

inside:



TAKE A CLASS!  
TAKE A TRIP!  
page 2



THESE  
GIFTS  
GIVE TWICE!  
page 6

# Desert Museum Discovery

Winter 2021/2022



## Sharing *is* Caring in the Sonoran Desert

*Catherine Bartlett, Education Program Manager*

**What do limp lizards, a bundle of bats, and fresh fecal samples have in common? Love. Well, maybe not love exactly but each can certainly be seen as an act of generosity in the animal world.** Of the five love languages (words of affirmation, quality time, physical touch, acts of service, receiving gifts) animals exhibit each, in some way. While we humans know that nature itself is a gift, what else can we learn from the wild gift-givers in nature?

Animals are inherently competitive. Resource allocation is the root of many a squabble (after all isn't possession 9/10ths of the law?). Access to space, food, water, and mates ups an individual's evolutionary fitness, that is, the potential to pass on genes. For a kingdom steeped in violent acts, why would some species willingly give up valuable resources? For the same reason- to increase the likelihood that they, or their family member, will maximize their evolutionary fitness. Playing nice and sharing is simply another strategy for survival.

Gentoo penguins court using perfect pebbles, bonobos will share food to make a friend, and even a domestic cat will leave 'gifts' of dead animals for its owner to reaffirm family bonds. (Side note: keep your cats indoors).

Here in the Sonoran Desert, you can find a plethora of animals who utilize those love languages. Roadrunners are notorious for nuptial gift-giving. They are opportunistic predators that feast on lizards, rodents,

insects, and snakes. When a male catches a reptile, it will slam the lizard or snake on a rock or the ground to kill it. The lifeless lizard is offered to a female and if accepted, they share the scaly snack while copulating. Seems like a lot of coordination, but hey it works for them!

Additionally, many species give their gifts in the form of help, or time, or cooperative parental care. Prairie dogs have complex, though not hierarchical, social structures and advanced communication. There are even dialects and cultural differences between colonies. Prairie dogs give kisses to establish and reinforce social bonds. Bats, too, engage in mutually beneficial social behaviors such as group foraging or huddling for warmth. A bat nursery, or maternity roost, is a group of reproductive female bats that are pregnant, nursing, or weaning their babies. During foraging when most bats leave to find food, babies cuddle in clusters (called crèches) and an unrelated female bat will stay behind. These babysitters often help by guarding the colony or carrying fallen pups back up to the roost.

...continued on page 2

Cockroaches and termites give a different sort of gift to their young. Since cellulose (found in plants and wood) is so difficult to process, these animals have gut symbionts that break it down. Those symbionts get passed on to offspring through proctodeal trophallaxis. The young feed on liquid that the adult excretes to get that gift of a healthy gut microbiome—a veritable bacterial smoothie. Thanks, mom! Additionally, there are many arthropods who set their offspring up for success by laying their egg(s) next to a nutritious first meal so that a newly hatched larvae has its own packed lunch. Examples include leafcutter, mason and carpenter bees leaving pollen balls in a brood cell, dung beetles and their present of poo, and Pepsis wasps leaving a paralyzed tarantula for its progeny.

To be sure, parental care, resource allocation, and communication in animals can all be seen as a way of life and not just gift-giving. But sometimes stepping back, observing nature, and appreciating the world around us is a gift itself. After all, hissss the season.



a.



b.



c.

a. Mason bee larvae developing in mud nest cell with pollen loaf b. Male Gentoo penguin gifting a perfect pebble in the name of love c. Prairie dogs give kisses to establish and reinforce social bonds.

# Take a class! Take a trip!

Adult Classes & Trips with the Desert Museum



**HEIRLOOM FRUIT TREE WORKSHOP**  
February 24, 2022  
Jesús García, founder of the Kino Heritage Fruit Trees Project, will teach techniques for propagation, pruning, grafting and care of fruit trees. The class includes a talk on the historical significance of heirloom trees, hands-on aspects of maintenance, and a tour of the Mission Garden at the base of A Mountain. Every participant will walk away with fruit tree cuttings. \$XX



**SANDHILL CRANES, RAPTORS, & WATERFOWL** • February 3, 2022  
Southeastern Arizona's desert grasslands and agricultural areas are dotted with artificial lakes, ponds and mudflats providing habitat for winter birds, including at least twelve species of raptors and numerous waterfowl. Thousands of Sandhill cranes migrate from as far away as Alaska to spend the winter in the Willcox area, one of the region's birding hot spots. \$90/\$99



**MOUNTAINS, MINES, & MINERALS**  
February 4, 2022  
Join us for a trip to an old mining site. The day begins with a class on mineral properties and identification before heading to the mountains to collect chrysocolla, malachite, pyrite, garnet, and other Arizona minerals. While in the field we learn about ore bodies, alteration and bedrock, as well as the life and times of the people who worked as prospectors and miners years ago. \$80/\$88



**BLACK LAVA WHITE SAND**  
February 14 – 17, 2022  
The volcanic landscape of the Pinacates includes huge maar craters, two varieties of lava flows, cinder cones, and majestic shifting dunes. Tour highlights include a full day at the Pinacates, visits to the salt fields in Gulfo de Santa Clara, intertidal marine life at the Center for the Study of Deserts and Oceans (CEDO), and for a special cultural experience we visit the sacred lands of the Sonoran Tohono O'odham community of Quitovac. \$1150

For nearly 30 years, Coati Kids Club member families have discovered the desert through tailored programs that combine natural history, art, and culture in engaging ways. Each year, Coati events foster learning and love of the Sonoran Desert region at the Museum and beyond.

# Coati Kids Club

a Desert Museum Treasure  
By Robin Kropp, Education Specialist

**If you wander the wildlands of southern Arizona, you might have the rare pleasure of spotting coatis (a.k.a. coati mundis).** These raccoon relatives are an unusual sight as they clamber up canyons and treetops, tails aloft, searching for food with their long, flexible noses. They are curious and agile, and make a perfect mascot for the Coati Kids Club, a unique Museum membership for children ages 6-12 and their favorite adults. Like its namesake, the Coati Club is an uncommon regional treasure.

**Here's a sample of a few things to come in 2022!**

**OUTDOOR ADVENTURES:**  
The Coati Club has ranged far and wide with hikes in the Tucson and Waterman Mountains, Cienega Creek, and Mt. Lemmon. In 2022, we will explore King Canyon history and geology, and also watch wildlife at Sweetwater Wetlands.

**BEHIND-THE-SCENES:**  
Club members get exclusive visits with staff, sneak peeks at new exhibits, and even help with future planning. When we were building the Packrat Playhouse, Coati families gave valuable feedback in its design phase and got to play inside before its grand opening. In 2022 we will meet the Herpetology Keepers and learn about their care of our aquatic creatures.

**ANIMAL ENCOUNTERS:**  
We've doubled the fun with paired events (a virtual program followed by an in-person experience) featuring our animal ambassadors. These pairings allow kids from near and far to connect to the Museum, each other, and the topic – and when Coatis come for the in-person events, they are ready to launch into deeper discovery.

**Be part of the wonder!**  
Coati Kids Club memberships make great gifts. Sign up today at: [desertmuseum.org/coaticlub](http://desertmuseum.org/coaticlub)

**Coati Kids Club COUPON**

20% off the purchase of a Coati Club Membership  
Promo code: COATIWTR21  
Discount Expires: 1/31/2022

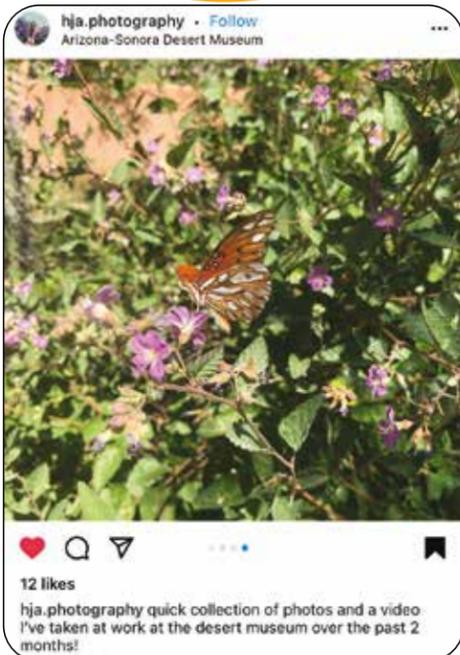
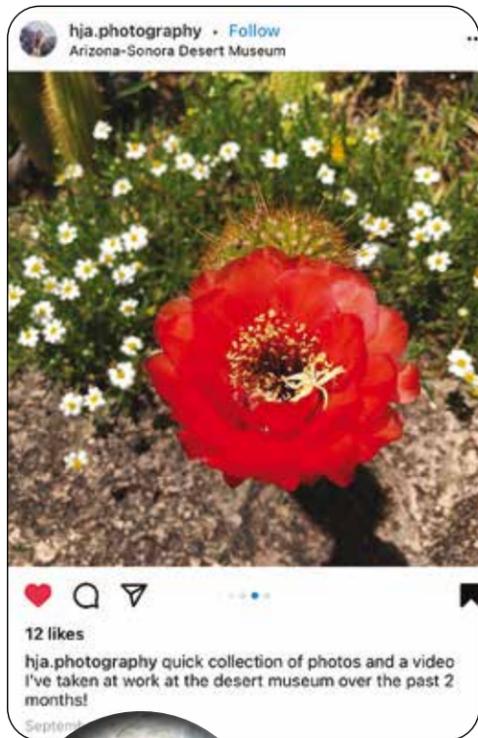
**Coati Kids spotlight**

**Matilda, Evelyn, and "Greenie"**

Last summer, Coati Club sisters Matilda and Evelyn picked up materials to make a "caterpillar casita" to temporarily host a caterpillar and watch its lifecycle. They carefully followed the instructions to prep their casita, collect its resident – a larval white-lined sphinx moth they dubbed "Greenie" – and its preferred food, and tend it until it pupated. A few weeks later, they delighted in the wonder of its emergence and set Greenie free.

white-lined sphinx moth dubbed "Greenie"

# SOCIAL MEDIA SPOTLIGHT

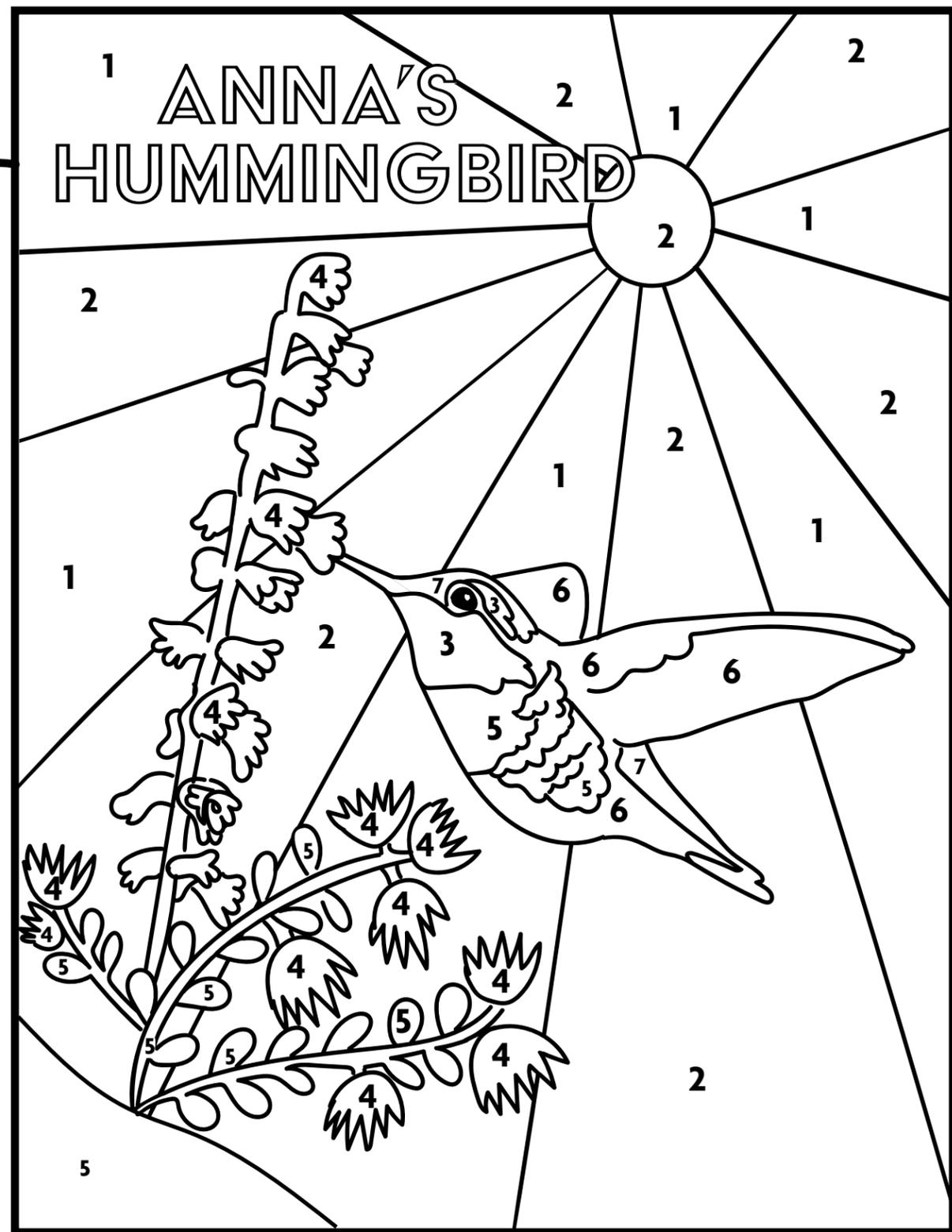


**WE LOVE SEEING THE MUSEUM THROUGH YOUR EYES!**  
Tag @desertmuseum and use #desertmuseum for a chance to be featured!

**Hey Kids!**  
Show us your artwork!  
Tag #desertmuseum on social media or email a picture to: [education@desertmuseum.org](mailto:education@desertmuseum.org)



## COLOR BY NUMBERS!



- 1-BLUE
- 2-YELLOW
- 3-PINK
- 4-RED
- 5-GREEN
- 6-GRAY
- 7-BLACK

# Oh schist! It's Mineral Madness time!



**Dig into the rockin' world of minerals with fun hands-on activities for families.**

Visit geology and fossil activity stations where children can collect rocks, minerals, and fossils in their own egg-carton collection box. *Free with Museum entrance.*

Shop for your own mineral and fossil treasures at **rock-bottom prices**. The sale showcases Arizona, New Mexico, and Mexico minerals with a selection of minerals and fossils from around the world.

## CHECK OUT:

- Gem stones
- Rare minerals
- Fluorescent minerals
- Quartz crystals & chalcedony
- Fossilized Poop (Coprolites)
- Decorator Rock
- Plant and Rock combos



**MEMBERS PREVIEW**  
Thursday, January 20  
5:00 pm - 7:00 pm

**PUBLIC EVENT**  
Saturday, January 22  
10:00 am - 4:00 pm

Sunday, January 23  
10:00 am - 4:00 pm



If you've been to the Desert Museum, you know that it's a special place. This holiday season, consider giving some of that special magic to your loved ones! You can choose a gift that gives back or simply a gift for goodness' sake! These gifts give twice — your loved ones receive a wild gift and you support the animals and plants in our care, research and conservation projects, and so much more!



Visit [desertmuseum.org/visit/holidaygifts](http://desertmuseum.org/visit/holidaygifts) for more ideas!



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Akindele Akerejah

**In memory of Virginia Zachariasen**  
Kathryn Voelz

*'Tis the season for giving back!*

**YOU have helped to create our successes this past year. From youth education programs and art classes, to animal care, conservation, and exhibits, your generosity makes it all happen!**

Remember - charitable gifts that you make to 501(c)(3) nonprofit organizations like the Desert Museum are tax deductible. Your support is so important to the work we do.

**THANK YOU for supporting the mission of the Desert Museum this holiday season!**

**Visit [desertmuseum.org/donate](http://desertmuseum.org/donate) to make your year-end contribution today.**

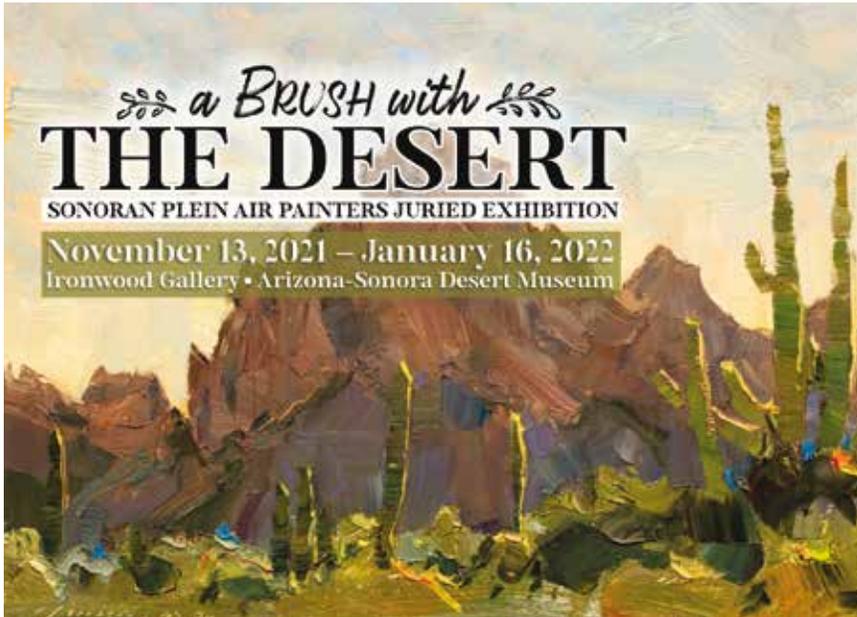
# DESERT MUSEUM ARTS UPDATE

www.desertmuseumarts.com

ARIZONA-SONORA  
DESERT MUSEUM

NON-PROFIT ORGANIZATION  
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ARIZONA-SONORA DESERT MUSEUM

The mission of the Arizona-Sonora Desert Museum is to inspire people to live in harmony with the natural world by fostering love, appreciation, and understanding of the Sonoran Desert.



## A BRUSH WITH THE DESERT

November 13, 2021 – January 16, 2022

This juried exhibition from members of the Sonoran Plein Air Painters encompasses a diversity of visual scenes and culture, echoing the wonderment of the Sonoran Desert region, from the mountains and cliffs to the smallest desert dwellers.

**IRONWOOD GALLERY HOURS**  
9:00 a.m. – 4:00 p.m. Daily

## STUDENT EXHIBITION

October 29, 2021-January 9, 2022

**Delight in original works by the Art Institute's students.**

These unique pieces interpret the magic of the desert through a variety of mediums including mosaic, oil, scratchboard, photography and many more.

**BALDWIN GALLERY HOURS**  
9:00 a.m. – 4:00 p.m. Daily



**ARIZONA-SONORA DESERT MUSEUM CALENDAR**  
*The 2022 Art Institute Calendar features the work of our students!* We solicited pieces in all forms and mediums that reflect how their experiences as Art Institute students influenced their art. The result is a delightful calendar that speaks to the artistic beauty of the Museum. **\$10. Purchase online, by phone at 520-883-3024, or in-person at the Ironwood Gallery and Art Institute offices.** Shipping included within continental USA.



**Arizona-Sonora Desert Museum**  
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Phone (520) 883-2702 · Fax (520) 883-2500  
www.desertmuseum.org

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The Arizona-Sonora Desert Museum is located on the ancestral lands of the Tohono O'odham (Desert People).