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PAJARITO ENVIRONMENTAL EDUCATION CENTER, LOS ALAMOS, NM

PEEC Nature Youth Group Members Earn Top Honors at Prestigious International AI Conference

By Aditya Viswanathan and Adis Bock, PEEC Nature Youth Group Members

The PEEC Nature Youth Group (PNYG) members were awarded a prestigious prize for a project that aims to prevent predator-livestock conflicts by using Artificial Intelligence (AI). The group was awarded one of four awards from the high school track of NeurIPS [1], the Conference on Neural Information Processing Systems, an annual conference that brings together researchers from various fields to exchange research ideas on neural information processing. It is considered one of the most prestigious Artificial Intelligence (AI) conferences in the world. Their project was selected from 335 global entries, placing them in the top 1% of submissions. Along with a \$1500 monetary prize, two members were given the opportunity to present at the conference on December 10, 2024, in Vancouver, Canada. Aditya Viswanathan and Adis Bock traveled to Vancouver to present the work and accept the award for the team. The members of the prize-winning team include Aditya and Adis, as well as Zoe Bent, Tate Plohr, Suchir Jha, Celia Pesiri, Sebastian Koglin, and Phoebe Reid.

PNYG was founded just a year earlier to bring together high school students, lab scientists, and local experts to address environmental challenges in the Los Alamos community. For the NeurIPS award, the team developed an AI system to help mitigate human-wildlife conflict in the local area. They used a combination of trail cams to take photos of passing

animals, AI to determine if that animal is a mountain lion, and if so, play sounds and flash lights to scare it off. This project aimed to highlight the practical role AI could play in addressing human-wildlife interactions and environmental challenges.

The award was announced during the conference opening remarks in front of over 7,000 people! Afterward, Aditya and Adis presented a poster at the opening reception, along with the other three winners. There was a lot of interest in the work and the pair was able to explain the project to many people over the course of three hours. This was a very exciting conference to attend because just last year AI contributions to STEM won Nobel Prizes in both Physics and Chemistry. Much of this



PNYG Members
Photo Credit: Ryan Ramaker

Nobel Prize work was initially presented at NeurIPS years ago. In addition, with the rapid development of generative AI tools such as DALL-E, ChatGPT, self-driving cars, and robotics, it was clear this was a fast-moving field impacting many facets of everyday life. Many talks at the conference discussed the positives and negatives of AI and how, as a community, AI researchers can make sure they avoid the negatives while focusing on the positives. Many of the leading AI researchers from Google, Microsoft, Meta, academia, and national labs across the world attended the conference, and it was exciting for the PNYG representatives to attend different talks and poster sessions. Seeing thousands of researchers presenting their work was very inspiring, especially since PNYG had not been to a scientific conference before.

PNYG is continuing to work on the deployment of their method and hopefully will be successful in preventing mountain lion-livestock conflicts. Their method could work for other predators as well, if they re-train their neural network (an AI computer system designed to learn and make decisions by mimicking how the human brain works). One of the other winning student projects at NeurIPS focused on using AI to help with rainwater harvesting in Tanzania. They also have problems with african lions killing livestock, so PNYG

discussed collaborating with their team to try PNYG's system in Tanzania. The students thought this was a great example of how these conference collaborations can lead to new exciting ideas and projects going forward.

PEEC Nature Youth Group is developing exciting eco-centric programs for young adults ages 14 – 19+. These programs will promote PEEC's mission of enriching local communities in and around Northern New Mexico by connecting people to our canyons, mesas, mountains, and skies. The program provides leadership development opportunities for participants and adheres to PEEC's core principles. 🌱

[1] <https://blog.neurips.cc/2024/11/18/announcing-the-neurips-high-school-projects-results/>

Please Support the Revision of New Mexico's Night Sky Protection Act

By Galen Gisler, PEEC Board Member

New Mexico's dark skies have long attracted tourists as well as amateur and professional astronomers. Dark skies are important for wildlife, biodiversity, ecosystems, and human health. But even in this state, pristine skies are becoming less common. If we want to enjoy dark skies we have to drive further away from our cities, towns, and highways.

Before the advent of civilization, animal and plant populations on this planet depended on the natural cycles of night and day and the monthly cycle of the moon. Our human cultural heritage also developed under those natural cycles — the rhythms of planting and harvest, and of story telling under the constellations.

Wildlife that are already hemmed in by human developments suffer habitat loss because light pollution produced in cities travels far into our wide open spaces. Artificial light at night impedes natural behaviors including predation, migration, and mating. Plants affected by artificial light may bud earlier or lose leaves later than under natural light alone.

The state of New Mexico enacted the Night Sky Protection Act (NSPA) in 1999, the first such law



Visual Description of PNYG's AI Project
Photo Credit: PNYG



Hear from PEEC Nature Youth Group LIVE on **February 5!**

Scan the QR Code or visit peecnature.org/events for more information.

in the nation. However, after 25 years, this law is outdated, both because of advances in technology and changes in recommendations from DarkSky International and the Illumination Engineering Society. The New Mexico Chapter of DarkSky International, formed in the summer of 2023, has proposed revisions to the NSPA to address the necessary changes. Our draft legislation has already been reviewed by two Interim Committees of the Legislature, and State Senator Liz Stefanics (D, Cerrillos) will be its sponsor in the Legislative Session that begins on January 21st. Please help us improve the protection of our night skies by supporting this legislation.

The New Mexico Chapter of DarkSky International has a website (nmdarksky.org) where you can learn more about our work. One of the most impactful ways to support the proposed updates to the Night Sky Protection Act is to contact your state legislators and encourage them to vote for the bill during the upcoming legislative session, which runs from January 21 through March.

Public participation is crucial. Attending committee hearings and floor debates, where the legislation will be discussed, can make a significant difference. Representative Christine Chandler, who represents Los Alamos, has been a supporter of dark sky

initiatives in the past, but reaching out to her to reaffirm community support is still helpful. It's also important to ask State Senator Leo Jaramillo, who represents our district, where he stands on the issue.

By voicing your support and engaging in the legislative process, you can help ensure that New Mexico continues to lead the way in protecting our precious dark skies. 🌌



Starry Night at Valle Grande Entrance
Photo Credit: Valles Caldera National Preserve



PEECNATURE.ORG/EVENTS

The Effects Your Pets Have on Wildlife

By Bonnie Klamm, PEEC Board Member

Your pets may affect wildlife in more ways than you know!

Why We Should Care:

We are responsible for our pets' actions. While these tips are primarily to keep us and our pets safe, they also aid in keeping our pets healthy from pests and disease.

CATS

In the US, cats annually kill on average 2.65 billion birds each year.



Safety Tips for Cat-Owners:

- Feed high protein commercial food
- Provide 5-10 mins daily play
- Use colorful, BirdBeSafe collars, bibs and/or bells

DOGS

Dogs are seen as a threat to most wildlife, which can change the natural and migratory behavior of animals, big and small.



Safety Tips for Dog-Owners:

- Train your dog to recall and reward with food and play; teach them to wait
- Keep your dog in a fenced yard and on a leash when outdoors
- Provide daily play
- Minimize contact with wildlife:
 - Don't leave food out
 - Be mindful of where you take your dogs for walks

Scan the QR Code to Watch Bonnie's Full Presentation on *The Effects Your Pets Have on Wildlife!*

Or Visit bit.ly/PetsEffectOnWildlife

Photo Credit: Bonnie Klamm



Watch for Wildlife on the Roadways During the Winter Months

By Leslie E. Bucklin, Los Alamos County Communications and Public Relations

As the temperature drops and the days and nights feel shorter, more vehicles will be on the road at times when wildlife, including larger mammals, are most active: dusk and dawn.

Wildlife in roadways can be dangerous for both motorists and animals. Even smaller animals, such as cottontails and jackrabbits, can prove to be hazardous as motorists break or swerve to avoid a collision.

Here are some simple tips and information that can help reduce the chances of a potentially dangerous collision:

Slow down and look for movement. This simple step can help motorists avoid a potential disaster. Slowing down doesn't just help avoid a collision; it can reduce the impact in the event a large animal is hit.

Avoid other distractions within the car, such as texting. Distractions increase the risk of a collision with unexpected wildlife in the roadway.

Watch for herd animals. Drivers should also note that when one herd animal, such as deer, is spotted, there may be more in the area.

Expect the unexpected. Male deer and elk behavior can be unpredictable during the rut. They may dart straight out in the road.

Some of the best forage can be found alongside roadways, especially during times of drought or seasonal green-up, making it particularly attractive to numerous animals. This increases the likelihood of collisions with wildlife.

REMEMBER, the easy path is the plowed one. Once winter weather sets in, elk are often on roads because it's easier to travel and burns less energy than walking through snow. Elk are more likely to move to areas where snow is plowed.

To learn more about the wildlife of the Pajarito Plateau, visit the County wildlife page at www.lacnm.com/wildlife.

THANK YOU

Because of YOU, we will connect over
35,000 people to nature this year!



PEEC
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The Book of Hope

Review By Ed Santiago, PEEC Board Member

"Hope is contagious." Weeks after reading the book, that line from the introduction keeps bouncing around in my head; sometimes as a source of comfort, sometimes as a call to action. I'm feeling a need for hope right now, and maybe you are too.

What is hope, anyway? Is it just another name for optimism or wishful thinking? (Spoiler: no. Oh, big-time no). Where does it come from? How does it help us? Why do each of us carry unequal amounts of it, and where can we order a resupply? Preferably with free shipping?

Jane Goodall has thoughtful answers to these and many more questions. Answers that will often make you think. It's not a stretch to say that 90-year-old Goodall has changed the world significantly, and for the better, despite long odds and setbacks and heartbreaks. In *The Book of Hope*, over the course of many conversations across several years, she and coauthor Douglas Abrams riff on hope: defining it, reflecting on their experiences with it, and, most importantly to those of us with evidence-based affinities, studying it. There is such a thing as hope science and it figures prominently throughout the book.

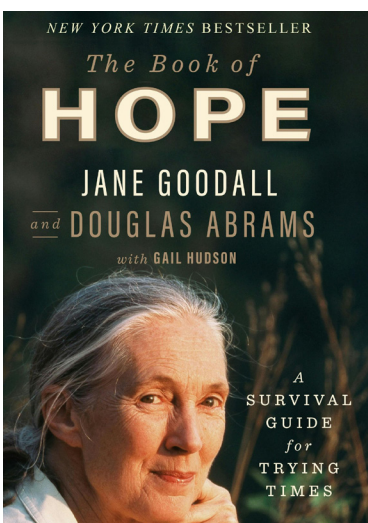


Photo Credit: mpd-biblio-covers

Goodall briefly identifies four great challenges



Jane Goodall Mingling with Children from Los Alamos and Northern New Mexico in 2007
Photo Credit: Michele Altherr

we face: alleviating poverty, reducing the unsustainable lifestyles of the affluent, eliminating corruption, and recognizing the impossibility of infinite growth. (Reading this list as 2024 draws to a close, it's hard not to wince or shed a tear). She frankly admits that these are daunting... then calmly proceeds to spend the rest of the book expanding in depth on the reasons she sees for hope. Goodall understands the power of stories, so in addition to referenced research she illustrates points with examples rich in wisdom, morality, and compassion. Her arguments are effective and have lingered with me for weeks.

The next twenty-five years are starting out with new challenges and new opportunities, first and foremost being climate change. If we humans are going to continue to address that—and we are—we're going to need new reservoirs of hope. Fortunately, I hear it's contagious. Pass it on.

The One Los Alamos Book Club meets every other month at the nature center. 🦋

For more information, visit linktr.ee/OneLosAlamos



View at Kinnikinnik Park
Photo Credit: PEEC

Kinnikinnik Park Update

By Eric Peterson, Los Alamos County Open Space Specialist

The Kinnikinnik Park trail improvement project will consist of improving just under a .5-mile (2,640 feet) section of trail to meet ADA standards. The design and construction will adhere to the accessibility guidelines outlined in the Americans with Disabilities Act of 1994 and 2010. This project is being funded with a 1:1 match with a grant from the NMED Outdoor Recreation Trails + Grant. The trail is part of the county's continuing effort to create inclusive and inviting trail access to all members of the community. The main goal is to reduce any barriers that individuals with disabilities may encounter when utilizing the Kinnikinnik Park Trail. **Los Alamos County anticipates the trail to be open for use in Spring of 2025.** 🚧

Geez, Finding Time.

By Dave Fox, in memoriam.

It's I wish it wasn't, but it is
The season of confliction.

Want Summer to be over,
Don't want Fall to start.

Not easy on our brain
Or any other part.

Floor it with all you've got:

Must on-ramp at 60mph,
in 2 point zero seconds flat.

Oh, Eight-Lane One-Way Highway,
You are needed now.

And, Geez, a giant snow and icy roads
Thundering plow.

Dodge collision with winter's
Off-ramp all together.

Gun it into spring again
Somehow.

Let it happen sooner,
For sure not later.

Oh, Geez, it's 108.
Let it happen
NOW. 🚧



Love Nature and Community? Join our Volunteer Team!

Opportunities: Docents, Bird Feeders, Animal Caretakers, Gardeners & More.

Make a Difference! Gain experience while connecting with nature and your community.



Questions? Contact PEEC Visitor Services Manager Ryan at ryan@peecnature.org or scan the QR code.



Sam Schultz, PEEC Youth Volunteer
Photo Credit: Jenna Espinoza

Our Mission: Enriching people's lives by strengthening their connections to our canyons, mesas, mountains, and skies.

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"Spent 3 hrs here with the kids. They would've stayed all day. And you can't beat free!"

— Los Alamos Nature Center Visitor

Nature Center hours:

Monday: 10 – 4
Tuesday: Closed
Wednesday: 10 – 4
Thursday: 10 – 4
Friday: 10 – 4
Saturday: 10 – 4
Sunday: Closed

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Young Movie-Goer Helps PEEC Staff Pick Raffle
Winners at Backcountry Film Festival in 2024
Photo Credit: Jillian Rubio

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UPCOMING EVENTS

- Backcountry Film Festival **JAN 30**
- PumaGuard: AI-Enabled Targeted Puma Mitigation **FEB 5**
- Stellar Attractions **FEB 14**
- Tracking Wildlife on the Pajarito Plateau **MAR 15**

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