the peak of a nova and learn what it feels like to be real astronomers!”

**Education** Great Basin National Park Foundation is dedicated to connecting Park visitors, adults, and youth to the unique and majestic resources of the Great Basin. Each year we support Great Basin National Park's Bioblitz, a yearly citizen science inventory- that was focused this year on bats. In 2019, we increased access to Park astronomy programs for 3,600 Park visitors, provided safe transport to the Astronomy Festival, and reached 1,665 elementary and middle school students with interactive science presentations in their classrooms.

Our philosophy is simple— *engage, connect and protect*. Working in tandem with the Park Service, we are connecting multifaceted audiences to the Great Basin.



Left: Aviva O'Neil does outreach at the International Dark Sky Association Conference in Tucson  
Middle: Baker Grade School creates a solar web during a Reach for the Stars program  
Right: Astronomy interns allow many more Park visitors to attend astronomy programs

## **Reach for the Stars** Our Education and Outreach program to youth brings scientific

opportunities to students and teachers in rural Nevada and Utah. This year we continued to focus classroom presentations around interactive science activities and concepts of dark sky preservation. Eighty percent of children cannot see the Milky Way from where they live due to artificial light at night. In the two large, rural, and sparsely populated counties surrounding Great Basin National Park, the skies are the darkest in the contiguous United States. Along with other science concepts, we are teaching students and community members to appreciate their unique dark sky heritage and what they can do to preserve it. As the teacher from West Desert Elementary states: "This presentation was very engaging and a timely topic. We can affect change."

Also this year, five high school students had the unique opportunity to dive into scientific research. SUCCESS academy, an early college high school in St. George, Utah, worked with their science teacher and SUU faculty Dr. Cameron Pace to use the GBO to study double stars and their orbits. Stars masses can be determined through studying double star orbits. The mass of a star determines the life and eventual fate of the star. Over the course of the project the students learned how to process astronomical images, measure stars, interpret their data, and prepare their observations for publication in a scientific journal.

"Students engaged in research projects at the GBO have made meaningful contributions to science. In the process they have sharpened their research skills, honed their writing abilities, and gained firsthand experience with the process of science," says Dr. Pace.





## Great Basin National Park Foundation

P. O. Box 181  
Baker, Nevada 89311

*Be a Guardian of your National Park!*

visit

[www.greatbasinfoundation.org](http://www.greatbasinfoundation.org)

[www.greatbasinobservatory.org](http://www.greatbasinobservatory.org)

# *Thank You - 2019 Guardians*

### Stellar Guardian, \$5,000 - \$9,999

Paul Bible, The Bible Family Fund

### Bristlecone Guardian \$1,000 - \$4,999

Steve Brown  
Timothy Cashman  
Briget Eastep  
Flora Mason  
Brian Menzel  
Mike & Linda Niggli  
Margaret Rees  
Pat Shalmy  
Mary Simmons  
Bill and Holly Wilson  
Frederick Zoerner

### Stalagmite Guardian \$500 - \$999

Anonymous gift *in honor of Elinor Charleston*  
Senator Richard Bryan  
Garth Fehner  
Kenji Hakuta & Nancy Goodban  
Marc Johnson & Karen Penner  
John Kenney  
Dave Marquart  
Rebecca Mills  
Bob & Mia Morrill  
Alicia Reban  
Vicki & Carl Zeiger

### Sustaining Guardian \$100 - \$499

Stephen Allman  
Donna Andress *in memory of JoAnn Kelly*  
Joe and Pam Brown *in memory of Bonnie Bryan*  
Peter Buerger  
Katharine Butler  
Scott Drury  
Bill & Paula Engelbrecht  
David Hubbell & Janet Keyes  
Denys Koyle & Gary Perea  
Steven Moore  
Shaaron Netherton  
Andrea Nicolas  
Holly Pecetti  
Julia Ratti  
Jeremy Reichenberg  
James T. Reynolds  
Kevin Robison  
Melodi Rodrigue  
Jim & Jane Sahagian  
Nancy Shepherd  
Susie Sides  
Octavio Simoes  
Marianne Slagle  
Dave Tilford  
Deborah Wallin  
Ronald Watkins  
Lauren Zeiger

### Guardian \$25 - \$99

David Albrecht  
Susan Blake  
Heather Booth  
Jonathan Burke  
Devin Casey  
Laurel Heap  
Cole Niebuhr  
Margaret Pense  
Lois Sagel  
Harvey Smith

### Corporate and Foundation Donors

### Great Basin Guardian Circle \$25,000 & above

The Fund for People in Parks

### Stellar Sponsor \$15,000 - \$24,999

Great Basin Heritage Area Partnership  
Noble Studios  
Robert S. and Dorothy J. Keyser Foundation

### Bristlecone Sponsor \$10,000 - \$14,999

NV Energy Foundation

### Sustaining Sponsor \$1,000 - \$4,999

Mt. Wheeler Power  
Robinson Nevada Mining Company  
The First National Bank of Ely  
The Nature Conservancy of Utah