

# MYZOO

FOR MEMBERS OF WOODLAND PARK ZOO • SUMMER 2016



**BUTTERFLIES** LEPIDOPTERA

SPLISH, SPLASH: A SUSTAINABLE SUMMER

**BEYOND BEAUTY:** RESTORING RARE BUTTERFLIES FOR A WILDER NORTHWEST

# LETTER FROM THE PRESIDENT



Bruce Bohmke



Alejandro Grajal, PhD

## **DEAR FRIENDS,**

This summer you can experience a new premier exhibit at Woodland Park Zoo when we open our butterfly exhibit adjacent to Zoomazium. Molbak's Butterfly Garden is a sensory delight and offers a popular zoo experience that we're pleased to bring back to the community. In our new exhibit, you will be awed by delicate wings, brilliant blooms, and the pull you'll feel to slow down and appreciate these small wonders.

Up close, inspiring experiences help millions of people learn about creatures large and small each year at our zoo and other accredited zoos and aquariums. Our mission of connecting people to the animals and plants that inspire conservation action is one that grows more meaningful every day. On this note, allow me to express to all members, donors, community partners, volunteers, staff and Board my gratitude for the opportunity to lead WPZ while the Board searched for a new president and CEO. This zoo boasts an unusually gifted and passionate team.

As MyZoo magazine arrives in your mailbox, Alejandro Grajal, PhD, is starting an exciting new chapter at the helm of WPZ. Most recently a top executive at Chicago's Brookfield Zoo, his deep experience in conservation science, environmental and climate change education, and animal welfare advocacy brings an unparalleled set of skills and values to our mission. He's a natural leader and I'm confident he'll guide our successful evolution as a leading conservation organization.

Please join me in giving Alejandro a warm welcome to the Emerald City and thank you for helping us build a better future for animals and people.



Bruce Bohmke
Acting President and CEO

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# LETTER FROM THE EDITOR

Summer is here, and longer hours (open until 6:00 p.m. now through September 30) mean more time to explore your zoo and spend time with your favorite creatures. Molbak's Butterfly Garden (check zoo.org for opening dates) will add a flurry of color and an appreciation for the little details while everyone's favorite, Bear Affair (June 4), highlights some of the bigger issues surrounding bear safety and Northwest wildlife conservation. We're excited for a beautiful season of tigers splashing, flamingos flapping and fantastic programs to connect you to wildlife conservation actions that make a difference for animals around the world.



## ON THE COVER

With delicate wings and dainty feet, a malachite butterfly graces our summer cover in celebration of the new Molbak's Butterfly Garden. Butterflies are back! Check zoo.org today for opening dates on this immersive summer experience.



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# **OUR MISSION**

WOODLAND PARK ZOO SAVES
ANIMALS AND THEIR HABITATS
THROUGH CONSERVATION
LEADERSHIP AND ENGAGING
EXPERIENCES, INSPIRING PEOPLE
TO LEARN, CARE AND ACT.

# ZOO HOURS

# SPRING/SUMMER

May I – September 30 9:30 a.m. – 6:00 p.m.

CLOSED CHRISTMAS DAY

### FALL/WINTER

October I – April 30 9:30 a.m. – 4:00 p.m.

# FIND US ON











@woodlandparkzoo

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# BUTTERFLIES Lepidoptera

The summer air is almost still, delicately scented with a sweet, seasonal bloom. Brilliantly winged creatures flit and float between lupine, spirea and honeysuckle. Here in the Molbak's Butterfly Garden, speak softly and step carefully as you enter another world.

The presence of a single butterfly is enchanting—tiny, delicate and fairylike. With more than 500 free-flying butterflies, the new exhibit opening this summer gets you up close to these small wonders. The littleness of these insects can be measured in grams; a swallowtail weighs only 0.3 grams. Time is also precious. For some species a single generation lasts no more than a few months and sometimes only a few days. Yet butterflies are also grand in scale. In the Lepidoptera taxonomic order, there are at least 15,000 butterfly species and 250,000 moth species. In the U.S. alone there are 750 butterfly and 11,000 moth species. Butterflies inhabit every corner of the world, except Antarctica. Their range is global and in every sense of the word, so is their impact. These tiny, but mighty insects have an impressive ecological footprint.

Iconic monarchs visit Central and Eastern Washington in June and take off in October, but the majority of butterflies here appear only during the warmest part of the year, when sunlight and nectar are abundant. Frequenting suburban flowerbeds to rural roadsides,

high elevation meadows near Mt. Rainier down to the Olympic coast, the butterflies of the Northwest have a dynamic existence in our own ecosystem.

In addition to the powerhouse pollinators such as native bees and honeybees, butterflies are some of the best pollinators in our region. In lieu of buzzing from flower to flower, butterflies flutter and dance, often pollinating a wider variety of flowers during the day. Their continual flitting, meandrous though it may be, makes up for the small amount of pollen they collect at each stop.

Besides pollinating our local crops, butterflies and moths are themselves a valuable food source for a variety of creatures including birds, bats and even bears. An important element in the food chain, these invertebrates are rich in nutrition and support a range of predators. Biologists often look to butterflies and other invertebrates as indicator species for healthy landscapes.

The intrinsic value of watching the ephemeral flight of a butterfly is incalculable. We see them as symbols of our very selves. In many cultures, the soul chooses to take the shape of a butterfly. This association is justifiably rooted in the mystifying process of metamorphosis.

When we introduce children to the concept of a life cycle, it is often







the butterfly we turn to first. From reading "The Hungry Caterpillar" to watching chrysalises take shape in science class, kids become early experts in identifying each stage in the insect's seemingly dreamlike transformation. Oftentimes, this is a child's first glimpse of life emerging.

As we grow up, we rely on these firsthand experiences of nature to reflect on our own stages in life, taking comfort in knowing that sometimes change is a beautiful thing.

We cultivate gardens that attract butterflies because they bring us joy, and shown in that act is our appreciation for these delicate creatures and their habitat. Some biologists estimate that over 40% of insect pollinators are at risk of extinction due to loss of habitat, urbanization and the use of pesticides. Because butterflies are especially fragile to ecological change, they are one of the first species to abandon an ecosystem. Let's persuade them to stay.

Visit Molbak's Butterfly Garden this summer and experience their world filled with brilliant colors and bountiful blooms. Learn about local Northwest species and pick up a tip or two about ways you can make your own backyard butterfly friendly.

Kirsten Pisto, Editor

Photos by Dennis Dow, WPZ and Brittney Bush Bollay, WPZ, unless otherwise noted.







# **BEAUTY IN THE DETAILS**

A butterfly's delicate wings are made up of layers of chitin, a protein that also makes up its exoskeleton. Look closely and you'll notice the wings are decorated with thousands of elaborately colored scales supported by strong, flexible veins. Butterflies feed on the nectar of flowers, tasting with their feet as they go. Probing the blossoms with their proboscis, the insects lap up syrupy nectar from a variety of plants. The proboscis works much like a straw, sucking nectar into the butterfly's mouth. When done eating, the proboscis can curl up to tuck away for flight.

# SAVINGASIA'S WILDLIFE

With help from visitors and members like you, we are able to support a variety of organizations that share one mission: to protect the endangered native species of Asia and preserve their habitats.

# **CONSERVATION PROJECTS:**

**CRANES OF ASIA** (Partners for Wildlife)

Location: Russia

**Focal Species:** endangered red-crowned cranes, vulnerable white-naped cranes, endangered oriental white storks and many endangered plant species

*Mission*: Protect Muraviovka Park, one of the few remaining undisturbed wetlands within the Amur Basin. Covering 16,000 acres, the park provides critical habitat for more than 500 plant species, and 200 bird species, 20 of which are rare or endangered.

# GUNUNG PALUNG ORANGUTAN CONSERVATION PROJECT (Partners for Wildlife)

Location: Borneo

Focal Species: endangered orangutan

**Mission:** Work with communities surrounding Borneo's Gunung Palung National Park to foster sustainable stewardship of the area's natural resources and build a future where orangutans and other wildlife can thrive.

# TREE KANGAROO CONSERVATION

PROGRAM (Partners for Wildlife)

Location: Papua New Guinea

Focal Species: endangered Matschie's tree kangaroo

**Mission**: Provide benefits and an improved standard of living for local communities, with indigenous landowners and community members participating in scientific research and conservation activities to protect tree kangaroo habitat.

# WOODLAND PARK ZOO & PANTHERA'S MALAYAN TIGER CONSERVATION PROJECT

(Partners for Wildlife)

Location: Malaysia

Focal Species: critically endangered Malayan tigers

Mission: Conserve critically endangered tigers and their forest home.

Local Malaysian nonprofits oversee the project's long-term tiger ecology and population survey research as well as species protection efforts: training rangers in the latest anti-poaching patrol strategies and effective law enforcement techniques to pull the Malayan tiger back from the brink of extinction.

To learn more about Partners for Wildlife and Wildlife Survival Fund visit zoo.org/conservation

# **GET WILD!**

Celebrate Asia's most endangered and elusive wild animals at Woodland Park Zoo's WILD ASIA: ASIAN WILDLIFE CONSERVATION DAY

CONSERVATION CARDS • KIDS' CRAFTS • KEEPER TALKS • AND MORE!

Saturday, August 13, 2016 9:30 a.m.- 3:00 p.m.

Free event with regular zoo admission or membership.









## **SNOW LEOPARD TRUST**

(Partners for Wildlife)

**Location:** China, India, Mongolia, Kyrgyzstan and Pakistan

Focal Species: endangered snow leopard Mission: Protect the endangered snow leopard and its mountain habitat through biodiversity conservation. Alleviate poaching, increase livelihoods of local communities, incorporate regional landuse planning, and develop sustainable partnerships with local governments.

### **RED PANDA NETWORK**

(Wildlife Survival Fund)

**Location:** Mechi Zone, Taplejung District, Nepal **Focal Species:** vulnerable red panda

Mission: Community-based monitoring, education outreach, sustainable livelihood promotion, and a species management plan all ensure a viable and healthy population of red pandas in the eastern Himalayan broadleaf forests.

# IN SITU CONSERVATION AND MANAGEMENT OF HIGHLY ENDANGERED ENDEMICTREE SNAILS OF FRENCH POLYNESIA

(Wildlife Survival Fund)

Location: French Polynesia

Focal Species: Partulidae, extinct in the wild Mission: Preserve and enhance the survival prospects of all endemic tree snail species of the family Partulidae within their natural range of French Polynesia; the species faces extinction after the introduction of the carnivorous rosy wolfsnail.

# WILDLIFE SOS DRONES FOR BEARS PROJECT (Wildlife Survival Fund)

Location: Sanapur Community Reserve Forest, Koppal, India

Focal Species: vulnerable sloth bears
Mission: Utilize drone technology for the
purpose of sloth bear conservation by
mapping sloth bear habitat and provide
critical data that is urgent to gain protection
for this vulnerable species.

# VISAYAN WARTY PIG CONSERVATION PROGRAMME

(Wildlife Survival Fund)

Location: Philippines

**Focal Species:** critically endangered Visayan warty pig

Mission: Contribute to the protection and conservation of Visayan warty pigs and their habitats through existing reserves and by supporting conservation initiatives such as captive breeding, personnel training and public education programs.

# STELLER'S SEA EAGLE BREEDING PROGRAM

(Wildlife Survival Fund)

Location: Magadan Region, Russia

Focal Species: vulnerable Steller's sea eagle
Mission: Longest running continuous study of
a population of Steller's sea eagles in the

world. Data from this project is the baseline information on breeding success and survival for the whole population of Steller's sea eagles.





# UPCOMING EVENTS

AT WOODLAND PARK ZOO

# **BEAR AFFAIR:**

**Living Northwest Conservation Day** 

presented by Brown Bear Car Wash . . . . . JUNE 4

RED, WHITE & ZOO ..... JUNE 30 - JULY I

JUNGLE PARTY\* ...... july 15

**WILD ASIA:** 

Asian Wildlife Conservation Day ...... AUGUST 13

**ZOOFARI MEMBER** 

APPRECIATION NIGHT..... SEPTEMBER 13

**BECU ZOOTUNES\*** 

presented by Carter Subaru . . . . . . . . . . JUNE 30 – AUGUST 24

\*Indicates a separately ticketed event. All other events are free with regular zoo admission or membership.



# LIFE IS A PICNIC

at Woodland Park Zoo

Woodland Park Zoo offers six unique picnic locations for groups of all sizes. When you host a picnic at the zoo, you're helping the zoo save animals and their habitats around the world.

For more information call 206.548.2590 or email groupsales@zoo.org

www.zoo.org/planyourevent







JUNE30 case/lang/veirs (neko case/k.d. lang/laura veirs) with special guest ANDY SHAUF

# JULY 17 PHILLIP PHILLIPS & MATT NATHANSON

with A GREAT BIG WORLD

JULY 2 | UB40 featuring ALI CAMPBELL,
ASTRO & MICKEY with THE WAILERS

**JULY 24 THE B-52s** 

with special guest THE ENGLISH BEAT

JULY 26 "WEIRD AL" YANKOVIC \*\* THE MANDATORY WORLD TOUR

**AUGUST<sup>2</sup> ZIGGY MARLEY** 

with special guest STEEL PULSE

AUGUST3 PINK MARTINI featuring &4 CHINA FORBES & STORM LARGE

AUGUST 21 JEFF BECK

AUGUST 23 BRANDI CARLILE & 24 with THE SECRET SISTERS

more than just money

BECU

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Tickets available at zoo.org/zootunes





# Cool, clear water. A refreshing reminiscence of

summertime afternoons, water is universal in its ability to relax us and inspire play. The simple, splendid feeling of dipping one's toes is enjoyed by creatures big and small. At the zoo, water features are a priority. Animals need access to water for drinking, bathing and temperature control, of course; but just like us, animals also enjoy water for recreational play. Exhibits are built with water features that mimic streams, ponds, rivers and even ocean shores. During the summer months, keepers help animals keep cool with pools,

aficionados in our midst. Water is a critical resource for every living thing, so while we depend

sprinklers and hoses. If you've ever watched one of our grizzlies

splash around, or witnessed the joy of an otter sliding down its

slick-rock waterslide, you'll agree that we have some true H<sub>2</sub>O

on water for the comfort and safety of our animals, we also have a responsibility to reduce our consumption. Over the last 13 years, we've already reduced the zoo's water use by 46 percent. Our goal is to reduce our water use by another 30 percent by the year 2020.

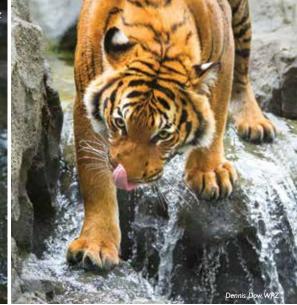
During the summer it's especially important to remember that reducing your water consumption just a bit can have an incredibly positive impact in our region. People think of Washington as a lusciously damp place, but most of the water we use comes from snowpack rather than rainfall. It's not just about having enough water, but also reducing runoff and overflow that can carry pollutants and harmful chemicals to the Puget Sound.

# THERE ARE A FEW SIMPLE THINGS YOU CAN DO AT HOME TO REDUCE WATER USE DURING THE SUMMER:

- Keep your lawn naturally watered with rain—brown is the new green!
- When washing clothes, use full loads and set your temperature to cold.
- Replace inefficient shower heads to save up to 2,300 gallons a year.
- Leaky plumbing is a huge water waste. Tighten faucets and fix leaky toilets.





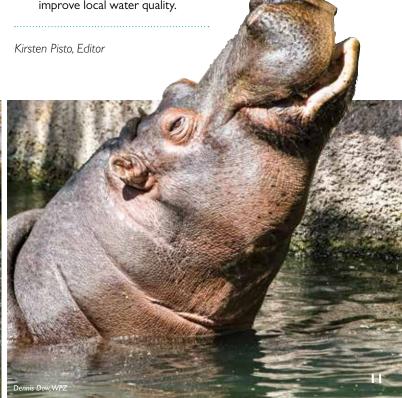


# How will the zoo save water?

- We'll continue to fit exhibits with green designs that use naturally efficient filtration systems. These systems are already in place at the Humboldt penguin and Asian small-clawed otter exhibits. The rainwater filtration system at the West Entrance is built to prevent the runoff of approximately 975,000 gallons of storm water annually. These systems save millions of gallons of water a year and keep our Puget Sound waterways clean from runoff and overflow from the sewer system.
- This year, the zoo's irrigation system controllers were replaced
  with new technology thanks to the Seattle Park District Fix it First
  maintenance fund. Controlled by the weather station located
  on Zoomazium's roof, the system uses water saving software to
  irrigate the zoo at night with only the necessary amount of water
  in places that need it most.
- Our horticulture team reduces water waste by soaking plants early in the morning when it's most advantageous and using mulch to allow water to infiltrate the top soil. Various landscapes on zoo

- grounds use drip irrigation. This applies water precisely where it is needed, minimizing waste through runoff and evaporation. Drip averages a 20-50% savings over conventional irrigation.
- The Zoo Doo composting yard has an effluent capture system, where water that falls on the composting area is caught in a holding tank and reused to wet the compost with a pump and hose during the summer months. This results in a savings of tens of thousands of gallons annually.
- All the men's restrooms in the zoo use waterless urinals. This
  well-established technology saves up to 40,000 gallons per year,
  per unit replaced.
- The new Otter parking lot added in 2015 has a 100% storm water infiltration capture system built in, as well as a significant area of pervious blacktop that helps improve local water quality.









# **Member Item of the Month**

Wild Talk – \$6.00 through July 1, 2016 (regular price \$10.00).

Take a break with the family to connect children to the natural world through conversation cards. This 20-card deck features themes such as leadership, cooperation, and patience to serve as conversation starters about family values and conservation stewardship.

Perfect for ages 4-9 and up!





**JOIN US** for a fun and memorable evening to celebrate the animals and cultures of the Great Northwest!

- · Silent and live auctions
- Exclusive animal tours
- Wine toss game and raffle
- · Gourmet sit-down dinner
- Live entertainment
- After party
- · And much more!

Jungle Party, Seattle's most anticipated summer fundraiser, welcomes more than 1,000 of Puget Sound region's civic and philanthropic leaders. Each year, Jungle Party raises more than \$1 million to help maintain and raise our level of excellence in animal care and exhibit design, support wildlife conservation locally and globally, and provide STEM and wildlife education programs for people of all ages.

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CO-TITLE SPONSORS







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Someone can smell that hotdog from 20 miles away.

# BEAR AFFAIR:

LIVING NORTHWEST CONSERVATION

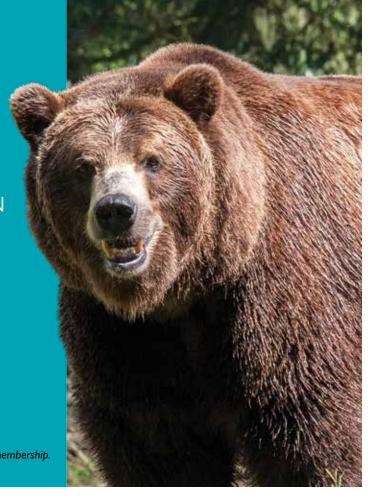
Presented by Brown Bear Car Wash

Join us for a close-up look at bear safety and conservation.

www.zoo.org/bearaffair

June 4, 2016 9:30 a.m.-3:00 p.m.

Free with regular zoo admission or membership.



# IN BLANKIN

# Is there any creature more deserving of a bountiful

summer garden than the butterfly? Seemingly emerging from the garden's own colors, butterflies make their way to our backyards in early spring, gracing us with their presence until late fall. Providing a flutter of benefits to your garden, these pollinators are not only easy to attract, but beneficial to the health of the neighborhood.

Building a butterfly-worthy yard means providing a range of plants to support each stage of a butterfly's life cycle, from eggs to caterpillars to chrysalises to adults. Planting a variety of flowers and shrubs will entice these beautiful insects to stick around, as well as attract other pollinators such as hummingbirds and honeybees. The pleasure of watching these winged wonders is a sweet reward.

# ALL ABOUT THE SUN

Butterflies are most attracted to warm, sunny areas which are sheltered from the wind. Think about planting near a southeast facing wall, a warm brick walkway or a sunny patio. Ideally, offer at least **six hours of direct sun** during the day.

# **NECTAR, PLEASE!**

Butterflies rely on energy-rich nectar to keep them going. Choose **brightly-colored, fragrant blooms**, especially reds, pinks and purples. The flowers featured on this page are all good choices and happen to be a butterfly's favorite.

# **GO ORGANIC**

Insecticides are detrimental to butterflies (after all, they are insects). Choose a natural **diversity of plantings**—which limits the need for pesticides—over spraying harmful chemicals.













# 6



# A PLACETO GROW

Consider a caterpillar's diet. These critters need a steady supply of leaves—many of which may already be growing in your yard. **Rhododendron, salal, lupine, madrona, bleeding heart, pine, alder and maple** are all on the menu. Grouping these plants together in a sort of nursery site provides excellent nourishment for hungry caterpillars.

# **DAMP PUDDLES**

Butterflies drink from patches of wet soil—called **puddling**—so you may already have the perfect set up here in the Northwest. If you have a particularly sunny yard, try a few small saucers sunk into the ground, which will help catch moisture. (Pro-tip: Head to the thrift store to score some pretty tea cups or saucers which make perfect butterfly mud baths. Be sure they are placed in a safe area of your yard where pets or children won't mistakenly trample them.)

# **BASKING STONES**

Butterflies spend cool mornings warming themselves by stretching out their wings on warming rocks, heated by the sun. Consider placing a few **large stones** near your butterfly plants, which will also give your garden texture and contrast.

By Kirsten Pisto, Editor Photos by Kirsten Pisto

















# NAME A BUTTERFLY IN OUR NEW EXHIBIT! BUTTERFLY IN OUR NEW EXHIBIT!











Experience a magical, aerial journey this summer and make it your own. Our Molbalk's Butterfly Garden promises evocative, sensory experiences of verdant smells, vibrant colors and fluttering interactions with nearly 500 butterflies.

When you make a charitable gift this season, we'll recognize your generosity with a special opportunity to name a butterfly in our new exhibit!

# JOIN OUR BUTTERFLY MOVEMENT

- Make a gift to the zoo's Annual Fund at zoo.org/nameabutterfly
- Choose your favorite butterfly species from four different options
- Give your butterfly a name!

In appreciation of your generous support, you'll receive a digital certificate, perfect for sharing or gifting, plus your butterfly's name will be displayed all summer long on signage just outside our butterfly exhibit!

Gifts of any amount make a big difference in our work to preserve pollinator habitats, restore threatened butterfly populations and educate millions of visitors about the importance of biodiversity in sustaining all life. Thank you for your support!

# www.zoo.org/nameabutterfly

Name a Butterfly recognition signage is temporary and shall remain on view until September 30, 2016. Please see zoo.org/nameabutterflyFAQ for your details.

# MEMBERSHIP MATTERS

# TOP 10 REASONS WHY IT'S GREAT TO BE A MEMBER

Summer is here—time to get outside, soak up the sunshine and visit your favorite animals! In case you need any more reasons to enjoy your membership, here are 10:

- 1. You have free access to a full lineup of summer events! Don't miss Bear Affair (June 4), Red, White & Zoo (June 30 & July 1) and, Wild Asia: Asian Wildlife Conservation Day (August 13). Bring two of your favorite animal lovers for half-price!
- 2. Explore **Molbak's Butterfly Garden** during a special upcoming member preview! Look for an email with event details.
- 3. Our raptor flight program takes off at 11:30 a.m. daily (except Weds.)
- 4. **Get close to our all-star ambassador animals** during daily presentations at our new Alvord Broadleaf Theater behind Zoomazium!
- 5. Jump in line inside the zoo and secure a spot on the meadow before the general public at the next **ZooTunes** concert (just bring your member card and concert ticket).
- 6. **Unlimited zoo access!** Pop in for a quick morning walk or swing by after work and de-stress with a book on the meadow.
- 7. Daily zookeeper talks! Hear it from our experts.
- 8. **Summer travel plans?** Members receive half-price admission at more than 150 zoos and aquariums across America! (www.zoo.org/reciprocal)
- When you joined, your backyard grew 92 acres! Picnic on the North Meadow, stroll through the Rose Garden, and look for orchids blooming in the Tropical Rain Forest.
- 10. Best of all, you're helping save wild animals and habitats. Your support helps tree kangaroos in Papua New Guinea, tigers in Malaysia, and gorillas in Africa, just to name a few. Thank you for your support—we love you, members!

**Questions about your membership?** We're here for you. Contact Membership Customer Service at membership@zoo.org or 206.548.2425.





Sharing your photos on social media?

Use #WPZmember

# **MYZOO**







# RESTORING RARE BUTTERFLIES

# Inside the zoo's butterfly conservation lab,

I squint at the tiny larvae that somehow seem not much larger than the period at the end of this sentence.

When I ask Erin Sullivan, Woodland Park Zoo collection manager and entomologist, how big they will get when they become adult butterflies, she demonstrates by pinching the gap between her thumb and index finger.

"Pretty big," she says without irony.

In the world of butterflies, size is measured in pinched fingers and adult life expectancy in mere days. In the world of butterfly conservation, however, there is nothing small or short lived about our effort to restore the threatened Oregon silverspot butterfly, a native of our beautiful Northwest.

For 15 years Woodland Park Zoo has joined Oregon Zoo, U.S. Fish and Wildlife Service, The Nature Conservancy, and other partners to preserve silverspot butterflies on Oregon's coast as part of our Living Northwest conservation program. The butterflies play an essential role as pollinators and though they fly the skies for just a few weeks, it takes all year to assure their success.

Each summer, U.S. Fish and Wildlife biologists collect female butterflies and send them here, where they lay eggs inside our

The butterflies play an essential role as pollinators and though they fly the skies for just a few weeks, it takes all year to assure their success.

conservation lab. After the eggs hatch, the small larvae take a big drink of water, find their way to tiny corrugated cardboard yurts that we provide for shelter, and snuggle in for the winter. Winter is spent in a state of diapause within carefully managed microenvironments built inside jars. The jars are refrigerated for months to keep their environment stable and controlled during this time of inactivity.

As Erin explains, when you consider how hard you need to work to ensure a head of lettuce keeps in your fridge for a week, you can start to understand how it's no small task to keep hundreds of larvae thriving inside a refrigerator for nine months!

In the spring, we rouse the caterpillars from their winter slumber. Then the real hands-on care begins. For the zookeepers and ZooCorps teen interns who raise these larvae, it's a daily exercise in devotion and attentiveness. These caterpillars are picky eaters!

Just like the giant panda is synonymous with bamboo and the koala is synonymous with eucalyptus, the Oregon silverspot butterfly is a specialist whose diet is made up exclusively of early blue violet plants (*Viola adunca*). The crew spends hours each day hand-picking violet leaves off the hundreds of plants tenderly grown by our horticulture staff from the seeds of the very same wild violets found along the Oregon coast. The pupae are fed, cleaned and tended to day in and out.

Throughout the summer, as the larvae mature into pupae, they are packed up and shipped to Oregon where our conservation associate then makes regular trips to release them into the field. In violet-rich meadows along the coast, we place the pupae inside small protective enclosures. Within a week they transform into butterflies, outstretching their wings and flying away on a coastal breeze.

# BEACIDA



# FOR A WILDER NORTHWEST

Each summer culminates with a rewarding trip down to the coast for the dedicated keepers and interns to release the last of the pupae. For them, the butterflies that flutter by are an encouraging reminder of a cycle about to renew. Soon, some of the female butterflies will be sent to the zoo to lay their eggs and start the whole process over again.

Over the years, thousands of butterflies have received a head start on life here at Woodland Park Zoo. For our augmentation efforts truly to make an impact, we need to assure the future of their habitat is protected too. Silverspots once called the coasts of Washington, Oregon, and parts of California home, but now populations survive only in Northern California and Oregon, where our restoration efforts are concentrated.

Their habitat is increasingly fragmented and diminished under threats of development, invasive species and more. The choices you make in your home and community, from what you plant in your garden to what you wash down the drain, can reduce the impact on Northwest habitats to the benefit of all (see sidebar).

Save the butterflies, save the plants. Save the plants, save the plant eaters. Save the plant eaters, save the meat eaters. Save the meat eaters, save the health of the habitat. Save the health of the habitat, save the communities that depend on it. Save the communities that depend on it, save ourselves. The inseparable connections bring a whole new meaning to that old trope that one seemingly small change can set off a series of unintended consequences—the butterfly effect.

There is another effect these winged jewels have had on us: hopefulness. Back in the butterfly conservation lab, sun begins to stream through the windows. It transforms the space with a light that hints at a brighter future ahead for a wild Northwest.

# WHAT YOU CAN DO

To protect Northwest butterflies, pledge to take one or more of these simple actions:

## Go native

Native pollinators like butterflies need native plants to thrive. Visit our backyard demonstration garden in the Family Farm to pick up easy tips on how to incorporate native plants into your home and community gardens.

# Keep your dirt clean

Using native plants and compost like Woodland Park Zoo's popular Zoo Doo will help your garden flourish naturally, reducing the need for pesticides that can potentially harm pollinators or drain away into local waterways.

## Raise a glass

A portion of the purchase of each bottle of Pelican Pub & Brewery's award-winning Silverspot IPA supports the Oregon silverspot butterfly restoration project and its partners.











# THRIVE 2016 THANK YOU!

We extend a heartfelt thanks to our Co-chairs Kevin Schofield and Jill Walker and to our generous Thrive 2016 supporters, for helping us create a more sustainable future for both human and non-human animals!

With more than 500 attendees, Woodland Park Zoo's annual fundraising breakfast, Thrive, is on track to exceed this year's \$335,000 goal! All gifts made at Thrive provide direct support for exemplary animal care for our 1,000 animal ambassadors, local and international conservation programs and education opportunities for all ages.

Keynote speaker Dr. Barbara Natterson-Horowitz gave a compelling presentation on how zoos provide critical information about animal health that informs new medical discoveries for better human health and the sustainability of all species. Dr. Natterson-Horowitz is a professor of medicine at the David Geffen School of Medicine at UCLA. Her book Zoobiquity: The Astonishing Connection Between Human and Animal Health explores how animal and human commonalities can be used to diagnose, treat and heal patients of all species.

As Thrive attendees learned, Woodland Park Zoo's approach to animal care, conservation and education is a unique, holistic solution that promotes the health of our planet. Through monitoring local wildlife, innovating new veterinary techniques, and supporting conservation projects around the world, our zoo is working hard to ensure that animals and their wild places have a THRIVING future.

# THANK YOU TO OUR SPONSORS FOR THEIR GENEROUS SUPPORT

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# In-Kind Sponsors



Members receive 10% off face painting, henna, photo memories (new!), handimals and caricatures.

Show your membership card at any kiosk and save now through October 9!

# ZOOPARENT FLAMINGO ADOPTION SPECIAL

# Celebrate summer with a Chilean flamingo adoption!

YOUR ADOPTION PACKAGE INCLUDES:

- Flamingo plush
- ZooParent adoption certificate
- Animal fact sheet
- Online recognition for one year
- · Color photo of animal
- ZooParent window cling

Or, upgrade your adoption to the \$100 level and get two one-time-use admission passes and your name on the ZooParent recognition sign on grounds for a full year, starting March 2017!

\$5 from every ZooParent adoption directly supports the zoo's conservation efforts in the Pacific Northwest and around the world.

Visit our Chilean flamingos at the zoo, then go online to zoo.org/zooparentspecial to adopt one today.

Hurry! Offer expires July 31, 2016.



# It's difficult to find fault in a flamingo. Its vibrant pink

feathers, bold beak, perfectly long neck and stilt-like legs make it unlike any other and a fixture of popular culture. From Alice's adventures to an art deco casino that shares its name, and everstationed as a decorative lawn ornament, there's no denying these beauties appear everywhere. More than just its looks, this species is an important player in a range of ecosystems. Here's a closer look at our own flock of Chilean flamingos that lives in the Temperate Forest at Woodland Park Zoo.



# THE ZOO'S FLAMBOYANCE

Currently, the zoo has 39 Chilean flamingos: 17 males, 22 females. Of the 39 flamingos currently living at the zoo, 22 are from the original group brought here in 2006. It is unknown how old the original 22 are, but it is estimated they are at least 40 years old. Some individuals might be 60 or 70 years old. The youngest bird in the group is a female that hatched at the zoo on August 31, 2013.

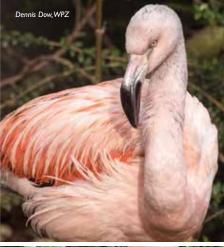
# **FLOCK FACTS**

Flamingos have highly recognizable physical features, all of which serve a purpose. Standing in water, a flamingo uses its long legs to stir up the mud, while holding its head upside down to scoop up water and food with its highly specialized beak. Pigments found in their food provide the familiar and characteristic coloration of the feathers, legs and beak. In stark contrast to their overall pink plumage, all flamingos have black flight (wing) feathers which vary in length and placement.

Relative to their body size, flamingos have the longest legs and necks of any bird. This allows them to wade in deeper waters to reach food. They also have webbed front toes to provide stability when walking in mud and to help with swimming.

# TRUE SEATTLEITES

Chilean flamingos are extremely hardy birds that can withstand cold, wet climates. They regularly live in lakes at altitudes up to 15,000 feet, as well as at sea level during the winter months. These lakes are usually inhospitable to all living creatures except for algae, diatoms, aquatic invertebrates, flamingos and other birds. As far as Seattle weather goes, Chilean flamingos can handle it. The flock is exhibited year round, even during snowy conditions.









# THERE ARE SIX SPECIES IN THE FLAMINGO FAMILY

Greater flamingo

American flamingo

Chilean flamingo

Lesser flamingo
Andean flamingo
Puna flamingo

Chilean flamingos have an extensive range throughout much of southern South America in Peru, Bolivia, Chile, Argentina and Uruguay. The flock at Woodland Park Zoo

consists solely of Chilean flamingos.

# BIRDS OF A FEATHER FLOCK TOGETHER

Chilean flamingos commonly live with Andean and Puna flamingos. The size of a colony varies, from 10,000 to 20,000 birds. Chilean flamingos have a slightly different beak structure from Andean and Puna flamingos, which allows them to feed on different types and sizes of food at greater depths. Thus, different species of flamingos within a combined flock do not compete for food resources and the large colony provides security from predators.

Flamingos not only eat together, they fly together too. Flamingos take flight together in lines or "V" formations. Unlike some water birds such as ducks, flamingos cannot simply begin flying from a stationary position. Instead, they must run extensive distances to build up sufficient speed and lift before they can take off. Once airborne, their flight speed can reach 37 mph (60 kmh).

# I ONLY HAVE EYES FOR YOU

All species of flamingos are highly gregarious and live in colonies. Their entire reproductive cycle occurs within a large flock, often consisting of thousands of individuals. Chilean flamingos mate for life.

Females will usually lay only one egg at a time. If an egg or chick is lost early in the breeding season, they are known to nest a second time in a year. The zoo's flamingo pairs have, for the most part, remained monogamous. For some, the relationship status is unknown; there are a few flamingo trios, as well as a few same-sex pairs, that have raised a chick together at the zoo. Breeding within the zoo's colony is not always predictable!

Chilean flamingos are extremely hardy birds that can withstand cold, wet climates. They regularly live in lakes at altitudes up to 15,000 feet, as well as at sea level during the winter months.

Alissa Wolken, Staff Writer





# **EARLY CHILDHOOD CLASSES**

Designed for parents/caregivers to attend with their children.

See our website for class descriptions.

# WALKIN' AND ROLLIN'

Ages: Birth-18 months Time: 9:00 - 10:30 a.m.

Fee: \$100/6-week session each

adult/child pair

9236: Thursdays, Jun 9 - Jul 14

### **TINY TYKE TIME**

Ages: 18-36 months Time: 9:00-10:30 a.m.

Fee: \$100/6-week session each adult/child pair

**9226:** Wednesdays, Jun 8-Jul 13

# YOUNG EXPLORERS

Ages: 2-5 years Time: 9:45-11:00 a.m.

Fee: \$20 each adult/child pair, \$7/ additional

family member 2-5 years

2216: Jun 21, Spinning Spiders 2316: Jul 5, Digging in the Dirt 2326: Jul 21, Poo at the Zoo 2336: Jul 27, Brilliant Butterflies 2346: Aug 4, Peek-a-Boo 2356: Aug 10, Colors of Nature

# **ZOO SPROUTS**

Ages: 3-5 years Time: 10:00-11:30 a.m.

Fee: \$25 each adult/child pair, \$10/ additional

child 3-5 years

3256: Jun I 4, Backyard Butterflies 3266: Jun 28, Sounds of the Savanna 3316: Jul 20, Outrageous Otters 3326: Jul 28, Trek the Northwest 3336: Aug 3, Real Cool Cats 3346: Aug II, Jungle Book Adventures

Each class generally includes an educational presentation and an activity before heading on grounds for a short zoo tour.

**SENIOR PROGRAMS** 

See our website for class descriptions at www.zoo.org/education/adult

Time: 10:00-11:30 a.m.

SENIOR CLASSES

Fee: \$20

5236: Jun 8, The Social Life of Otters 5316: Jul 6, Meats and Treats: Animal Diets 5326: Aug 3, New to the Zoo: Butterflies

### SENIOR ZOO WALKERS

For individuals 55 and older, please see our website for information at www.zoo.org/education/adult

# **PARENTS' NIGHT** OUT

Kids will enjoy a fun-filled evening with zoo staff inside Zoomazium while you enjoy a night out on the town. Supervised activities include games, an educational film, a live animal encounter, plus pizza for dinner!

Ages: 4-11 years Time: 5:30-10:00 p.m.

Fee: \$30/child, \$22 each additional sibling

# **PNO: ZOOMAZIUM**

4226: lun 10 4236: Jun 18 4316: Jul 23 4326: Aug 13

# **NEW PNO: AFRICAN VILLAGE**

1316: Jul 9 1326: Aug 27

# **ZOO OVERNIGHT AND EVENING ADVENTURES**

All Zoo Adventures include a pizza dinner and an exclusive after-hours look at the zoo! Overnight Adventures also include a light breakfast. Zoo Adventures are offered March through mid-November. Program runs rain or shine so come prepared for any weather.

Ages: 7 years and up

Time: Overnight Adventures run

6:30 p.m.- 9:30 a.m.

Evening Adventures run 6:30-10:00 p.m. Fee: Prices range from \$38-58/person, depending on program selected.

For more information and to register, visit www.zoo.org/overnights. Questions? Email classes@zoo.org

## ADVENTURES FOR SMALL GROUPS

Aug 6: Stealthy Science: Research After Dark Aug 19: A Zookeeper's Life for Me!

# **ADVENTURES FOR YOUR GROUP** OF 22 OR MORE:

- A Zookeeper's Life for Me!
- Stealthy Science: Research After Dark
- · Living Wild! Living Wild! is now offered with the option of sleeping indoors

### ADVENTURES FOR SCOUTS

Multiple dates are available for small scout groups; information is available on our website.

# **BUG CLUB**

Ages: 5-12 years

Time: 10:00 a.m.-noon, generally the fourth

Sunday of every month

Fee: \$55 per guarter plus a one-time \$12 materials fee for new members

# **SUMMER CAMPS**

Camps at Woodland Park Zoo are a terrific blend of learning and fun!

Age Requirements: Ages listed for each camp indicate the age the child must be before the first day of camp.

Spaces are still available in many sessions. Summer Camps are offered June 27-September 2.

For the safety of the animals and participants, students will not have direct contact with the zoo's animals. Children are assigned to age-appropriate groups.

We cannot accommodate all "group with" requests.

# Extended Day for all summer camps:

Mornings available Tuesday-Friday, 8:00-9:00 a.m. **Fee per child:** \$28 Tuesday-Friday or \$8/day Afternoons available Monday-Friday, 4:00-5:30 p.m. **Fee per child:** \$50/week or \$12/day

# Kinder Camp

Children must be **fully** potty trained. North and South End curricula are offered each week throughout the summer

NORTH END: Children will be based in the carousel party rooms and from there explore animals of the Northern Trail, Tropical Asia, Australasia and more! Drop-off and pick-up for these sessions take place at the zoo's old North Entrance.

**SOUTH END:** Children will discover the wonders of the African Savanna, Tropical Rain Forest and other exhibits on the southern half of the zoo. Drop-off and pick-up for these sessions take place at the Education Center entrance near the zoo's South Entrance.

### Half-day Session:

Ages: 3-4 years
Time: 9:00 a.m.-noon

Fee: \$180

# Full-Day Session:

**Ages**: 4-5 years

Time: 9:00 a.m.-4:00 p.m.

Fee: \$295

# Zooper Day Camp

We offer two themes so campers can attend one or two weeks of Zooper Day Camp. Each curriculum is offered every other week.

•••••

**ANIMAL OLYMPICS:** Join us to compare the athletic feats of wild animals to those of humans competing in the Olympics. We will learn about teamwork, competition and specialization (whether among animals or human athletes) and learn about those mind boggling record setters.

**KINGDOM OF ANIMALS:** There are so many animals on this planet, how do scientists keep track of them all? We will explore the organization of the animal kingdom while practicing our classification skills on animals found around the zoo.

### Half-day Session:

Ages: 4-6 years Time: 9:00 a.m.-noon

Fee: \$180

# **Full-Day Session:**

**Ages**: 5-9 years

Time: 9:00 a.m.-4:00 p.m.

**Fee**: \$295

# Ryan Hawk, WPZ

# Discoveries Day Camp

Offered in partnership with Seattle Children's Theatre Drama School, Discoveries Day Camp offers a blend of theatrical and environmental education.

Registration For Discoveries Day Camps is through Seattle Children's Theatre.

To register, call 206.443.0807 ext. I186 or go to www.sct.org/School/Classes.

**MAGIZOOLOGY:** Together we will embark on adventures to feed dragons, keep disappearing creatures in their exhibits, and build a new home for a baby chimera at our magical zoo.

**I SPY:** As a secret agent, you will use your detective skills to track down a culprit and solve a mystery of the animal kingdom!

### Full-day Session:

**Ages**: 5-7 years

Time: 9:00 a.m.-4:00 p.m.

**Fee**: \$335

# Zoo University (Zoo U)

10 to 14 year olds study more advanced subjects while playing topic-based games and making new friends at the zoo. Group age offerings vary by week. Each curriculum is offered weekly, depending on students' age.

**ANIMAL MANAGEMENT:** What does it really take to provide for the animals in a zoo? How does a zoo decide which animals to keep and where to put them? Join us to take a closer look at how this process happens at our zoo.

**LIVING WITH WILDLIFE:** Wild animals don't just live in exotic far-off lands, we have wild animals right here in our backyards. We'll learn how to be good neighbors to wildlife, whether they are wolves, bears, birds or raccoons, and how the decisions we make every day affect wildlife near and far.

### **Full-day Session:**

Ages: 10-14 years

Time: 9:00 a.m.-4:00 p.m.

Fee: \$320

# Ages 6-10

# Cool as a

# CATERPILLAR

You already know caterpillars turn into beautiful butterflies and moths, but here are some incredibly cool facts about these amazing larvae!



Did you know caterpillars sense touch through tiny hairs all over their bodies? They use special **setae**, as well as their antennae, to navigate across plants and branches.



Instead of breathing through their mouths, caterpillars breathe through tiny holes on the side of their body called **spiracles**. Their mouth and powerful jaws, called **mandibles**, are reserved for chewing all that food to help them grow quickly.



to protect them from predators, while others are brightly **colored!**Caterpillars can be **poisonous**, depending on the type of plants they eat.

Caterpillars eat a ton, but they are quite **picky** eaters. Most species prefer only one or two types of plant.



Caterpillars have six pairs of eyes called **ocelli**, or **stemmata**. They also have eight pairs of legs, but only the first three pairs, called **thoracic** legs, will become butterfly legs.

Most caterpillars molt up to five times, **shedding** their exoskeleton when it becomes too tight.



Aaron Headly, via Flickr

Moths vs. Butterflies

How to spot the difference.



Thick bodies

Most fly and eat during the night (nocturnal)

Typically have dark, duller colors

Rest with their wings open (flattened)

Have feathered antennae

Usually hairy bodies

Wings

Fly

Six Legs

Antennae

**Proboscis** 

Metamorphosis

Have head, thorax and abdomen

Use camouflage

BUTTER ALL

Most fly and eat during the day (diurnal)

Typically have brighter colors

Rest with their wings pointed upwards

Have straight or clubbed antennae

Usually smooth bodies

K Z Y T S Q D W F P Q W Z V W F A X H A X R I N S E C T C I L F E O S O C W T B O N L H N Y R V R Q A N T E N N A E E G M E T A M O R P H O S I S A S D V Q X C Y I Q N Q D Y Z D Z I O A B D O M E N O S I M P P I T C A M O U F L A G E X C K P R O B O S C I S V H S C R U Y P H D H I F L V N D I V A X

# Can you find these words?

**METAMORPHOSIS** 

**ABDOMEN** 

**HEAD** 

**CAMOUFLAGE** 

INSECT

**FLY** 

**PROBOSCIS** 

**THORAX** 

**ANTENNAE** 

**WINGS** 

Answer key on page 31





Sipping From a Flower

Butterflies and moths have a special part in their mouth, called a proboscis, to reach deep into flowers to drink nectar. The **proboscis** is shaped like a straw. When they aren't drinking nectar, butterflies curl their proboscis back into their mouths.

Can you make a straw shape with your mouth?

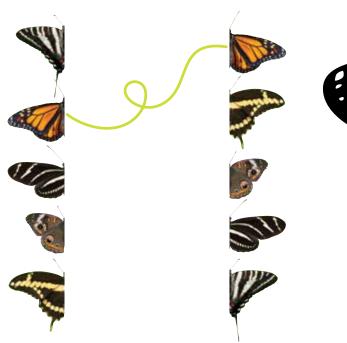


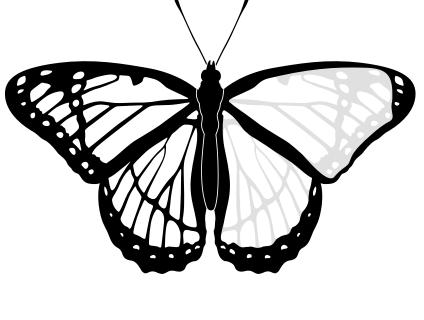
Can you match the left wing with the right wing? Butterflies have the same pattern on both wings.

Draw a line to connect the symmetric pairs, the first one is done for you.

Can you complete the missing wing pattern?

Try to mirror the left wing by tracing the pattern on the right wing.







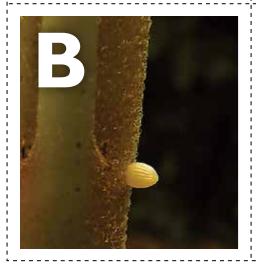
















Ask an adult to help you cut out the squares above. Then, arrange them in order according to the butterfly life cycle.

Use the **BUTTERFLY** clue to help spell it out.

WORD SEARCH ANSWER KEY: K Z Y T S Q D W F P Q W Z V W F A X H A X R I N S E C T C I L F E O S O C W T B O N L H N Y R V R Q A N T E N N A E E G M E T A M O R P H O S I S A S D V Q X C Y I Q N Q D Y Z D Z I O A B D O M E N O S I M P P I T C A M O U F L A G E X C K P R O B O S C I S V H S C R U Y P H D H I F L V N D I V A X

