

INTERNATIONAL WOLF



A PUBLICATION OF THE INTERNATIONAL WOLF CENTER
SUMMER 2018

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Upcoming Adventure Vacations

at the International Wolf Center

Wolves & Women's Weekend:

Boundary Waters Adventure

September 14-16, 2018

Friday 4 p.m. CDT- Sunday 9:00 a.m. CDT

In the company of women with schedules as hectic as yours, come and relax with us in the wilderness. Learn about wolves, enjoy the natural environment, and slow it all down with some wine, some cheese, and a lot of friendly conversation. We'll gather at the Northern Tier High-Adventure Canoe Base to kick off a weekend of canoeing, radio telemetry and trekking through the crisp, beautiful northwoods. It's an outdoor learning adventure that's good for the soul and the environment.

Registration Deadline: September 1, 2018

Fees: Non-member \$250, Member \$225

Tracking the Pack

September 28-30, 2018

Friday 5 p.m. CDT- Sunday 10 a.m. CDT

Join us for this wolf-research adventure, and experience the life of a wildlife biologist for one weekend. At the International Wolf Center, discuss wolf research and management with experts. Learn about tools biologists use to locate and study wild wolves—and then head into the field with telemetry equipment to search for the collar signals of wild wolves in the area. After the "What's for Dinner?" Program Saturday night (when the ambassador wolves are fed in the observation area), we'll take to the woods for a howling safari. A Sunday morning wrap-up allows time for Q & A.

Registration Deadline: September 14, 2018

Fees: Non-member \$160, Member \$144



For more information, or to register, visit WOLF.ORG

Wolf and Dog Cognition: The Human Factor

By DEBRA MITTS-SMITH

Comparisons between wolves and dogs, ranging from physical characteristics to behavioral traits, are common in popular books about each species. In books about wolves, the comparisons help render a wild, unfamiliar animal more understandable—and perhaps more sympathetic. In books about dogs, the comparison to wolves raises the stature of the dog, lending it a kind of wild nobility while helping to explain some of a dog's behaviors. And similarities are, of course, understandable, since the wolf is the dog's closest genetic relative.

But popular works are not the only place in which differences between wolves and dogs are considered. Evolutionary biologists, anthropologists, veterinary scientists and cognitive scientists are just some of the researchers who study these canines to better understand the effects of domestication on dogs. One recent study is “The effects of domestication and ontogeny on cognition in dogs and wolves” by Michelle Lampe, Juliane Brauer, Julianne Kaminski and Zsofia Viranyi, an international group of researchers from a range of disciplines.

The investigators conducted their research at the Wolf Science Center (WSC) in Austria (see Summer 2014 *International Wolf* magazine). The WSC offers researchers the unique opportunity to study wolves and dogs raised in near-identical ways; each species lives in packs (of their own kind) in a large, fenced enclosure. In addition to being socialized with others of their own kind,



Asali pack: Pack dogs Asali, Banzai and Bora together with trainer Christina.

the wolves and dogs are socialized with humans. Human handlers bottle-feed the pups, and continue providing regular physical contact and social interaction throughout their adulthood.

The near-identical living conditions and upbringing help ensure that wolves and dogs have similar backgrounds, which in turn helps researchers distinguish between traits rooted in evolutionary changes and traits due to differences in life experience. Researchers included pet dogs in trials, as well. Pet dogs volunteered by their human families were included to help researchers learn if dif-

ferent kinds of experiences from living with human families might have an effect on the dogs' social learning and problem-solving abilities when compared to the dogs living in packs. As Dr. Viranyi explained, a range of test subjects, from human-socialized wolves to pack dogs and pet dogs, helped researchers “tease apart the influence of domestication from raising and living conditions.”

The test consisted of six trials. The participants included 12 of WSC wolves, 14 WSC pack dogs and 14 volunteered pet dogs from human families. Each animal was tested individually.

For each trial, canine participants were placed behind a fence facing the human test administrator who sat behind a table pushed against the fence. Two containers were placed on the table. One contained food; one was empty.

Four of the trials tested the canines' social cognition (their ability to pay attention to and use information provided by the researcher to choose the container with food).

Two trials tested the canines' ability to correctly interpret human-provided communicative cues. Cues included attracting the animal's attention by mak-

ing eye contact, nodding, looking at and pointing at the food-filled container. The wolf or dog indicated its choice by touching one of the two containers.

The researchers also tested each canine's ability to understand and follow behavioral cues. In one trial, the human researcher glanced at the empty container and then "desperately" reached out for the one containing the food. In another, the researcher picked up and sniffed the empty container, replaced it, picked up the full one, sniffed it "excitedly" and tried to open it before placing it back on the table. After the human provided

the cue, the animal indicated its choice by touching one of two containers.

The trials included tests to compare the wolves' and dogs' physical cognition—their ability to identify the food-filled container based on causal cues (sounds and shape). For these trials the human researcher hid under the table, invisible to the canine participants. With the aid of a fishing line attached to each of the two containers, the researcher, from under the table, shook each of the containers. The one containing food made noise while the empty one remained silent, leaving the



Above: Researcher Michelle Lampe performs the reach cue (behavioral cue) in front of wolf Chitto.



While Lampe is hiding underneath the testing table, she shakes a food-filled and an empty container to give wolf Chitto an audible clue (causal cue) about the location of the hidden food.

Lampe performs the look cue (communicative cue) for pet dog Tuukka.

animals to investigate and select the one that had food in it. The second test required the dogs and wolves to choose between differently shaped containers; the empty one was flat while the one containing food protruded outward.

Trial results held a few surprises. Prior to the tests, Lampe and her team had expected communicative cues (nodding, looking, pointing) to benefit pet dogs more than pack dogs or wolves. They reasoned that since pet dogs live in human families, they would be more used to, and therefore more responsive to, human communication in a variety of situations.

The results showed something different. The WSC human-socialized wolves and pack dogs were just as capable as the pet dogs in following such human prompts as nodding, looking or pointing at the food-filled container. Further, although other studies have demonstrated that adult wolves can follow a human “point” to find food, this is the first study to show that they can also follow a human’s gaze to find food.

Since earlier studies showed that wolves were more attentive than dogs to the behavior of their pack mates and human partners, the researchers antici-



The Wolf Science Center offers researchers the unique opportunity to study wolves and dogs raised in near-identical ways.

ated that the wolves would be better at observing and acting upon such gestures as reaching for, sniffing or trying to open the correct container. However, neither wolves nor dogs did well in these tests. Lampe, the principle investigator, suggests that perhaps the cues were too human-oriented or human-specific for the animal participants to take note of or understand.

In the cause-and-effect trials where the human researcher was not visible, the wolves outshone both the pet and pack dogs in identifying and selecting the food-filled container by either noise or shape. Further, there was no difference between the performance of pet and pack dogs. Lacking human help, both failed to make the necessary infer-

ences—noise equals food and bulging shape equals food—to find the food. Their failure to solve the task revealed several things:

- Dogs, whether human-socialized but living in packs or living with humans as pets, benefit from cues provided by humans.
- Even though the WSC pack dogs had similar life experiences and upbringing as the WSC wolves, the dogs failed to complete the task of finding the food without human help.
- Although pet dogs and pack dogs had different life experiences, they both fared poorly, implying that domestication may impair a dog’s physical cognition or ability to make causal inferences.

So what are we to make of these results? According to Lampe and her researchers, the wolves’ ability to make use of information provided by humans confirms “...that wolves can adapt their social cognitive abilities to their social environment, in this case to humans and human communication.”

Since all human-socialized canines (dogs and wolves) were able to follow the researcher’s prompts, tests suggest that domestication has had no effect on how dogs use human-provided cues. Instead, as Dr. Brauer noted, “The wolves’ ability to understand human communicative cues after being socialized with humans may have made it possible to become domesticated.”

However, the success of the wolves in solving the cause-and-effect tasks, and the failure of the dogs to do so, suggests that domestication may have diminished the dog’s problem solving skills. The authors state that more research is necessary to determine whether the wolves succeeded in finding the food because their wild heritage has rendered them more curious and persistent in searching for food, or whether domestication may have left the dogs more dependent on humans for help in obtaining food.

Lampe interacts with pack dog Bora during a pack visit.

Lampe concludes by proposing the “social canine, causal wolf” hypothesis, which argues that “socialized canines are sensitive to human communicative cues, and that the skills underlying this comprehension likely facilitated domestication.”

In addition, domestication may have diminished the dog’s ability to understand and solve cause-and-effect type problems. ■

Additional Reading and Resources

 For more information on Austria’s Wolf Science Center, see the 2014 summer issue of *International Wolf*.

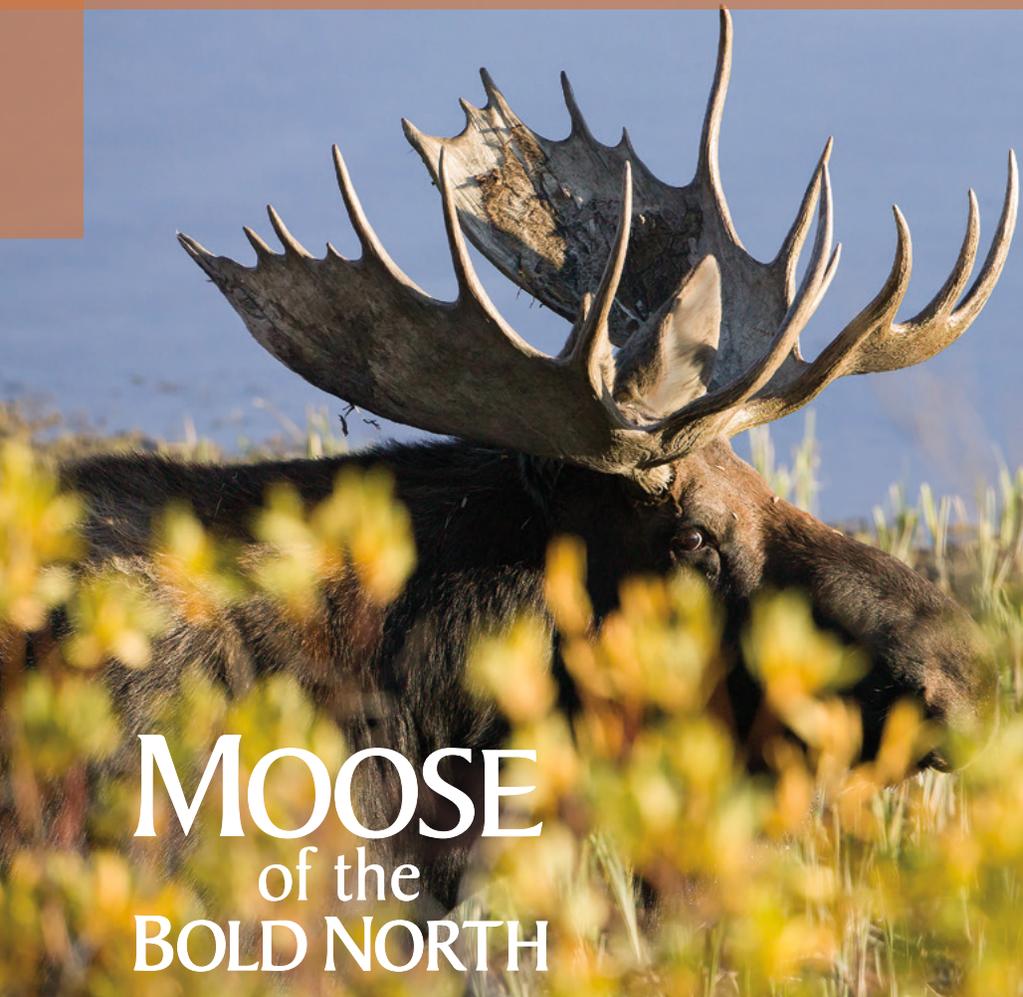
 Lampe, Michelle, J. Brauer, J. Kaminski and Zsafia Viranyi. “The effects of domestication and ontogeny in dogs and wolves.” *Scientific Reports* 7:11690 (15 September 2017): 1-6.

 “Wolves understand cause and effect better than dogs.” *Biology/Plants & Animals* (September 15, 2017). <https://phys.org/news/2017-09-wolves-effect-dogs.html>

Debra Mitts-Smith is a School of Information Sciences faculty member at the University of Illinois. Her research and teaching focus is on visual culture, children’s literature, history of the book and storytelling. Her book, Picturing the Wolf in Children’s Literature, was published by Routledge in 2010.



Cynthia de Jong



SUMMER 2018

at the International Wolf Center

MOOSE of the BOLD NORTH

Moose is a word from the Algonquin that means “twig eater.” These big ungulates are one of Minnesota’s iconic species, and their declining population has put them in the news, increasing public awareness of their plight. The complexities of moose biology and the moose-wolf relationship have made it a challenging not only to determine the cause of this decline, but also to find a solution.

Moose are the largest wild animals in Minnesota and the focus of the International Wolf Center’s 2018 temporary exhibit. The display will provide visitors an opportunity to stand next to an impressive, full-grown moose mount—nearly 6 feet high at the shoulder and close to 10 feet long—the sheer mass of which makes sense of the fact that these animals graze on vegetation for nearly eight hours every day.

“Moose of the Bold North” will provide visitors with insight into research occurring on Michigan’s Isle Royale and in Minnesota.

As prey and predators in coexistence, moose and wolves on Isle Royale in Lake Superior are the subjects of one of the most fascinating, longest-running research projects in the world. Moose arrived on Isle Royale in the early 1900s; wolves arrived almost a half-century later in 1949. For nearly 60 years, researchers have studied their population fluctuations and other aspects of their coexistence, seeking a better understanding of the ecology of predation. The new exhibit highlights this research and hints at what might happen next in the ongoing Isle Royale story.

Research on likely causes of moose population decline in Minnesota began in 2012, with data collection focused on environmental factors, calf mortality and winter survival. The results have surprised some people, as brain worms, ticks and predation have each played a role in moose population fluctuations.

Between now and May 2019, plan to visit the International Wolf Center to experience the “Moose of the Bold North” exhibit—and the stunning photography by Heidi Pinkerton that accompanies it. You’ll come to understand a long-running drama that continues as biologists search for answers to long-standing questions.



Moose photos: Heidi Pinkerton



2018 DAILY PROGRAMS

Wolves in Wildlands

What role do wolves play in their ecosystem? How do they interact and impact the other organisms where they live? Join us for a look at these relationships and discover the importance of wildlands.

Ambassadors to the Wild

Want to know more about our Exhibit Pack? Join this program to learn about each of our ambassador wolves, their histories and behaviors. Then step into the world of wolf biology and gain a better understanding of wolf behavior and pack dynamics!

Arctic Wolves

As arctic wolves, Axel and Grayson are unique. Find out what characteristics arctic wolves have that help them survive in such a harsh climate and learn how they differ from other wolves in North America.

Wolf Enrichment

Looking for the wolves? Wolves typically try to conserve energy and avoid the heat of the day. During this special program, our wolf care staff will encourage our ambassador wolves to actively investigate their enclosure.

The Canidae Family

It's more than their looks that make wolves, coyotes, foxes and dogs different. Behaviors, diets and even vocalizations vary between members of the dog family. Come find out what makes each one unique!

Moose!

How can a moose tower in size and still be so difficult to see in the wild? Learn about this iconic Minnesota animal during this program about moose biology, current research and Minnesota's changing population.

SPECIALTY PROGRAMS

Additional Fees Required

Wolf Explorers

Learn about wolves through interactive games and fun activities. This hands-on program is designed for kids 4-12 years old. Parents must remain on-site and with their child.

Howling Safari

Did you hear that?! Learn about wolf vocalizations before practicing your own howl and venturing into the nearby forest to try howling to a local wolf pack. Don't be surprised if they howl back!

August: Wednesday and Friday at 8:00 pm;
September and October: Saturday at 8:30 pm

What's for Dinner?

Learn about the fascinating feeding behavior of wolves as you watch our Exhibit Pack dine, cache, hide or lay on a variety of prey.

Saturdays at 7:00 pm

2018

ADMISSION FEES

Members	FREE!
Adults	\$ 13.00
Seniors (60+)	\$ 11.00
Children* (4 - 12)	\$ 7.00
Children* (3 and under)	Free

* Children must be accompanied by a paid adult.

HOURS

May 14 - June 10

Sunday - Friday	10 - 5
Saturday	9 - 5

June 11 - August 12

Open daily	9 - 6
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August 13 - October 15

Sunday - Friday	10 - 5
Saturday	9 - 5



Visit
WOLF.ORG
to learn more!

Don Gosselt

WOLF GIFTS & GEAR

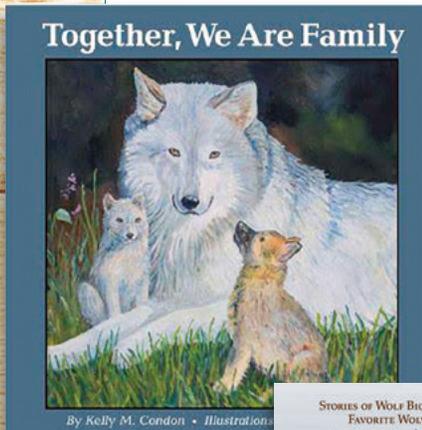
from the
Wolf Den Store

Summer 2018



Plush

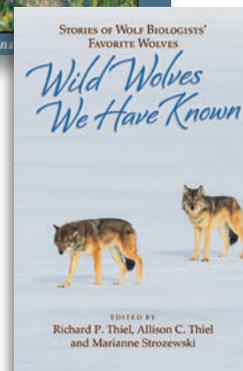
- Clockwise from front center
 4" Baby Wolf #1350 • \$5.00
 8" Gray Wolf #7268 • \$7.95
 12" Gray Wolf #7273 • \$15.95
 11" Timber Wolf #7267 • \$9.95



Together, We Are Family
 #1439 • \$20.00



**The Last Stand
of the Pack**
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**Wild Wolves
We Have Known**
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**Glass
Soap Dish**
 #7414 • \$14.95



**Northern Lights
Fused Glass**
 #7408 • \$24.95



Long Sleeve Raglan T-Shirt
#2252 • \$13.95



Logo T-Shirt
Overdyed Blue, Black, Heather Heliconia
#269P • \$10.00

Wolf Map T-Shirt

Bay #2073p • \$19.95
Khaki #3080p • \$19.95



Necktie

Wolf Face #1846 • \$15.00
Native Wolf #1847 • \$15.00



Children's Cartoon Wolf Sweatshirt

Maroon #2207p • \$28.95
Pink #2211p • \$28.95

Full Zip Raglan Hoodie

Burgundy #2155p • \$33.95
Denim #2146p • \$33.95



Pearle Jewelry

Moose Pin #1580 • \$13.95
Wolf Necklace #3099 • \$14.95
Wolf Pin #1579 • \$13.95



Embroidered Logo Cap

#211P • \$19.95



International Wolf Center

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Twin Cities, MN



Wolves in a Changing World October 11-14, 2018

Four highlights of the 2018 International Wolf Symposium:

While the full schedule for the 2018 International Wolf Symposium is still being finalized, we have some amazing highlights to share. Register now to get in on special early-bird pricing!

Here are just four of the spectacular programs we have planned:

1. A special keynote presentation by Dr. L. David Mech!
2. An intriguing look at 20 years of wolf recovery in Yellowstone with Dr. Doug Smith and filmmaker Bob Landis.
3. "The Last Great Wolf Restoration - Colorado," presented by Mike Phillips.
4. A fascinating panel discussion on "Wolves of the World" will be led by Dr. Sabina Nowak, Dr. Yadvendradev Jhala, Dr. Brent Patterson, Dr. Shannon Barber-Meyer and Dean Cluff.

To register, or for more information, visit

WOLF.ORG



International Wolf Center

**Early-bird registration
closes May 31,
so register now to save!**

This year's event is located at the
Minneapolis Marriott Northwest
7025 Northland Dr N
Minneapolis, MN 55428

Reserve your room online or call 763-536-8300

