

Tuesday News



**Thank You
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4-H 

WASHINGTON STATE UNIVERSITY
EXTENSION

Tuesday News – October 24, 2023

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Features

Due December 1: Applications For Harry Burcalow 4-H Endowment For Innovative Grants

Denise Echelbarger

Harry Burcalow is the former Associate Dean of the WSU College of Agriculture and Home Economics, now CAHNRS, and Associate Director of WSU Cooperative Extension. In retirement from WSU and now the WA 4-H Foundation Board, Burcalow remains a strong supporter of 4-H programs. He personally founded the Harry Burcalow 4-H Endowment for Innovative Grants, funding projects and programs that help 4-H youth serve their communities, while learning about leadership, decision making, responsibility, and healthy lifestyle choices.



In 2022 the funds from the Harry Burcalow 4-H Endowment for Innovative Grants helped purchase gardening supplies for Yakima County's Grandview Elementary After School Program. Goals included promoting 4-H to school youth, (many who come from low-income households), and providing hands-on learning through the 4-H gardening curriculum.

The goal of the grant is to fund worthy 4-H youth development programs or projects. The emphasis is on short-term needs such as new innovative programs, seed money, emergency, or unanticipated shortfalls. 4-H depends on involvement and donations to help Washington youth from all walks of life succeed.

Learn more about the Harry Burcalow 4-H Endowment for Innovative Grants [HERE](#).

Save the Dates! State Equine Presentations for 2024!

Kim Baker & Jennifer Leach



SAVE THE DATE
2024
WA STATE 4-H
EQUINE
CONTESTS

UPDATE  The State Equine Presentations Contest date has changed from September at State Fair to **February 3, 2024** (on Zoom)! Help us spread the word!

 FEB 3, 2024 Location: Virtual	STATE EQUINE PRESENTATIONS CONTEST
 MAY 4, 2024  MAY 5, 2024 Location: Grant County Fairgrounds, Moses Lake	STATE HIPPOLOGY CONTEST STATE HORSE BOWL CONTEST Teams are encouraged to try both contests. Fun Derby Party Saturday after Hippology Contest!!
 SEPT 2024 STATE FAIR DATES TBD Location: State 4-H Fair Puyallup, WA	STATE HORSE JUDGING CONTEST Will be held during State Fair. Dates will be published with the State Fair schedule. STATE GROOM SQUAD CONTEST

Rules, Registration and Information: [WA State 4-H Horses](https://extension.wsu.edu/4h/projects/animal-science/companion-performance/horse/)
<https://extension.wsu.edu/4h/projects/animal-science/companion-performance/horse/>



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WSU Extension programs and employment are available to all without discrimination. Evidence of noncompliance may be reported through your local WSU Extension office.



New for 2024 — the state equine presentations, formerly called “National Equine Presentations,” will no longer be held at the 4-H State Fair. This year, the equine presentation contest will be held February 3, 2024 and will be virtual.

These are specific presentations for seniors that focus on the equine industry that include individual presentation, team presentation, and public speaking, with the top blue-ribbon winners eligible to represent the Washington State 4-H equine program at the Eastern 4-H Equine Roundup that is held the first weekend of November in Louisville, Kentucky.

More details will come later about the specifics of the contest, such as registration information, updated rules, etc.

We wanted to let counties know now about the revised date in order to prepare senior 4-H members at the county level for the state contest.

Kim Baker has agreed to be the coordinator for this state contest. If you have questions about the contest contact Kim at kim.baker@wsu.edu or Jennifer Leach, State 4-H Horse contact at jleach@wsu.edu

Submitted by Jennifer Leach, State 4-H horse contact

State 4-H Fair Equine Presentation Results Announced

Jennifer Leach

Congratulations to the seven senior 4-H members who participated in the State Equine presentations, held virtually on Sunday, September 17th. There were two team presentations, Charlotte Pestinger and Camille Talbot from Thurston County and Sierra Carlson and Sebastian Palmer from Snohomish County, and two individual presentations, Dylan Qureshi from Snohomish County and Norah Gilbertson from Spokane County. Emmalee Broadbent from Snohomish County. presented for public speaking.

The top blue-ribbon winners in the above three categories are eligible to represent the Washington State 4-H Horse Program at the national contest called the Eastern National 4-H Horse Roundup that will be November 3rd through 5th in Louisville, Kentucky. They will be joining the State 4-H Horse Bowl Team and 4-H State Hippology teams, both from Snohomish County, along with the top four individuals from the State Horse Judging Contest.

The 4-H members representing the equine presentations at the National contest are the team of Charlotte Pestinger and Camille Talbot and Dylan Qureshi doing his individual presentation.

The contest could not have been successful without the efforts of the “officials,” includes judges Kelli Whidden and Alyssa Bowers, along with timer/scorekeeper-Ramona Leber, and tech support from Kim Baker.

On behalf of the Washington State 4-H Horse Program, congratulations to all the state winners; we wish them luck at the 2023 Eastern National Equine 4-H Horse Roundup!.

Submitted by Jennifer Leach, State 4-H Horse Contact and Coordinator of the State Equine Presentation contest



Save The Date! Washington State 4-H Volunteer Recognition Luncheon – October 28th!

Jana Ferris

VOLUNTEERS...



Please join us in honoring our volunteers! Our 2023/2022 Volunteer Recognition Luncheon will be held Saturday, October 28 at 12:30 p.m. at The Armory in Ellensburg, WA. All state awardees (Alumni Award, Salute to Excellence Ten Year and Lifetime, Heather Rider Award, Volunteer Staff Award, [state] Friend of 4-H AND Hall of Fame) for years 2020, 2021, 2022, and 2023 will be honored. Volunteers of the Year and Teen Leaders of the Year for 2022 and 2023 will be honored through narrated video during the program.

All state awardees will receive an invitation directly to reserve their space at the event and will RSVP as indicated on their invitations. Others may attend at a \$20/person cost; registration for non-awardees opens on Friday, September 22, and can be found at: <https://www.eventbrite.com/e/722452523947>

Contact Jana Ferris at ferrisj@wsu.edu or 360-548-3301



Table Sponsorship Packages Are Available for the 2023 4-H Washington State Volunteer Recognition Luncheon

Denise Echelbarger

TABLE SPONSORSHIP PACKAGES ARE AVAILABLE FOR THE 2023 4-H WASHINGTON STATE VOLUNTEER RECOGNITION LUNCHEON

VOLUNTEERS...



Your sponsorship is a \$250.00 investment that will help the 4-H Washington State Volunteer Recognition Luncheon celebrate the contributions of volunteers who promote the positive development of youth in communities.

Sponsorship includes your logo and recognition on-screen and signage during the event.

To sponsor (\$250), go to our direct donation link for Washington State 4-H Excellence Fund at: <https://bit.ly/WA4H> or scan the QR code. Under Other, type in \$250, and at proceed to checkout, under Additional Comments please type "Volunteer Luncheon"



If you would like to purchase tickets to attend the luncheon please visit
<https://www.eventbrite.com/e/722452523947>

Ask Dr. Universe: What Is Mutualism In Nature? – Luke and Wade, 10, Maryland



Check out the latest episode of the [Ask Dr. Universe podcast!](#)

Dr. Universe: What is mutualism in nature? – Luke and Wade, 10, Maryland

Dear Luke and Wade,

When I get the same question from different kids, I know it's a good one.

So, I talked about your question with my friend [Angeliqua Montoya](#). She's a graduate student at Washington State University. She works on a mutualism between pea plants and bacteria.

"I study [ecology](#), which is looking at interactions between different species," she said. "Mutualisms are interactions where both species benefit."

Living things [interact with each other](#) in lots of ways. When a lion kills a rabbit, that's an interaction. When a bird builds a nest in a tree, that's an interaction. When a bee collects pollen from a flower, that's also an interaction.

Some interactions are good for just one individual and bad for the other. The lion gets a meal. But the rabbit becomes a meal. Some interactions are good for one individual but neutral for the other. The bird gets a nice place to lay eggs. The tree isn't helped or harmed.

Some interactions are good for both individuals. The bee collects pollen to feed the colony's baby bees. As the bee visits flowers, it spreads pollen around. That's how plants [make baby plants](#). This interaction is a mutualism. It's good for the bee and the plant.

Sometimes scientists label the type of mutualism. Here are three common ones. Transportation mutualisms help move stuff around. That's important for plants because they can't move on their own. Our bee moving pollen from flower to flower is a transportation mutualism. Another is when a [bat](#) eats fruit then flies away and poops out the seeds somewhere else.

Protective mutualisms are about staying safe. Montoya told me some squid let special bacteria live inside their cells. The bacteria make the [squid glow](#). When a

hungry predator swims under the squid, they think the squid is the moon—not their dinner.



This root has pinkish-orange nodules. Photo: [Ninjatacoshell/Wikimedia](#)

Montoya studies a nutrition mutualism. It's about food. As pea family plants—called legumes—grow, they gather bacteria from the soil. They make lumps called nodules on their roots. The bacteria live inside the nodules. They eat some of the sugar the plants make. In return, the bacteria take in nitrogen from the soil. They change it into a form the plant can use. That helps the plant grow bigger and faster.

“You can go out in the back yard and find a legume like a clover plant,” Montoya said. “If you dig up its roots and wash off the dirt, you’ll see little nodules. They’re filled with bacteria.”

An ancient mutualism is probably why plant and animal cells work the way they do today.

Inside plant and animal cells, there are mitochondria. That's the part of a cell that turns food energy into energy your body can use. Plant cells also have chloroplasts. That's the part of a plant cell that changes light energy from the sun into energy for the plant.

More than a billion years ago, there were bacteria that could make usable energy, too. Other one-celled organisms sucked up those bacteria. But they didn't die. They kept making energy inside their cozy new homes. They evolved to **become mitochondria and chloroplasts**.

You could say they started something new-tual.

Sincerely,
Dr. Universe

Dr. Universe: How did one comet kill all the dinosaurs? If crocodiles, snakes and birds came from dinosaurs, did it actually kill all of them? — Mya, 11.4, Virginia

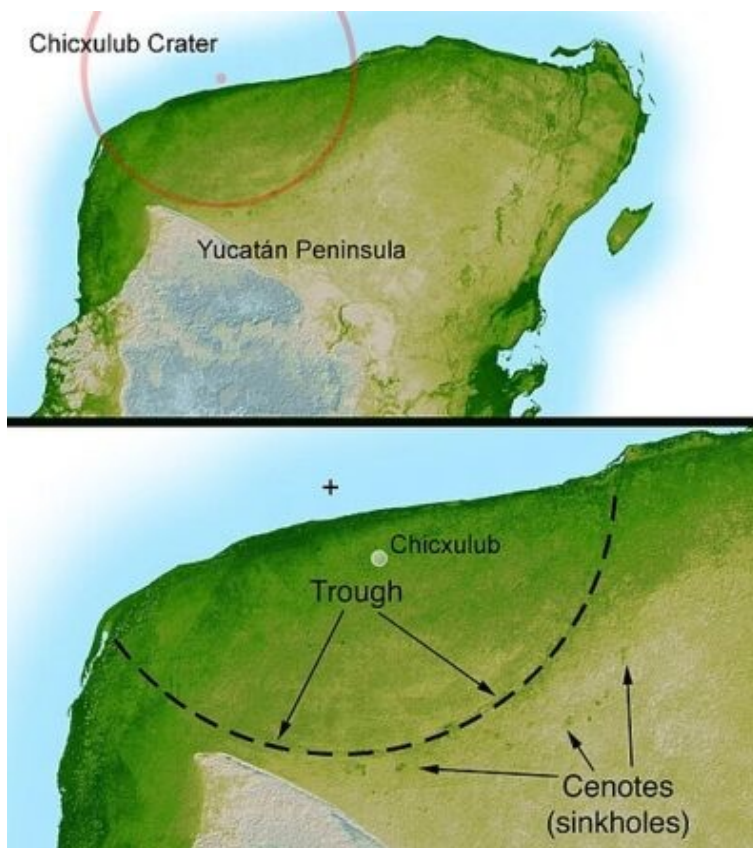
Dear Mya,

It's hard to imagine that one space rock wiped out the dinosaurs. But it did more than that. It killed 75% of the plants and animals on Earth. Me-OW.

I talked about that with my friend **Barry Walker**. He teaches geology classes about Earth's history at Washington State University.

Walker told me that we call a space rock that hits Earth a **meteorite**. The meteorite that took out the dinosaurs set off changes on Earth. Those changes lasted for thousands of years. That's how it killed so many things.

"We're not saying everything got wiped out immediately," Walker said. "Something happened, and within a geologically short amount of time—maybe 10,000 years or so—the damage was fully wrought."



*The Chicxulub crater shown with a red circle and black dotted line
Credit: NASA/JPL-Caltech/David Fuchs/Wikimedia Commons*

That something was a meteorite called Chicxulub. It crashed into Earth nearly 66 million years ago. It made a **giant bowl-shaped hole** in the ground called a crater. The crater is about 100 miles wide and around 12 miles deep. It's near Mexico.

The meteorite killed everything near the crater. It caused fires for hundreds of miles. It set off earthquakes, huge waves called tsunamis and volcano eruptions.

It also sent up a ginormous cloud of dust and soot. That cloud spread over the planet. Today we can see a layer of rock from that time all over the world. It contains a rare element called **iridium** that came from the meteorite.

All that dust, soot and wildfire smoke in the air blocked out the sun's light. Earth became dark and cold. Plants need the sun's light to make food. Without light, lots of plants died. Then plant-eaters and meat-eaters died, too.

Scientists think Earth was dark for about two years. But the changes on Earth lasted much longer.

The animals that survived mostly got lucky. They adapted to the changes and made homes where other animals couldn't. It was easier for animals who ate detritus—or bits of dead stuff. Or animals who could go without food for a long time. Like snakes and crocodiles. It was harder for big animals who lived on land.

Like the big dinosaurs.

But **some dinosaurs did survive**. They're still alive today. We call them birds. They belong to a group of dinosaurs called theropods. That's the same group that once included T. rex and velociraptors.

Scientists think that **bird-dinosaurs** without teeth were the ones that survived. They used their beaks to pick out tiny seeds in the soil. They were small so they needed less food.

Of course, no humans were around back then. Everything we know about Chicxulub comes from looking at clues. They're our best guesses.

"Science is a method of asking questions," Walker said. "All the stuff we're talking about is based on evidence. But being comfortable with uncertainty is a good thing. It's an opportunity."

The exciting thing about your question is that scientists are still answering it. For now, I guess you could say surviving the meteorite was for the birds.

Sincerely,
Dr. Universe

[Get more questions and answers here!](#)



Know a kid with a science question?

Help them submit it for a chance to be featured in a future Q&A.

[Submit a question!](#)

Q and A Sessions for the Washington 4-H Horse Program Continue – Now On First Wednesdays!

Have questions about the Washington 4-H horse program? **Our monthly Q and A for leaders, parents, members, and staff will now be meeting on the first Wednesday of each month via Zoom from 6:30 to 7:30 pm. beginning June 7th.**

Zooms are structured around the theme/parameters of horses and youth development. They are more than “what are the rules.” There is also time set aside for input on future topics for subsequent Zooms. **The Zoom meeting ID is 452-082-9765 with no passcode.** You must have a zoom account to participate.

The meetings are facilitated by Kim Baker, State 4-H Equine Coordinator.

Feel free to contact Kim with any questions at **kim.baker@wsu.edu**.

