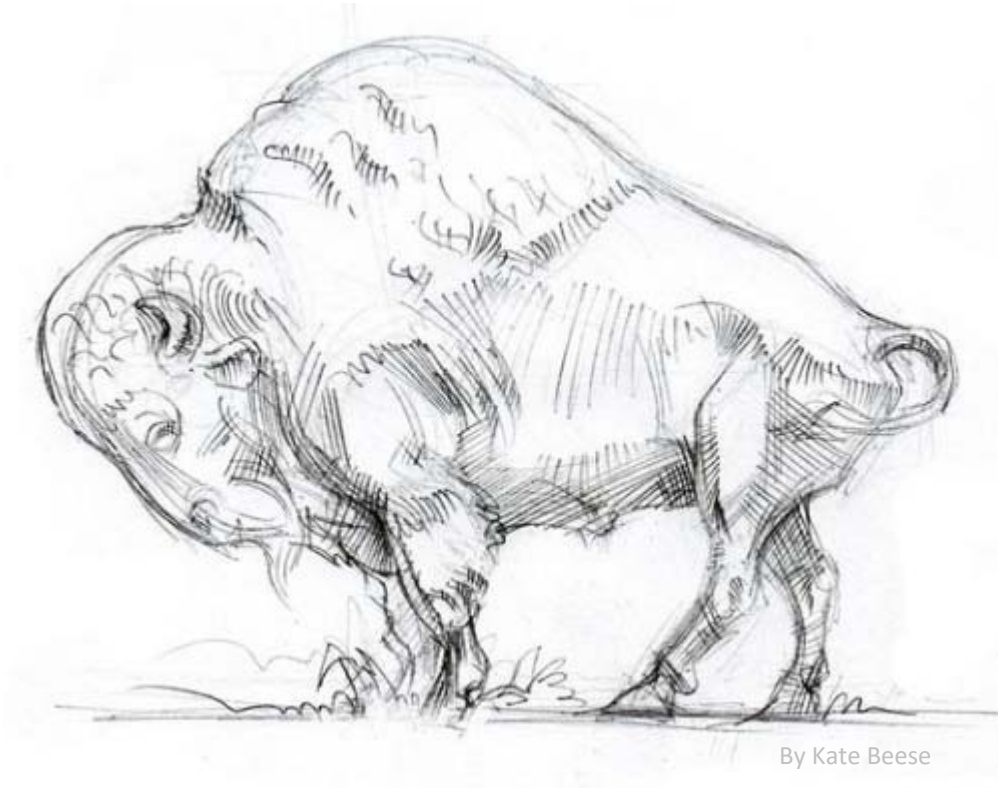
Michael P. Malone Conference 2016

Wild Animals in the Wild West



October 12—October 15, 2016

Montana State University

Bozeman, MT

2016 Michael P. Malone Wild Animals in the Wild West
MSU Graduate Student & Faculty Events

Wednesday, October 12, 2016

All Wednesday events taking place at 1915 Barn

<u>This event is capped at 50 people</u> – Reserve your spot here: https://goo.gl/w0vJg

5:00 pm to 6:00 pm: Dinner

Dinner by Sweet Chili; Veggie & Vegan options available

6:00 pm to 6:30 pm: Film by Dr. Theo Lipfert, MSU School of Film & Photography

Invasion of the Giant Tortoises

6:30 pm to 6:50 pm: Q&A with Theo Lipfert

7:00 pm to 8:00 pm: Keynote Lecture: Dr. Doug Smith, Yellowstone Biologist

The wolves of Yellowstone: The first twenty years

8:00 pm to 9:00 pm: Q&A with Doug Smith

Friday, October 14, 2016

10:00 am to 10:15 am: Opening Remarks and Welcome for 2016 Malone Conference

Dr. Nic Rae, Dean of MSU College of Letters & Sciences
Strand Union Building, Procrastinator Theater

10:20 am to 10:50 am: Presentation: Dr. Susan Cohen, Chair MSU History & Philosophy Dept

How the ancient near eastern snake became the modern western devil
Strand Union Building, Procrastinator Theater

11:00 am to 12:45 am: Undergraduate Poster Session (Open House)

Check out MSUs undergraduates' research on all types of animals
Animal Bioscience Building, Room 138 and Atrium

1:10 pm to 1:30 pm: Presentation: Dr. Walter Fleming, Chair MSU Native American Studies Dept

Deconstructing Wildness
Strand Union Building, Procrastinator Theater

1:35 pm to 2:00 pm: Presentation: Dr. Lucas Mix, Ronin University

The Wide Wild – Astrobiological Insights on Types of Life
Strand Union Building, Procrastinator Theater

2:10 pm to 3:00 pm: Keynote Lecture: Dr. Arik Kershenbaum, University of Cambridge

The Call of the Wild: From wolves to dolphins, what can we really know about animal communication?
Strand Union Building, Procrastinator Theater

3:10 pm to 3:35 pm: Presentation: Dr. Robert Mitchell, Eastern Kentucky University

Pointing Gone Wild: Power and Control Between Humans and Dogs
Strand Union Building, Procrastinator Theater

3:40 pm to 4:00 pm: Presentation: Dr. Jessica Owens, Cooperative Predator Vocalization Consortium

The Matter of Social and Vocal Complexity in an Increasingly Noisy World

Strand Union Building, Procrastinator Theater

4:45 pm to 5:05 pm: Presentation: Dr. Sara Waller, MSU Philosophy Dept

Is Talking to your Cat like Talking with ET?: Signal Exchange between Critters and Folk

Byker Auditorium, Chemistry & Biochemistry Building

5:10 pm to 6:10 pm: Professor Cindy Stillwell, MFA, MSU School of Film & Photography

Film: *Mating for Life*

Byker Auditorium, Chemistry & Biochemistry Building

Saturday, October 15, 2016

Unless noted, all Saturday events will take place at 1915 Barn

9:00 am to 9:25 am: Presentation: Dr. Diane Smith, Research Historian, USDA Forest Service, Missoula Fire Sciences Lab

Animals as Artifacts: Taking the Wild Out of Wild Animals in the Not-So-Wild-West

9:30 am to 9:55 am: Presentation: Dr. Dan Flory, MSU Philosophy Dept

"Zootopia," Predators, and Implicit Racial Bias

10:00 am to 10:25 am: Presentation: Dr. Tim LeCain, MSU History Dept

The Consumption of Humans: Commoditizing the Danger of Wild Grizzly Bear Attacks in Post-War America

10:30 am to 10:55 am: Graduate Speed Talks, Group One

Mariana Olsen: *Using Eye-Tracking to Explore Selective Attention in Dogs*

Cheryl Hendry: *Charismatic Megafauna in an Industrial Swamp*

LaTrelle Scherffius: *Contorted Coyote Carcasses and Modernity*

Emma Narotzky: *Cooperative Predators and the Development of Language*

11:00 am to 12:25 pm: Lunch and Keynote Presentation

Keynote Lecture: **Dr. Lisa Kemmerer, Montana State University Billings**

If I Care about Wildlife, What Should I Eat?

Lunch from Five on Black
Veggie & Vegan options available

12:30 pm to 12:55 pm: Presentation: Dr. Michael Reidy, Malone Professor, MSU History Dept

Animals in the Andes: How Mountain Biogeography led Darwin to his First Theory of Evolution… Which was Wrong

1:00 pm to 1:25 pm: Presentation: Dr. Thomas Baumeister, Carroll College

Keeping Montana Wild--Pragmatism and the Public Good

1:30 pm to 1:50 pm: Graduate Speed Talks, Group Two

Sarah Coletta: *Lake Michigan Landfill: How an Environmental Impact Statement Altered the Fate of a World's Fair*

Kelsey Matson: *Restoring a River – A Fish Eye's View of the Elwha*

Marciso Garcia Neto: *Generalizing and Transferring a GIS-based Species Distribution Model*

1:55 pm to 2:20 pm: Presentation: Dr. Colter Ellis, MSU Sociology Dept

Breeding Inequality: Gender, Heteronormativity, and Capital in Conventional Beef Production

2:25 pm to 2:50 pm: Presentation: Dr. Catherine Dunlop, MSU History Dept

Animals in the Wind: Lessons from the Mistral in Southern France

2:55 pm to 3:20 pm: Presentation: Dr. Anne Perkins, Carroll College

What are they thinking and feeling? How scientists are addressing non-human animal mind

3:25 pm to 4:00 pm: Book Discussion led by Dr. Sara Waller

6:00 to 7:30 pm: Keynote Lecture with Drs. Robert Lurz and Peter Godfrey-Smith

Dr. Robert Lurz, Brooklyn College, CUNY
Appearance-reality discrimination, introspection, and theory-of-mind in chimpanzees
Museum of the Rockies, Hager Auditorium

Dr. Peter Godfrey-Smith, Graduate Center, CUNY
Consciousness and Animal Evolution
Museum of the Rockies, Hager Auditorium

This event is free but tickets are required due to space restrictions; reserve your seat here: www.montana.edu/history (email history@montana.edu or call 406-994-4395 with questions)

7:30 to 8:00 pm: Q&A with Drs. Lurz & Godfrey-Smith
Museum of the Rockies, Hager Auditorium

8:00 to 9:00 pm: Reception
Museum of the Rockies, Bair Lobby

Michael P. Malone Conference Wild Animals in the Wild West Abstracts:

Thomas Baumeister

What sets Montana apart from much of the world is its wildness—its wild lands, wild rivers, wild animals, and wild living. Its untamed and intact landscape teeming with wild things and wild experiences have become its signature brand. But this didn't just happen by accident. Deliberate and thoughtful actions by citizens of the state who could not envision living without wildness have made Montana what it is today. Through vignettes on coexisting with wild animals, this presentation shares the unique story of Montana over the last one hundred years. With the *public interest* as a normative guide, Montana has championed an environmental ethic which is deliberate, pragmatic, pluralistic, and democratic. Drawing on philosophy, history, sociology, and biology, this presentation articulates the basic tenets of this ethic and offers an assessment as to its ability to sustain Montana as the wildest places left in the formerly Wild West.

Susan Cohen

The association of the devil and evil with snakes in western culture draws on a long interpretative history, primarily based on the dominant Christian interpretation of Genesis 3. Despite the fact that the word "devil" (or any of its equivalents) appears nowhere in the text itself, the view of the snake as a representation or symbol of the devil in western traditions derives its origins from this story. This perception, however, stands in opposition to centuries of interpretative traditions in the societies of the ancient Near East preceding the Christian era—including the early Israelite society described in the Hebrew Bible—in which the snake represented learning, wisdom, knowledge, and healing. The view of the snake as conceptual evil and/or the incarnation of the devil himself developed out of a later particularized interpretation of the story preserved in Genesis 3, read through the lens of specific contemporary views of human nature, the divine, and theodicy. This paper will present views of the snake in the ancient world, and explain how the snake of knowledge in the ancient Near Eastern world because the serpent of the devil in the west.

Sarah Coletta

In the early 1980's, a group of businessmen and architects began planning a World's Fair in Chicago. The proposed 1992 Fair was designed, in part, to revitalize the South Loop, and Skidmore, Owings, and Merrill's plans required significant landfill to expand the Lake Michigan shore in that neighborhood. A number of community groups protested the Fair, demanding greater transparency and community involvement. During the 1983 preliminary scoping hearings held by the Department of Commerce for the Environmental Impact Statement (EIS), non-profit organizations protested that World's Fair planners had intentionally withheld documents pertaining to the EIS to prevent community input. The furor over the EIS proved a turning point in the battle over the World's Fair.

This talk traces the history of alterations of the lakefront in Chicago, and explores the community's interaction with the South Loop Lakefront as an economic resource, whether as a natural space or an industrialized space. Particular attention is paid to the evolving desires of city planners, state and city officials, and community organizations.

Catherine Dunlop

The southern French region of Provence is famous for a powerful wind called the Mistral. The term Mistral, which comes from the Latin word for "Master," is a fitting name for a wind that has influenced everything from architectural styles, to shipping routes, to agricultural practices in Provence. While evidence of human adaptation to the Mistral is widespread, evidence of animal adaptation to weather is less obvious. How do animals living in Provence—including wild birds in the Camargue and domesticated livestock in the Crau—live alongside the Mistral? Do animals and humans adapt to local weather systems in similar manners? What can animals teach us about climate and its history?

Colter Ellis

Beef production is a complex and emotionally intimate task. Ranching work positions bodies to be both biologically reproductive and economically productive. Cross-species intimacy and gender fluidity are a part of the mode of cattle production. Building on 43 in-depth interviews, done with 36 producers on 27 different beef-producing operations, as well as weeks of ethnographic fieldwork on commercial ranches, this paper shows how cattle producers, and the cattle themselves, occupy dynamic gendered statuses as cattle are cyclically reproduced. Within the mode of cattle production, cows become capital, calves become babies, and ranchers—both male and female—become inseminators, midwives, and mothers to the animals they will later trade as commodities.

Mark Fiege

Many people imagine national parks as wild landscapes defined by the ideal of ecological purity, but this has not been the case in every national park. For decades, good portions of many national parks also have been rural landscapes in which domestic animals mixed with wildlife, and in which the culture of livestock husbandry influenced the management practices of the National Park Service. As important as they are, ecological purity and the strict separation of the wild and the domestic often hides an important and era in the early history of conservation.

Dan Flory

This presentation argues that the Disney animated film *Zootopia* (2016) explores implicit bias, especially in the form of racial profiling. Using the vehicle of fear that prey animals have for their predators, the story offers for audience consideration what sorts of implications that preconceptions about one's conspecifics as violent, aggressive, and untrustworthy might have on the society and creatures depicted in the movie. Moreover, by having a protagonist who is simultaneously a bunny, humanoid, a "good girl," and a cop, the

film shows how negative prejudices blindly applied to one category of creature can distort our perceptions, be blatantly unfair, and cause substantial social harm. Through structuring their narrative in this fashion, the makers of *Zootopia* also encourage us as viewers to consider whether something similar might be true about ourselves, our own implicit racial biases, and their effects on our own, very real world.

Neto Garcia

Species distribution models (SDMs) are efficient simulations of the distribution of species across geographical space and help to understand the spatial patterns of biological diversity. However, they are not able to provide a description of species habitats. Geographic information systems (GIS) combined with SDMs have been used to illustrate 1) the distribution of habitats across a landscape, 2) infer the sustainability and capability of those habitats, 3) to identify landscapes favorable for establishment of a new population, and 4) to explore ecological relationships, as selection of vegetation types, as avoidance of habitat disturbed by humans, establishing factors like predation. Despite the large number of SDM papers published within the last decade, the practical utility of these models in the conservation management field remain sparse. One possible reason could be the reluctance of researchers to apply their models outside the regions where they were developed. The development of a spatial transference method for locally developed models should overcome the unwillingness of biologists to apply their own models to areas outside the original regions. The main objective of this study is to further develop a method that makes possible the application of already existing species distribution to the design of a new model that will predict target species distribution in areas outside the location where the original model was developed.

Peter Godfrey-Smith

A look at the evolution of animals, especially the early stages, with a view to answering questions like these: when did subjective experience first evolve? Did it evolve once or several times? Might it take radically different forms in different kinds of animals?

Cheryl Hendry

At age eleven, Don Smith trapped his first muskrat in the Hackensack Meadowlands, a highly-polluted tidal wetland in the heart of the New York metropolitan area. That gave him the "fever." In the 1960s, government officials and developers justified proposals for massive filling and development of the Meadowlands because the Meadowlands were ecologically "dead." But Smith knew better – he had caught thousands of muskrats a year. And it was this experience with the muskrat that led him to a lifelong career protecting the Meadowlands' ecology and landscape. Western conservationists use charismatic megafauna – grizzly bears, wolves, bison – to promote attitudes in favor of conservation. The Meadowlands had the muskrat. This talk will explore the use of the muskrat to promote conservation in an industrial swamp.

Lisa Kemmerer

Omnivore, carnivore, vegetarian, pescatarian, vegan—we are faced with an ever more daunting array of dietary options. What are the implications of dietary choice for habitat and wildlife? This talk explores the effects of animal agriculture, fish consumption, and hunting on the environment, and explains why our most significant decision on behalf of wildlife is what we eat.

Arik Kershenbaum

Many animals use sounds to communicate, but does that mean that they have their own language? What does it mean to have a language, and why do people think that animals don't? After all, wolves howl to each other across long distances, and can distinguish between pack-mates and strangers. Dolphins choose their own names, and use them to call to each other individually. In this talk I will discuss what we understand about communication in these intelligent animals; what it is, and what it isn't. I'll describe our work in Yellowstone and elsewhere, in which we are trying to understand not just what animals are saying to each other, but also why they should be saying anything at all, and what that could mean for our understanding of our own human language.

Tim LeCain

One of the defining features of the state of Montana (USA) has been and still is the presence of comparatively large numbers of bears, including the brown or "Grizzly" bear, Ursus arctos horribilis. For generations of Americans, the grizzly bear was the symbol of a deadly natural world, red in tooth and claw. To face death and survive offered a form of personal transcendence, and to kill the animals seemed to reaffirm the supremacy of humans as the masters of the Earth. In the late nineteenth and early twentieth centuries, guided bear hunts in Montana became a deadly means of commoditizing bears, a path to reasserting Euro-American and human power while also celebrating masculinity. As the "wild" (that is, bear-bearing) regions of North America began to disappear, new ways of commoditizing bears emerged in places like Yellowstone in which concessionaires deliberately recast the animals as cute and cuddly pets in order to engineer a domesticized and profitable wilderness experience safe for the whole family. During the post-war period, however, a number of well publicized violent encounters between Grizzly bears and humans (likely brought on by rapid declines in bear habitat), lead to a resurgence of the idea of the dangerous wilderness bear. In the emerging modern ideal of the true wilderness experience, a key aspect was the chance for the wilderness tourist to experience the chance (albeit statistically remote) of becoming another animal's prey. In essence, Americans sought to consume the possibility of being consumed, making this increasingly rare experience a critical commodity that could be marketed and sold to a world hungry for supposedly authentic wilderness experiences.

Theo Lipfert

"Invasion of the Giant Tortoises" explores the controversial introduction of a non-native species to the African island of Mauritius. Once home to the dodo, Mauritius was teeming

with giant tortoises until the arrival of man. The introduction of predators and habitat loss doomed these majestic creatures to extinction. Now biologists have embarked on a radical plan: to replace the extinct Mauritian tortoise with a close relative: the giant tortoise from Aldabra, a deserted atoll near the Seychelles. How will the island's eco-system respond? And how do the results of this experiment change how we thing about biodiversity?

Robert Lurz

Introspection is the capacity to form beliefs about one's own mental states. This capacity is critically important to normal human cognitive development and is arguably one of the central characteristics of what makes human beings persons (Baker 2005). Whether this capacity is unique to the human species has been hotly debated for nearly two decades now. Findings from a number of metacognitive studies have been taken to show that monkeys, apes, and dolphins are capable of making judgments about their level of uncertainty – a form of introspection. However, these studies have been severely criticized for failing to control for alternative non-introspective hypotheses. Data is presented from a recent study (Krachun, Lurz, Russell & Hopkins 2016) that show that chimpanzees are capable of distinguishing appearance from reality as a result of their being introspectively aware of their own subjective visual experiences. It is argued that this study controls for the sort of non-introspective hypotheses that have challenged the metacognitive studies. It has been speculated that if chimpanzees are capable of being introspectively aware of their own visual experience, then they might be capable of using this knowledge to understand the visual experience of others (i.e., theory-of-mind) in an 'experience-projection paradigm.' Recent experience-projection studies with apes, unfortunately, fail to control for the alternative line-of-gaze hypothesis. A novel experience-projection study with chimpanzees is described that controls for this alternative hypothesis and some preliminary data from the study are discussed.

Kelsey Matson

Dam removal and ecosystem "restoration" are critical issues in a world increasingly defined by climate change and environmental deterioration. Humans, particularly Americans and other representatives of the wealthy Global North, have undeniably changed Earth's geology and ecology in the unrelenting pursuit of cheap energy. The consequences of this appetite for power have recently crystallized in the form of the newly-declared Anthropocene epoch. Dam removal and ecosystem restoration exemplify recent efforts to remediate some of the problems of the Anthropocene. Ecologically, economically, technologically, and socially, the removal of the Elwha and Glines Canyon Dams and the ongoing restoration of Washington State's Elwha River represent the most expansive such effort to date. While the National Park Service and numerous other stakeholders advised the restoration process, arguably the most important stakeholder was the river itself and the organisms that inhabit it.

By thinking from the perspective of its piscine inhabitants and critically examining the literature produced from the Environmental Impact Assessment process, this talk will evaluate the tangible material and environmental implications of the Elwha restoration,

with emphasis on problematic and paradoxical elements. Many complex motivations catalyzed the decision to attempt to restore the ecosystem, and those motivations have been materially inscribed on the now undammed landscape. While the collective decision to remove the dams and allow the Elwha to again flow freely represented a tremendous opportunity for positive change, it has also created an entirely new kind of anthropogenic landscape.

Robert Mitchell

We examined human pointing (once with a foot, the rest with an extended finger) to dogs during 62 dog-human play interactions, spanning 4.8 hours. Participants were 26 humans and 27 dogs. Humans played with their own dog(s) and, almost always, an unfamiliar dog. Sixteen human players (as well as one passerby) pointed for 20 dogs a total of 101 times during 26 interactions. Most (49.5%) points were toward an object (almost always a ball); 36.6% were to the ground in front of the (almost always familiar) pointer, directing the dog to come, and/or drop a ball the dog held, here; 10.9% directed the dog toward the designated player or play area; and 3.0% directed the dog to move away from a ball the dog had dropped. Dogs responded appropriately to only 22% of the points, more often for points to the ground than for points to objects. Humans pointed more frequently with their own dog than with an unfamiliar dog, but dogs responded appropriately to points equally often, proportionally, from both owners and strangers. Dog-human play provides a context in which dogs resist responding to human gestural (and vocal) commands, and raises questions as to whether not some animals in other pointing studies resist being controlled by human pointing.

Lucas Mix

The term life can refer to at least three concepts, each one requiring its own kind of explanation – biological organization, internal experience, and mental judgment. Dividing the world into wild and tame invokes the power and unpredictability of biology unconstrained by will or mind. By expanding our view of nature beyond human control, astrobiology invites us to reimagine both humanity and wilderness.

Emma Narotzky

The origin of human language looks like a mystery when you compare them to their close relatives, as no other great apes communicate using complex vocalizations. Unlike the other great apes, early humans occupied a niche with social predators. We can look at the vocal communications of modern coooperative predators like wolves to see what early humans may have needed to communicate about, what those communications might have looked like, and what selective pressures acted on the communication mechanisms of early humans and currently act on modern cooperative predators.

Mariana Olsen

Recently, many researchers have called for more investigation of problem-solving and inhibitory control abilities of the domestic dog. Similar constructs have been examined in humans using eye-tracking technology; this talk will briefly propose how eye-tracking could be implemented to learn more about canine cognition.

Jessica Owens

Species or groups with more complex social networks also require complex vocal communication systems to manage interactions and relationships between group members. This is the argument of the Social Complexity Hypothesis, which has been supported by empirical evidence across a variety of taxa. What, if anything, will happen to the balance between social and vocal complexity when more frequently challenged by human-caused disturbances, like anthropogenic noise. Experimental studies of the effects of traffic noise on the tufted titmice (Baeolophus bicolor) prompt us to question some of our most basic assumptions about animal behavior and communication.

Anne Perkins

Early day animal behaviorist taught us a great deal about how and why animals behave the way they do. They systematically analyzed how experience (consequences of actions) shape subsequent behaviors. Animal behaviorists developed learning theories, and taught us how to quantify and analyze behavior. One rule earlier researchers imposed on scientists is that it is inappropriate to project our uniquely human experiences onto non-human species. This is "*anthropomorphism".* Scientists have been taught to avoid anthropomorphizing because it can result in misunderstanding the uniqueness of each specie and indeed each individual that has evolved in their environment. For example, if you are cold and miserable out in Yellowstone Park in the winter while observing wildlife, it does not necessarily mean that the animals you are watching are experiencing that same discomfort. Maybe they are, but you should test that hypothesis before jumping to a conclusion. Some scientists have become frustrated by this rule because in their personal observations of other animals, it appears logical that the animals experience emotions, and thoughts similar to those of humans. In addition, the behaviors of individual animals can appear similar to the behavior of humans under similar circumstances. For example, individuals experiencing depression or grief after losing a mate or offspring. There are some ingenious experimental designs addressing questions about non-human species that experience complex concepts like fairness and justice or guilt, and grief. The groundbreaking work of neuroscientist Dr. Jaak Panksepp has delineated specific regions of the non-human brain where panic, fear, play and lust exist. This talk will present discoveries and discussions about the new direction for researching the animal mind.

Michael Reidy

Mountains formed the most significant physical geography for the formation of Darwin's evolutionary theory. He purposefully followed in Humboldt's footsteps, climbing every

mountain he could on his five-year voyage around the world. His most impressive ramblings occurred on two high passes in the Andes: the Portillo Pass via the Piuquenes ridge and the Uspallata Pass near Aconcagua. On the highest ridges, he found fossilized marine shells and an entire forest of petrified wood. He also noted the different types of animals and plants found on each side of the Passes. After his experience in the Andes, mountains rose and fell in his imagination, he swam in the depths of deep time, and he formulated his first theory of evolution. It was based on an incorrect reading of the geology of the Andes and a misguided emphasis on the role "barriers" (such as mountain ranges) play in speciation.

LaTrelle Scherffius

Robert Morrison, photographer and sign painter from Pennsylvania, moved to Montana in 1880 and photographed around the region for the next forty years. He was an avid outdoorsman who hunted buffalo and other western game, and guided the likes of Teddy Roosevelt. His later photographic work is often documentary in nature and through rich symbols and carefully chosen words offers a window into a complex time. This talk will focus on one particular image, a street scene that features five frozen and contorted coyote carcasses, nine men and two street signs. My talk will examine each aspect of the photograph as symbols of frontier anxiety, modernity and the changing nature of the west. Specifically, I will consider the rise of federal, state and private bureaucracy and a perceived loss of wildness, both in the west's animals and citizens. The talk will also look at modernity's attempt to quantify and control chance.

Diane Smith

Staring with the earliest government-sponsored expeditions into the area that would become Yellowstone National Park, naturalists collected and sent specimens to the Smithsonian Institution. Congressional instructions establishing the Smithsonian mandated that the new institution receive all natural history specimens and artifacts collected in the field, but Spencer Baird of the Smithsonian asked Ferdinand Hayden in particular to send more. Specifically, Baird wanted skulls and skeletons of all animals Hayden could find, twenty of each if possible, and "any perfect bison head" that Hayden could send.

This paper argues that Yellowstone functioned as a source of animals and other scientific specimens from the beginning, introducing the park into the world of late-19th century museums and zoos. Long before the establishment of the National Park Service in 1916, early park superintendents and military personnel collected, displayed, and shipped wildlife to the Smithsonian and other museums and zoos around the country (and around the world). They even transformed the grounds of Yellowstone to better reflect other zoological parks of the era and meet the expectations of visitors. By the early 20th century, science, tourism, and wildlife conservation and displays had become inextricably mixed in Yellowstone National Park, a legacy that challenges park managers to this day.

Cindy Stillwell

In this first person essay, the filmmaker's pilgrimage to central Nebraska to witness the annual spring migration of the sandhill cranes is drawn as a metaphor for human transformation. As we learn facts about this most elegant of birds, the narrator muses over existential questions that tend to resonate around the midpoint of our lives. The sandhill crane is a bird species known to mate for life; it is one of the oldest living birds and perhaps has some things to teach us about our ability, or inability, to find a lifelong mate. Through imagery of these ancient birds, landscapes of the route to the Platte River, and hand drawn animations of crane behaviors, the film evokes a meditation on nature and art, posing essential questions about our need for both connection and solitude.

Sara Waller

Controversially, humans have tried to send communicative signals to any listening extra terrestrials; our methods have included radio signals, the Arecibo message, and a National Geographic sponsored aggregate of friendly #tweets. These informational messages neglect the possibility that ET may have evolved to be more like wolves, dolphins, or prairie dogs than human beings. Famously, L. Doyle of SETI has made a distinction between "critters" (without radio telescopes) and "folk" (with radio telescopes) and the divide between the two is not trivial. However, while we might initially think that language or sophisticated symbol processing demands technology, successful and systematic exchange of mental content with another species leaps an expanse arguably as large as the distance between two civilizations on neighboring planets.

This paper argues that understanding, "decoding" and learning the signals of Earth-based species such as wolves, cats, and dolphins may help move our SETI efforts forward much more fruitfully than simple analysis of radio signals. Examples of signal exchange with dolphins (Diana Reiss), the referential value of prairie dog signals (Con Slobadchikoff), and new work on the content of vocalizations produced by wolves (Kershenbaum) and feral and domestic cats (Owens & Waller) will be presented as concrete, cutting-edge evidence that the minds of animals have evolved to communicate in ways that are of crucial importance to the SETI project and future communicative efforts with ET. Specifically, we can learn about the natures of a variety of kinds of minds, and the possible different types of abstraction and inference that may be supported by different evolutionary circumstances. An understanding of the ways in which different creatures think differently leads to broader questions of the social status of animals and the ethics of first contact. This paper will not answer these broader concluding questions, but merely show how they arise through the study of communication across Earthly species.

Our Sponsors

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