



2016 GUIDE RESOURCE NOTEBOOK

GRAND TETON NATIONAL PARK

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CONTENTS

<u>Grand Teton National Park</u>	<u>1</u>
<u>The National Park Service</u>	<u>3</u>
<u>Grand Teton National Park</u>	<u>5</u>
<u>Purpose and Mission</u>	<u>8</u>
<u>Interpretation</u>	<u>13</u>
<u>Geology</u>	<u>21</u>
<u>Communities</u>	<u>26</u>
<u>Ecology</u>	<u>26</u>
<u>Animals</u>	<u>29</u>
<u>Plants</u>	<u>35</u>
<u>History</u>	<u>41</u>
<u>Conclusion</u>	<u>56</u>

Caring for the American Legacy

The National Park Service

The National Park Service preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

On August 25, 1916, President Woodrow Wilson signed the act creating the National Park Service, a new federal bureau in the Department of the Interior responsible for protecting the 40 national parks and monuments then in existence and those yet to be established.

This "Organic Act" of August 25, 1916, states that "the Service thus established shall promote and regulate the use of Federal areas known as national parks, monuments and reservations . . . by such means and measures as conform to the fundamental purpose of the said parks, monuments and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."



The National Park Service still strives to meet those original goals, while filling many other roles as well: guardian of our diverse cultural and recreational resources; environmental advocate; world leader in the parks and preservation community; and pioneer in the drive to protect America's open space.

The National Park System of the United States comprises 401 areas covering more than 84 million acres in 50 States, the District of Columbia, American Samoa, Guam, Puerto Rico, Saipan, and the Virgin Islands. These areas are of such national significance as to justify special recognition and protection in accordance with various acts of Congress.



“...to promote and regulate the use of the...national parks...which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

National Park Service Organic Act, 16 U.S.C.1.



References:

<http://www.nps.gov/legacy/mission.html>

<http://www.nps.gov/legacy/legacy.html>

Grand Teton National Park



Grand Teton National Park (GRTE) was established in 1929 and Jackson Hole National Monument was created in 1943. The two units were combined to become present-day Grand Teton National Park in 1950. The park is 45 miles in length from north to south, 26 miles maximum width.

The park is famous for spectacular mountain scenery and abundant wildlife. Park boundaries include approximately 310,000 acres.

John D. Rockefeller, Jr. Memorial Parkway was established in 1972 to commemorate the philanthropic activities of John D. Rockefeller, Jr. and his generous donations of lands to the National Park System. The Parkway connects Grand Teton and Yellowstone National parks and includes 23,700 acres. The Parkway is managed as a recreation area under the administration of GRTE.

Daily park operations at both sites are managed through several divisions; these include the Superintendent's Office, Public Affairs, Administration, Science and Resource Management, Ranger Activities, Business Resources, Maintenance, and Interpretation and Partnerships.

Park Operations

- Four and a half million visitors annually
- \$9.89 million base operating budget
- 144 permanent positions, 210 seasonal positions, and 128 volunteers donate 20,000 hours yearly
- Four visitor centers, one information station, and three entrance stations
- 653 structures (public buildings, historic buildings, employee housing, concessions facilities, and life estates)
- The only commercial jet airport in a national park, the busiest airport in Wyoming
- 160 miles of paved roads, 62 miles unpaved
- 252 miles of trails
- 907 NPS campsites in five campgrounds and 287 concession campsites in two campgrounds
- 28 concession contracts and 60 permits total gross revenue of \$38 million annually
- 75-100 technical search & rescues annually
- Approximately 4,300 law enforcement incidents and 200 EMS incidents, annually
- Four federally-listed threatened species (wolves, grizzly bears, lynx, bald eagles)
- 350 known archaeological sites, probably thousands that have not been discovered
- 395,795 museum objects, including 1,429 in the David T. Vernon Museum Collection and nearly 300 historic structures. The Vernon Collection was removed from the park for conservation work in 2011.
- Formal intergovernmental relations and consultation with five American Indian tribes
- Five established partner organizations are based in the park and two new partner organizations are currently being established

Park Features

Grand Teton National Park is located in the heart of the Greater Yellowstone Ecosystem, one of the largest essentially intact ecosystems in North America. The park is home to some of the greatest populations of wildlife in the world – elk, moose, bison, pronghorn, mule deer, grizzly and black bears, gray wolves, coyotes, otters, wolverines, and about 300 bird species, ranging from raptors such as bald eagles and great gray owls, to trumpeter swans and sage grouse.

The park and the adjacent John D. Rockefeller, Jr. Memorial Parkway provides more than 330,000 acres of largely pristine habitat for rare, threatened, and endangered species as well as hundreds of less visible (but just as ecologically vital) native species, such as insects, bull and garter snakes, boreal toads, little brown bats, and several subspecies of native cutthroat trout.

The central feature of the park is the Teton Range – an active, fault-block mountain front which is 40 miles long and 7-9 miles wide. The highest peak in the range is the Grand Teton at 13,770 feet. The range includes 12 peaks over 12,000 feet.

Seven morainal lakes are along the base of the Teton Range: Jackson, Leigh, String, Jenny, Bradley, Taggart, and Phelps. Jackson Lake is the largest at 25,540 acres with a maximum depth 438 feet. There are more than 100 alpine and backcountry lakes.

The valley of Jackson Hole is 55 miles long, 13 miles wide, with an average elevation of 6,800 feet.

The Snake River bisects the valley and is the headwaters of the Columbia River system. Major tributaries include Pacific Creek, Buffalo Fork, and the Gros Ventre River.

The park's climate is semiarid with extreme highs of 93 degrees F; the extreme low can reach -46 degrees F. Average snowfall is 191 inches. Rainfall average 21 inches per year.

The Clean Air Act classifies Grand Teton National Park as a class I airshed—areas that should meet the strictest standards for air quality and visibility. In recent years, public and private interests have also increasingly expected national parks to protect the natural esthetics of night skies in undeveloped areas, and to provide quiet soundscapes. The untamed landscape in much of the ecosystem allows many visitors to seek experiences of a wild nature.

The park also displays evidence of a rich and varied human history dating back more than 10,000 years. Early Native Americans used the landscape and its resources for subsistence; they hunted, fished, conducted ceremonial activities, and left traces in their pathways and campsites. Hundreds of archeological sites have been found in the small portion of the park that has been surveyed. Park scientists are still learning about the park's prehistory, from archeological research as well as ethnographic

studies involving oral history interviews with American Indian tribes that still maintain traditional ties to native resources and special sites on the landscape.

More recent development in the valley of Jackson Hole has left its mark through an array of new roads and facilities, as well as more than 300 historic structures, districts, and landscapes, many of which are still in use. These include working livestock ranches, dude ranches, and "hobby" ranches; visitor accommodations such as Jenny Lake Lodge and Jackson Lake Lodge, designated a National Historic Landmark in July 2003; the park's original headquarters located at Beaver Creek; and the Murie Ranch owned and occupied by noted naturalist-conservationists Adolph, Olaus, and Mardy Murie. The rich history of Jackson Hole is reflected in many park sites and scenes.

Today, Grand Teton National Park provides opportunities for visitors to explore the human and natural history of the place, the conflicts that sometimes occur in the interface between natural and cultural resources and the many different expectations Americans have of their nation's parks.

References:

Adapted from 2004 Management Strategies



Grand Teton National Park

Purpose and Mission

Park Mission Statement:

Grand Teton National Park is dedicated to the preservation and protection of the Teton Range and its surrounding landscapes, ecosystems, cultural and historic resources. The singular geologic setting makes the area and its features unique on our planet. Human interaction with the landscape and ecosystem has resulted in natural, cultural and historic resources that represent the natural processes of the Rocky Mountains and the cultures of the American West.

Park Purpose

- Preserve the dramatic scene of the Teton Range and the Piedmont Lakes.
- Preserve and learn from a rare example of the fault block uplift process found in a relatively accessible and compact area.
- Provide the opportunity for people to have an emotional, inspirational, and aesthetic response to the unspoiled scenery.
- Preserve, study, learn from, and interpret the diversity of natural habitats and species that are significant components of the Greater Yellowstone Ecosystem.
- Preserve and interpret the cultural resources representative of the continuum of prehistoric and historic human interaction with the Teton Range and Jackson Hole.
- Provide opportunities for physical interaction compatible with the park's resources.



Significance

Geologists regard the Teton Range as one of the most impressive examples of fault-block mountains in the world. The peaks of the range, which tower 3,000 to 7,000 feet above the sagebrush flats of Jackson Hole and culminate in the Grand Teton (13,770 ft), dominate the park landscape. They are one of the youngest ranges in North America and are part of the Basin and Range complex. They began to rise about 10 million years ago. Several piedmont lakes rimmed by moraines from the last glaciations lie adjacent to the range and form part of the scenic foreground. The park also includes 25.5 miles of the Snake River. In addition to being an outstanding recreational resource, the Snake River is one of the last remaining natural habitats of the cutthroat trout. The flora and fauna are typical of the Central Rocky Mountain region. Forested areas are a mixture of limber pine, lodgepole pine, whitebark pine, Englemann spruce, subalpine fir, and Douglas fir. Scattered patches of aspen are

found at lower elevations. Cottonwood, willow, and Colorado blue spruce line the Snake River and its tributaries, and sagebrush dominates the valley floor. Fifty-four species of mammals inhabit the park. Elk, moose, pronghorn, mule deer, and bison are common. Bighorn sheep can be found in the higher mountains. Other mammals include beaver, muskrat, wolves, coyotes, pika, Uinta ground squirrels. Black and grizzly bears are now found throughout the park. Other prominent species include birds, such as white pelican, great blue heron, trumpeter swan, Canada goose, sandhill crane, sage grouse, golden and bald eagles, common raven, several species of woodpeckers, and a variety of songbirds. The park's physiographic and biologic features fall within the Middle Rocky Mountain natural region and include features representative of the themes of mountain systems, works of glaciers, geologic history, alpine tundra, boreal forest, lakes and ponds, and rivers and streams.

Park Themes

- The Teton Range dramatically illustrates all the processes of fault block mountain building.
- Humans have responded and adapted to the resources and environment of Jackson Hole in many different ways for 12,000 years.
- Grand Teton, John D. Rockefeller, Jr. Memorial Parkway and Yellowstone comprise the heart of the largest, most intact ecosystem remaining in the temperate zone of the world.
- The dramatic scenery of the Teton Range and Jackson Hole was created by glaciers and other erosive forces.
- The grandeur of the Teton Range adds a greater dimension to resource compatible recreation uses.
- Grand Teton provides a diversity of habitats for a variety of plant and animal species that interact as a unit rather than as individuals.
- A number of hazards exist in a natural area such as Grand Teton.

Park Goals

- To make visitors aware of how geologic forces created and continue to shape the landscape.
- To help visitors understand the interdependence of each element of an ecosystem and the consequences if an element is altered or removed.
- To provoke an awareness in park visitors of the issues, such as global warming, which affect not only the Greater Yellowstone Ecosystem, but the world, and to foster an attitude of stewardship.
- To facilitate the visitor's appreciation of how the policies of land management agencies can affect the entire ecosystem.
- To foster comprehension of how the harsh climate affected all human interaction with the resources. To promote awareness of hazards in the natural environment.
- To develop recreational skills sufficient for safety, minimum impact and a satisfying interaction with park resources.
- To provide visitors with site orientation and information so they can plan a safe, enjoyable, rewarding, efficient and minimum impact National Park experience.
- To foster an awareness of park cultural resources in order to ensure their protection and preservation.
- To provide interpretation of each significant cultural period.
- Facilitate concessioner orientation, training and evaluation for concession-provided interpretation.
- To use recreation activities to enhance appreciation of park resources.

John D. Rockefeller Memorial Parkway

Purpose and Mission



Located at the heart of the Greater Yellowstone Ecosystem, the Rockefeller Parkway connects Grand Teton and Yellowstone national parks. The late conservationist and philanthropist John D. Rockefeller, Jr. made significant contributions to several national parks including Grand Teton, Acadia, Great Smoky Mountains, and Virgin Islands.

In 1972, Congress dedicated a 24,000 acre parcel of land as John D. Rockefeller, Jr. Memorial Parkway to recognize his generosity and foresight. Congress also named the highway from the south boundary of Grand Teton to West Thumb in Yellowstone in honor of Rockefeller.

The parkway provides a natural link between the two national parks and contains features characteristic of both areas. In the parkway, the Teton Range tapers to a gentle slope at its northern edge, while rocks born of volcanic flows from Yellowstone line the Snake River and form outcroppings scattered atop hills and ridges.

Grand Teton National Park administers John D. Rockefeller, Jr. Memorial Parkway.

Parkway Purpose

- To commemorate the contributions of John D. Rockefeller, Jr. to the cause of conservation in the United States.
- To provide an integrated National Park experience between two popular National Parks.
- To provide different recreational opportunities from those which can be offered in Grand Teton National Park.
- To provide opportunities for stimulating physical interrelations compatible with park resources.
- To provide a link between the natural systems of two national parks which constitute the central components of the Greater Yellowstone Ecosystem.

Parkway Themes

- John D. Rockefeller, Jr. and his descendants have aided the conservation efforts of the National Park Service and have been instrumental in supporting the concept of parklands, making a significant contribution to the preservation of Jackson Hole's natural resources.
- John D. Rockefeller, Jr., Memorial Parkway links Grand Teton and Yellowstone national parks geologically, ecologically, logically and administratively.
- John D. Rockefeller, Jr., Memorial Parkway lies at the heart of the Greater Yellowstone Ecosystem and provides critical habitat for several endangered species.
- John D. Rockefeller, Jr., Memorial Parkway provides a variety of year-round recreational opportunities and experiences that reflect the character of the natural systems contained therein.
- A number of hazards exist in a natural area such as the Rockefeller Parkway.

Parkway Goals

- Promote understanding of John D. Rockefeller, Jr.'s contributions to the National Park Service and conservation in the United States.
- To encourage understanding of the significance of the ecosystem concept and the importance of biological diversity to the success of the ecosystem.
- To make visitors understand the interdependence of each element of an ecosystem and the consequences if an element is altered.
- To focus on winter use and, in the summer, provide information and orientation about the Greater Yellowstone Ecosystem and recreation opportunities available within it.
- To provide visitors with site orientation and information so they can plan a safe, enjoyable, rewarding, efficient and minimum impact National Park experience.
- To use recreational activities to enhance appreciation of park resources.
- To provide information about minimum impact activities appropriate to the season.
- To provide both personal and non-personal services at Flagg Ranch.
- To facilitate training, orientation and evaluation of concession-provided interpretation.



Interpretation

The goal of interpretation is to build connections between visitors and Grand Teton National Park, helping them find meaning in this landscape and fostering their sense of stewardship.



The use of the word interpretation to describe the work of naturalists was first coined by John Muir, who wrote:

"I'll interpret the rocks, learn the language of flood, storm and the avalanche. I'll acquaint myself with the glaciers and wild gardens, and get as near the heart of the world as I can." (John Muir, 1896)

The goal of interpretation is to build connections between visitors and Grand Teton National Park, helping them find meaning in this landscape and fostering their sense of stewardship. Hopefully, by learning about this landscape, they will leave with a greater appreciation of this place and its resources. We all live or work in Jackson Hole, and we have developed our relationship with this place over months, years, or even decades. But visitors may only spend hours or days here. As guides, part of our job is to interpret the landscape for them and help them build their own connections in the short time they spend here.

People form connections in different ways—some connect on an intellectual level, by learning the names of wildflowers, the geologic evolution of the area, or its ecology. Other people connect more strongly with emotional narratives, and want to engage in a participatory trip that explores those narratives through dialog.

So what makes a trip interpretive, instead of just informative? Using a variety of techniques that move beyond being the 'sage on the stage', or the 'walking encyclopedia' can create an interpretive experience. While knowledge is important, trips can be more engaging when stories are told, when props are used, when inspiring or compelling quotes are read, and when open-ended questions are asked that make visitors think about and engage with their surroundings. There are many other tools and techniques available in the discipline of interpretation, which are listed on page eighteen.

Books upon books of information are available about the Teton landscape and its natural and cultural resources. Your guests may walk away with a few of the peices of scientific or historical information they hear, but most facts and figures will be lost as memory fades. Consider the unique lens you can provide to a trip as a guide. What main idea connects each of the things you want to talk about that your guests wouldn't realize unless you created the opportunity to consider the park in that way? If done well, a program with a purpose can ensure that your guests remember that one new way to think about things, that one concept, idea, or feeling, that you as a guide reveal.

Trip Ideas: Sample Concepts and Questions

Float & Fish Guides

Objects: River, water, mountains, valley, habitats, wildlife, dude ranch, Menor's ferry, sound of cobbles hitting

Concepts/Meaning: Power, Beauty, Processes, Survival, Adaptation, Danger, Shelter, Time

Possible Main Idea: Rivers are endlessly powerful, yet delicate.

Topics: Geologic processes and water, safety, power of wildlife, glacial outwash, power to bring people together (homesteaders and us)

Open ended questions: Who are powerful people in your life? What do you think is stronger, a stone or water, and why?

Possible Main Idea: Incredible forces have shaped and continue to shape the river.

Topics: Safety, geologic processes, beaver's ability to shape their environment (ecosystem engineers), forces for conservation

Open ended questions: How has place shaped you? Do you think of natural processes as linear or cyclical, and why?

Possible Main Idea: The river is a vein of life in a harsh environment.

Topics: Adaptations of common animals along the river, safety, how humans have survived in Jackson Hole

Open ended questions: How have you adapted to different aspects of your life?

Possible Main Idea: Stories of life are more like rivers than books

Topics: Movement, dude ranches, tourism, cyclical/linear/wandering personal stories, cyclical/linear/wandering natural processes

Open ended questions: When has life gone in the exact direction you expected?

Possible Main Idea: A native trout in a wild river is unique, and creates a once in a lifetime opportunity.

Topics: Lake trout vs. cutthroat trout, native or invasive, management difficulties

Open ended questions: What is it about fishing that you enjoy? Why do we typically allow fishing in national parks, but not hunting? Are there species that are of a lesser importance than others?

Possible Main Idea: Rivers are indicators of our impact on National Parks.

Topics: Pollution, sensitivity of fish, sensitivity of other river organisms (aquatic invertebrates), stream health

Open ended questions: If you had to choose one, would you pollute a river, the air, or soil, and why?

Climbing Guides

Objects: Mountains, rocks, gear, wildlife

Meanings: Legacy, Adventure, Weather, Safety, Wilderness

Possible Main Idea: With great adventure comes inherent danger and limited access.

Topics: Safety gear, emergency resources, mountain weather, access

Open ended questions: What about the mountains makes you want to climb them? How accessible should we try to make places like this? How would Garnet Canyon be different if there were a road like Going-to-the-Sun in it?

Possible Main Idea: Climbing has a rich history and legacy within the Tetons.

Topics: Stories of climbing in the Tetons, how things have changed, current climbing ideas/gear

Open ended questions: Have you ever felt you were the first person to do something? Would you still be climbing if we didn't have modern gear?

Possible Main Idea: Wilderness is both an idea and a designated place.

Topics: Leaving natural processes unhindered, "trammeled" versus "trampled", human impacts and constructs.

Open ended questions: Share a time you felt nature overcame a human barrier. Are people a part of nature, or separate from it? What about the Tetons feels like wilderness? What about the Tetons doesn't feel like wilderness?

Road-based Guides

Objects: Wildlife, mountains, habitats

Meaning: Wild, beauty, home, survival

Main Idea: Each ecosystem in the park is interconnected, in ways both seen and unseen.

Topics: Community types, ecosystem processes, wildlife relationships, human habitation

Open ended questions: What impact do we visibly/invisibly have on the landscape?

What would our wild landscapes look like without _____ (a species)?

Would you support being excluded from a favorite wildlife area in the park to support a particular species?

Wranglers

Objects: Horses, western culture, mountains, valley, wildlife

Meanings: Legacy, Beauty, Tradition

Possible Main Idea: Western traditions live on today in Jackson Hole, connecting one generation to the next

Topics: First settlers, dude ranches, current tourism

Open ended questions: What is a tradition your family has? How does where you are from shape who you are? Why is it important to learn about the past? Who is responsible for younger generations engaging in National Parks?

Youth Backpacking Guides

Objects: Mountains, lakes, gear, animals

Meanings: Protection, Learning, Storytelling

Possible Main Idea: National Parks are places preserved to protect resources, tell important stories, and enjoy.

Topics: Parks as wild landscapes, parks as an idea, history, resource protection

Open ended questions: What is your favorite place to go outside?

Possible Main Idea: Rugged landscape

Topics: Safety/Weather, geology, animal adaptations for the environment, history of human habitation

Open ended questions: Would you want easier access to this place, like a road?

Are some places worth protecting more than others?

How should the nation decide if we have enough Wilderness land or how much more land should be designated for Wilderness protection?

Does our human impact on nature concern you?

More Open Ended Questions:

What is your first memory of a National Park?

What connects you to this place?

What did you think when you first saw the mountains?

If you were going to give someone one piece of advice from your time here, what would it be?

What is the most interesting display of animal behavior that you have seen?

What would have happened to this place if it had not become a National Park?

If you were the superintendent of Grand Teton, what would be the first change that you would make?

Interpretive Techniques

Using appropriate techniques should allow the visitor to make the connection between objects they are seeing and their deeper meanings.

Discussion and Dialog: Consideration of a question in an open and usually informal facilitated dialogue. Open ended questions help facilitate discussion and visitor engagement.

Questioning: Asking questions of visitors to engage in the program through observation or thought.

Testimony: Personal account.

Description/Imagery: Discourse intended to give a mental image of something experienced, and includes sensory details to engage audience.

Irony: Verbal irony is similar to sarcasm in that you use a word in such a way that it suggests the opposite of its literal meaning.

Storytelling: Including a fictional or nonfictional narrative, which can be used to communicate different perspectives and/or illustrate and clarify the points you are trying to make.

Living History: The portrayal of real people experiencing past events.

Photographs/Illustrations: Images of relevant people, places, resources, or concepts.

Props: A physical aid that strengthens and supports an interpretive message.

Challenge: Activity where an interpreter asks visitors to find something, count something, investigate, etc.

Comparisons: the interpreter or audience describes how two or more objects, events, people, ideas, etc. are the same or different.

- **Metaphor:** When you make a comparison between two usually unconnected objects.
- **Simile:** A comparison between two unconnected things using 'like' or 'as'.
- **Analogy:** Comparison between a pair with the same relationship.

Game: An interactive activity.

Sensory: An activity where the audience is asked to use a specific sense for a specific reason.

Statements: A remark designed to intentionally disrupt a visitors normally held beliefs, way of thinking, attitudes, or set of manners and mores.

Quote: Explicit reference or allusion to well known or relevant statements made by another person.

Demos: A physical/participatory activity performed by the interpreter or visitor

Silence: A pause to listen and observe, reflect and internalize.

Sounds: Music, resource recordings, etc.



Quote Collection

Using a quote in your program can be an easy way for the audience to form emotional connections with place. A few examples of relevant quotes are listed below.

“Keep close to Nature’s heart...and break clear away, once in a while, and climb a mountain or spend a week in the woods. Wash your spirit clean.” - John Muir

“Walk away quietly in any direction and taste the freedom of the mountaineer. Camp out among the grasses and gentians of glacial meadows, in craggy garden nooks full of nature’s darlings. Climb the mountains and get their good tidings, Nature’s peace will flow into you as sunshine flows into trees. The winds will blow their own freshness into you and the storms their energy, while cares will drop off like autumn leaves. As age comes on, one source of enjoyment after another is closed, but nature’s sources never fail.” - John Muir

“Thousands of tired, nerve-shaken, over-civilized people are beginning to find out that going to the mountains is going home, that wildness is a necessity, and that mountain parks and reservations are useful not only as fountains of timber and irrigating rivers, but as fountains of life.” – John Muir

“Those who contemplate the beauty of the earth find reserves of strength that will endure as long as life lasts. ... There is something infinitely healing in the repeated refrains of nature — the assurance that dawn comes after night, and spring after winter.” - Rachel Carson, *Silent Spring*

“May your trails be crooked, winding, lonesome, dangerous, leading to the most amazing view. May your mountains rise into and above the clouds.” - Edward Abbey

“Wilderness is not a luxury but a necessity of the human spirit.” - Edward Abbey

“Rivers run through our history and folklore, and link us as a people. They nourish and refresh us and provide a home for dazzling varieties of fish and wildlife and trees and plants of every sort. We are a nation rich in rivers.” – Charles Kuralt

“Fishing provides that connection with the whole living world. It gives you the opportunity of being totally immersed, turning back into yourself in a good way. A form of meditation, some form of communion with levels of yourself that are deeper than the ordinary self.” - Ted Hughes

“If you cannot understand that there is something in man which responds to the challenge of this mountain and goes out to meet it, that the struggle is the struggle of life itself upward and forever upward, then you won’t see why we go.” - Edmund Hillary

“If future generations are to remember us with gratitude rather than contempt, we must leave them something more than the miracles of technology. We must leave them a glimpse of the world as it was in the beginning, not just after we got through with it.” – Lyndon B. Johnson

“Then in the Arctic half-light of the canyon, all existence fades to a being with my soul and memories and the sounds of the Big Blackfoot River and a four-count rhythm and the hope that a fish will rise. Eventually, all things merge into one, and a river runs through it. The river was cut by the world’s great flood and runs over rocks from the basement of time. On some of those rocks are timeless raindrops. Under the rocks are the words, and some of the words are theirs. I am haunted by waters.” - Norman Maclean, *A River Runs*

Through It "Far and away the best prize that life has to offer is the chance to work hard at work worth doing."
- Theodore Roosevelt

"In our family, there was no clear line between religion and fly fishing. We lived at the junction of great trout rivers in western Montana, and our father was a Presbyterian minister and a fly fisherman who tied his own flies and taught others. He told us about Christ's disciples being fishermen, and we were left to assume, as my brother and I did, that all first-class fishermen on the Sea of Galilee were fly fishermen and that John, the favorite, was a dry-fly fisherman." - Norman Maclean, A River Runs Through It

"My father was very sure about certain matters pertaining to the universe. To him all good things-trout as well as eternal salvation-come by grace and grace comes by art and art does not come easy." - Norman Maclean, A River Runs Through It

"We are never far from the lilt and swirl of living water. Whether to fish or swim or paddle, or only to stand and gaze, to glance as we cross a bridge, all of us are drawn to rivers, all of us happily submit to their spell. We need their familiar mystery. We need their fluent lives interflowing with our own" - John Daniel, Oregon Rivers

"Life is always flowing on like a river, sometimes with murmurs, sometimes without bending this way or that, we do not exactly see why; now in beautiful picturesque places, now through barren and uninteresting scenes, but always flowing with a look of treachery about it; it is so swift, so voiceless, yet so continuous." - Faber

"Those who contemplate the beauty of the Earth find reserves of strength that will endure as long as life lasts." - Rachel Carson

"At the time I did not know that stories of life are often more like rivers than books." - Norman Maclean, A River Runs Through It

"Poets talk about "spots of time," but it is really fishermen who experience eternity compressed into a moment. No one can tell what a spot of time is until suddenly the whole world is a fish and the fish is gone."
- Norman Maclean, A River Runs Through It

"Men may dam it and say that they have made a lake, but it will still be a river. It will keep its nature and bide its time, like a caged animal alert for the slightest opening. In time, it will have its way; the dam, like the ancient cliffs, will be carried away piecemeal in the currents." - Wendell Berry

"The song of the river ends not at her banks but in the hearts of those who have loved her." - Buffalo Joe

"Nature gives to every time and season some beauties of its own." - Charles Dickens



Geology

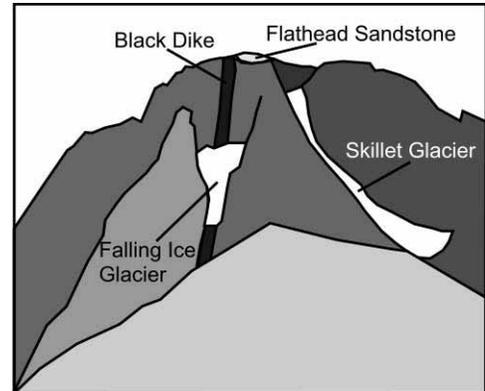


The Big Picture

When visitors catch their first glimpse of the Teton Range, the jagged skyline sparks wonder. What natural forces shaped this magnificent landscape? Some of these forces began and ended long ago, but some of these forces are still changing the landscape today. The rocks found in the core of the mountains are some of the oldest in North America; whereas, the forces that lifted the Teton Range and formed the Jackson Hole valley began very recently in geologic time. Our journey through the past explores these stories of the Teton Range.

Rocks

The geologic story of the Teton Range began more than 2.7 billion years ago. Sand, mud and volcanic sediment sank into an ancient sea. The collision of tectonic plates, moving sections of the Earth's crust, buried these sediments up to 20 miles deep. Heat and pressure changed these sediments into a metamorphic rock called gneiss. In this rock, light and dark minerals separated into layers as seen along the trail to Inspiration Point, or sometimes into "eyes" as seen in Death Canyon. Around 2.5 billion years ago, molten rock called magma squeezed into weak zones or cracks in the gneiss. Crystals grew as the magma slowly cooled to form an igneous rock called granite. These bodies of granite are inches to hundreds of feet thick slicing through the gneiss. Granite appears speckled in contrast to the layers seen in gneiss. Granite is harder than gneiss and forms the jagged summits of the Cathedral Group such as the Grand Teton. Roughly 775 million years ago, iron-rich magma similar to basalt squeezed into vertical cracks in the granite and gneiss and cooled to form dikes. These igneous dikes are made of a rock called diabase. The "Black Dike" on Mount Moran is roughly 150 feet wide, sticks out from the face of the mountain 200 feet and continues west for six or seven miles before being buried under younger sedimentary rocks. This dike sticks out from the face of Mount Moran because diabase is harder than gneiss. The dike on the face of the Middle Teton, however, forms a slot because granite is harder than diabase. Inland seas flooded the region about 510 million years ago, depositing sand, mud, and forming coral reefs during the next 400 million years. With burial, these sediments compressed into layered sedimentary rocks such as sandstone, shale, limestone and dolomite. These rocks flank the Teton Range to the south, west, and north and outcrop on Blacktail Butte.

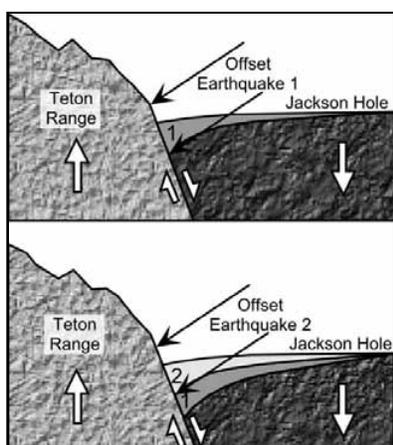


Mountain Building

Starting 120 million years ago, a tectonic plate under the Pacific Ocean collided into the west coast of North America. This collision built mountains by crumpling the Earth's surface from the west coast progressing eastward. Mountain building reached the Rocky Mountains and Gros Ventre Range around 70 million years ago by thrusting large blocks of bedrock skyward. (Figure 3) As the Rocky Mountain uplift ended, lava erupted from volcanoes across the region. Layers of lava and volcanic debris deposited to form the Absaroka Range. Lingering heat from this molten rock left the Earth's crust hot and bulged up like a hot-air balloon. In places, the crust stretched past the breaking point. Huge blocks of the Earth's crust broke and slipped past each other along faults such as the Teton fault.



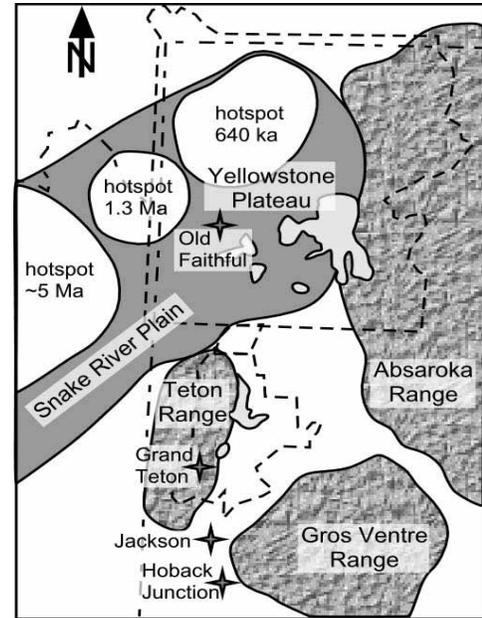
Teton Fault



Movement on the Teton fault accounts for the dramatic uplift of the Teton Range. Starting 10 million years ago, a series of massive earthquakes triggered by movement on the Teton fault tilted the mountain block skyward and dropped the valley block. Each of these earthquakes, up to magnitude 7.5, broke or offset the Earth's surface by up to ten feet. Today, the total offset on the Teton fault approaches 30,000 feet. The Flathead Sandstone caps Mount Moran 6,000 feet above the valley floor. This same sandstone layer lies buried more than 20,000 feet beneath the valley floor. The best view of the Teton fault is from the Cathedral Group Turnout along the Jenny Lake Scenic Loop. From this vantage point, the fault "scarp" or break in the Earth's crust represents up to a dozen earthquakes since the end of the Pleistocene Ice Age.

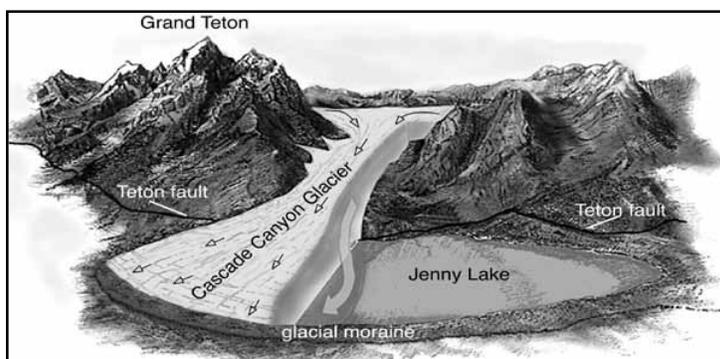
The Teton/Yellowstone Connection

Today a plume of magma or “hotspot” lies beneath the Yellowstone Plateau. The magma heats the overlying rock and water to generate spectacular hot springs and geysers found in Yellowstone National Park. Five million years ago, the hotspot erupted west of the Teton Range sending clouds of volcanic ash into Jackson Hole. This heat caused the area to stretch more rapidly triggering earthquakes on the Teton fault and continuing to uplift the Teton Range. Between two million and 640 thousand years ago, the Yellowstone hotspot exploded three times. These eruptions destroyed mountain ranges and sent fiery clouds of gaseous lava south along both sides of the Teton Range. Deposits from these eruptions cap Signal Mountain and the north end of the Teton Range.



Glaciation

Today's landscape preserves evidence of the last two glacial advances. The most recent glacial advance, called the Pinedale, lasted from about 50,000 to 14,000 years ago. This ice sheet wrapped around Signal Mountain and dug out Jackson Lake. The older glacial advance, called the Bull Lake, buried the town of Jackson under 1,500 feet of ice and pushed south toward Hoback Junction. While ice sheets flowed from the north, alpine glaciers flowed eastward from the high peaks. Glaciers slid on a film of meltwater picking up rocky debris in their bases. Debris acted as a belt-sander to polish and groove the bedrock. Glaciers also broadened V-shaped stream drainages into U-shaped valleys as seen in Cascade Canyon. When the glaciers reached the valley floor, they bulldozed out depressions and left behind ridges of rocky debris called moraines.



Terminal moraines mark the furthest extent of a glacier's flow and form natural dams for valley lakes such as Phelps, Taggart, Bradley, Jenny, Leigh and Jackson. Today the Teton Range hosts a number of small glaciers. These glaciers are not remnants of the Pleistocene Ice Age but formed during a cool period called the Little Ice Age, which lasted from 1400 to 1850. Today, Skillet and Falling Ice glaciers continue to carve Mount Moran, and the Teton Glacier flows down the north flank of the Grand Teton. Even as these glaciers flow down due to gravity, warming temperatures cause them to shrink and retreat. During the past 40 years, these glaciers have retreated 20 to 25 percent.



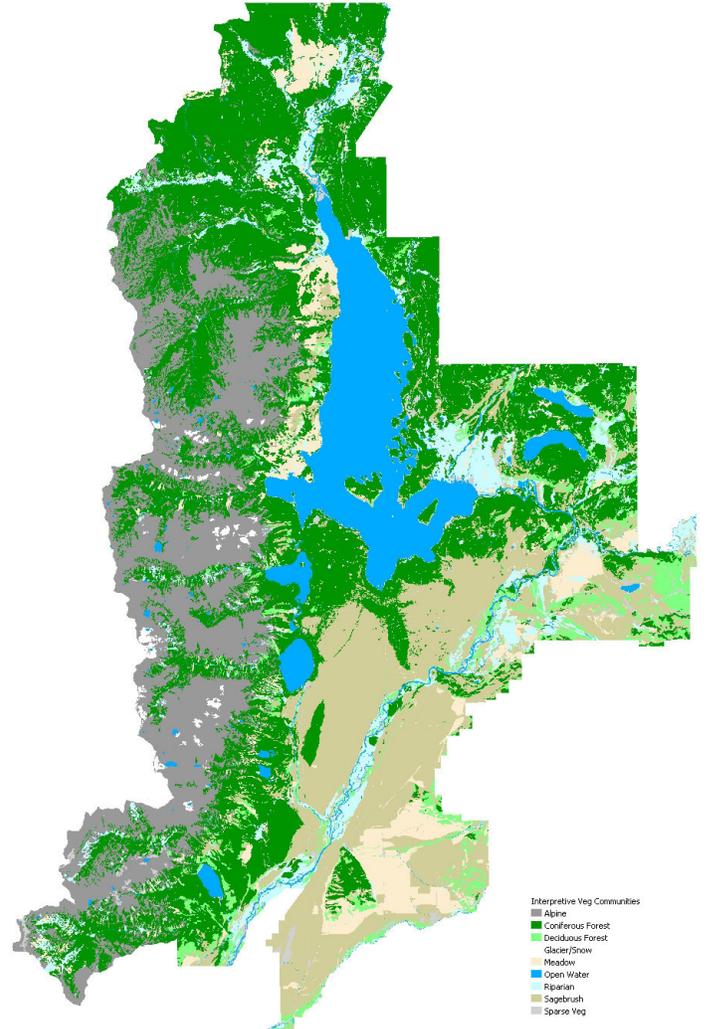
Today's Landscape

Ice age glaciers melted and flooded Jackson Hole. The meltwater carved channels across the valley floor, washed away soil, and deposited glacial outwash plains of sand, gravel, and cobbles. As time passed, the Snake River cut through these plains leaving behind benches or terraces that step down to today's channel. On the outwash plains, sagebrush, arrowleaf balsamroot and scarlet gilia have adapted to thrive in this sandy dry soil. Silt in glacial moraines holds rainwater to support lodgepole pine forests. Today, these forests cover moraines such as Timbered Island, Burned Ridge, and around Jenny Lake. Geology influences the vegetation and in turn, the wildlife found here. As you enjoy the scenic beauty of the Teton Range and Jackson Hole, remember that geologic forces are still at

work. Mountains continue to rise, while wind, water and ice erode the mountains as part of a never-ending story. Park law prohibits collecting. Please leave rocks where you find them so that others may enjoy this geologic story. Each major earthquake breaks the Earth's crust forming a vertical face of raw dirt and rock called a scarp. Regional stretching has generated thousands of earthquakes over the past ten million years; tilting the mountains skyward and hinging the valley down. Ice, water and wind sculpted the stunning Teton Range. The Pleistocene Ice Age began 2 million years ago as the Earth's climate cooled. Snow accumulated across the high Yellowstone Plateau and compressed into ice. Gravity caused the large ice sheet, up to 3,500 feet thick, to flow down from the high plateau.

As the climate warmed, glaciers melted and retreated and the cycle repeated. A glacier flowed out of Cascade Canyon gouging out a depression and depositing a terminal moraine forming Jenny Lake today. Every day seismic instruments record earthquakes up to magnitude 5 in the Teton – Yellowstone region. Few if any of these earthquakes occur on the Teton fault. Geoscientists discovered that the last two major earthquakes were around 4,800 and 8,000 years ago. Each of these earthquakes offset the Earth's surface by 4 – 10 feet. Someday another major earthquake will shake the ground, break the Earth's surface, and lift the mountains skyward once more.

Ecology



Communities

Grand Teton National Park is made up of communities of plants and animals that occupy the same areas. There are four major communities found within the park, including the alpine, forest, sagebrush, and wetlands.



Alpine

Life above treeline is precarious. Plants and animals in the alpine community must adapt to an environment of extremes, including scant soil, intense solar radiation, short growing season, extreme temperatures, heavy snow cover and fierce winds. Survival in this harsh environment requires that plants use unique strategies and adaptations to overcome these limitations.

- Common plants: Alpine Forget-Me-Not, Moss Campion, Alpine Laurel
- Common animals: Bighorn Sheep, Pika, Marmot, Peregrine Falcon, Rosy Finch



Forest

Trees are the pillars of the forest community. They provide habitat for wildlife, produce oxygen, stabilize soils and prevent erosion of riverbanks. Geology and climate determine the type and location of forests. Glacier-created moraines retain moisture, allowing the growth of lodgepole pine adjacent to areas of shallow porous soils that lack trees. Trees are absent above treeline in the mountains.

- Common plants: Subalpine Fir, Engelmann Spruce, Whitebark Pine, Lodgepole Pine, Highbush huckleberry
- Common animals: Snowshoe Hare, Black Bear, Porcupine, Dusky Grouse, Western Tanager



Sagebrush

Sagebrush communities in Grand Teton National Park are surprisingly diverse. Sagebrush dominates the silver-green patchwork, but look carefully and you will discover many shrubs, grasses and wildflowers. Shallow soils, consisting of sand and cobbles that hold little moisture in summer, characterize this community. Drought-tolerant plants survive here despite dry soil and intense sunlight.

- Common plants: Big Sagebrush, Silky Lupine, Arrowleaf Balsamroot
- Common animals: Bison, Coyote, Pronghorn, Uinta Ground Squirrel, Greater Sage Grouse, Western



Wetland

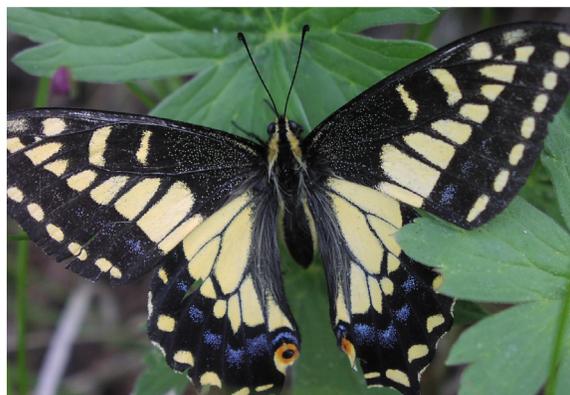
Wetland communities in Grand Teton National Park come in many forms, including willow swamps, marshes and potholes. Wetlands buffer against floods and provide critical habitat for many species. Each year, melting snow from the surrounding landscape recharges the wetlands. This fluid, ever-changing aquatic environment at the headwaters of the Snake River is a magnet for both wildlife and humans.

- Common plants: Narrowleaf Cottonwood, Yellow Pondlily, Geyer Willow, Yellow Monkeyflower
- Common animals: Beaver, River Otter, Moose, American White Pelican, Trumpeter Swan, Osprey, Bald

References:

Discovergrandteton.org

Animals



Insects

Insects are possibly the most important group of animals on the planet by playing key roles in food webs. They pollinate dazzling wildflowers, provide food for many animals, and act as decomposers and nutrient-recyclers. Amazingly, insects outnumber all of the other animals combined. In this region alone, there are over 10,000 different species.

Many flowering plants depend on a single insect species for pollination. Dazzling flowers like lupine, yellow-bells, phlox, sunflowers and the delicate Calypso Orchid rely on bees, beetles, and butterflies for survival. Plants use a large amount of energy to attract insects with bright colors and alluring scents to ensure survival.

The violet-colored lupine attracts bees in our park. Lupine, a member of the pea family, has a very

complex flower structure. The two bottom petals are fused together to form a canoe-shaped pollen protector. When a bee lands, its body pushes the tip of the canoe-like petals down exposing the pollen as if opening a trap door. Pollen sticks to the bee's belly that is then carried to the next lupine. Only bees are the right size to open the hatch and pollinate lupine.

Thousands of animals rely on insects for energy and nutrition. Insects are the primary food for lizards, snakes, frogs, trout, and many birds. Even bears depend on insects. During fall, the massive grizzly feasts on the tiny Army Cutworm Moth. Swarms of cutworm moths migrate from the plains to the alpine to mate in fall. After mating, the moths die and grizzly bears roam the high peaks scooping up moths by the paw-full, an important pre-hibernation

protein source. On the forested slopes below, both bear species feast on ant colonies and beetle larvae called grubs. If you see a log on the trail ripped to shreds, it might be where a bear enjoyed a snack.

Beetles are true workhorses of the forest acting as construction crews, recycling crews and sanitation crews. Bark beetles bore through conifer bark and chew elaborate tunnels on the wood underneath. Beetles break down woody plant material and recycle nutrients back to the soil. When an animal dies, carrion beetles recycle the valuable minerals in the body. Through tunneling, chewing and feeding beetles mix up the soil playing a major role in decomposition. Their activity helps the next generation of plants and animals to start anew.

Fish

Rivers, lakes and ponds sparkle on the landscape obscuring the processes and life forms that exist below. The most familiar creatures of this underwater world are fish. Though they often go unnoticed, fish are crucial to the health of the regions ecosystem.

The fish species present in Grand Teton National Park vary widely in shape, size and behavior. The mountain sucker feeds on algae. The cutthroat trout, named for the red slash under the lower jaw, feeds mainly on insects and smaller fish. The Utah chub lives in warm,

shallow, slow-moving water. The mountain whitefish prefers cold, deep, fast-moving water. Despite their many differences, all fish are the primary food source for several species of birds, mammals, and other fish. The bald eagles depend on fish for their survival. Many other animals, including humans, consume fish as a secondary food source. Fish in turn control plant and insect populations. The well-being of fish worldwide is threatened by pollution, loss of habitat and overfishing.

Grand Teton National Park has

a worldwide reputation for its excellent trout fishing. Of the five species of trout present in the park, however, only the Snake River cutthroat trout is native. More than a dozen species of fish thrive in Grand Teton National Park.

Native Species: Snake River cutthroat trout, Utah sucker, Longnose dace, Redside shiner, Paiute sculpin, Mountain whitefish, Speckled dace, Mountain sucker, Mottled sculpin



Amphibians



Amphibians are some of the most unusual and important species found in the park. The word amphibian comes from the Greek words meaning “double life”, and refers to their unusual two-stage life cycle. An amphibian begins life as an egg, laid either in water, or in some other wet environment. The larvae hatch and spend their time in water breathing through gills. They then undergo a metamorphosis into an adult form that breathes using lungs. While adults are considered terrestrial, amphibians continue to spend most of their lives near water. Unlike reptiles that have dry scaly skin, amphibians have moist, smooth, glandular skin with no scales, and they have no claws on their toes.

Amphibians are cold-blooded and cannot regulate their body's temperature like mammals and birds. In the park, the cold annual temperatures, high elevation and dry climate limit amphibian diversity and numbers. The park is home to six species of amphibians: spotted frogs, boreal chorus frogs, boreal toads, tiger salamanders, northern leopard frogs (possibly extinct in the area) and bullfrogs (introduced just outside the park).

The best places to find amphibians are near rivers, streams and lakes along the valley floor. Good places to look for spotted frogs include String Lake, Schwabacher's Landing (along the Snake River) and Taggart Lake. Chorus frogs are easiest to find in late May and early June because the males are actively

calling during their breeding season. Look and listen for these frogs at dusk in moist valley meadows. The boreal toad seems to be disappearing from their historic range. Sightings of these, as well as leopard frogs, should be reported to a park's visitor center.

Take some time during your visit to search for these interesting creatures. They are an important link in the food web-providing food for birds, otters and fish; and preying on insects. Finally, amphibians indicate the overall health of the ecosystem. Their dependence on water and the dual life cycle they lead makes them extremely sensitive to changes in environmental conditions.

Reptiles

Grand Teton National Park is home to an incredible variety of wildlife including several species of reptiles. Reptiles have dry, scaly skin and either lay eggs or bear live young. Reptiles are cold-blooded. They cannot maintain a constant body temperature like mammals. Instead they regulate their body temperature by moving into or out of sunlight. The park's cold climate limits the number of reptile species found here.

There are only four species of reptiles in the park-one species of

lizard, and three species of snakes. The most common reptile in the park is the wandering garter snake (*Thamnophis elegans vagrans*). The valley garter snake (*Thamnophis sirtalis fitchi*) and the rubber boa (*Charina bottae*) are less common. All three species of snakes typically live near water. There are no species of venomous snakes in the park.

The only known species of lizard in the park is the northern sagebrush lizard (*Sceloporus graciosus graciosus*). Amazingly,

this lizard species that lives in dry, rocky sagebrush habitat was not confirmed in the park until 1992. Although Grand Teton is a heavily visited jewel of the National Park System, this relatively recent "discovery" points to our lack of knowledge about smaller species in the park. Since other reptile species, including the Great Basin gopher snake (*Pituophis catenifer deserticola*), may someday be found in the park, further study is needed.



Birds



Grand Teton National Park has many diverse communities that support a variety of birds. Some of the largest and smallest North American birds inhabit or pass through the park and parkway. The calliope hummingbird, the smallest North American bird, weighs less than a tenth of an ounce. This bird can be found around blooming scarlet gilia and near willow shrubs. The trumpeter swan, the largest waterfowl in North America, can be found at Oxbow Bend, Swan

Lake and Flat Creek in the National Elk Refuge. Trumpeter swans are often found in pairs that mate for life.

Osprey and bald eagles hunt and nest near water. The sight of these birds catching a fish is a special treat. Ospreys carry fish in their talons so the fish is parallel to the bird's body in an efficient streamlined position. Ospreys are often mistaken for bald eagles.

The Western Tanager is one of the most colorful birds in the Tetons

frequenting the forests. The male is red, orange, yellow and black reflecting its winter range in the tropics. If you visit the park during spring, look for the courtship display of the sage grouse in the sagebrush community. During display, the male sage grouse tail feathers spread over a 280-degree angle and they expand air sacs on the chest that produce a popping sound to attract a female.

Mammals

Sixty-one species of mammals live beneath the towering peaks of the Teton Range. They are found in each of the four major communities in the park: alpine, forest, sagebrush flats, and wetlands.

Mammals have two characteristics that separate them from other animals. They have hair and they nurse their young. Mammals also have other characteristics that allow them to thrive in almost any environment. They are warm-blooded relying on metabolism to maintain a constant body temperature instead of their surroundings. Mammals have well-developed sensory systems and specialized teeth that allow

them to find and eat different foods. They can climb, swim, run, glide, and fly allowing mammals to inhabit a variety of niches in every ecosystem. Mammals also focus their energy to raise only a few young to ensure their survival rather than produce vast numbers of offspring. These characteristics allow mammals to adapt to almost every environment found on Earth.

In Grand Teton National Park, most wildlife watchers are in search of mammals. Look for large ungulates like moose, elk, mule deer, bison, and pronghorn from roadside vantage points. Large predatory mammals like grizzly and black bears, wolves and mountain lions are typically more elusive. Uinta

ground squirrels, least chipmunks and red squirrels are common on the valley floor, but badgers, pine martens, long-tailed weasels, and wolverines are difficult to find. As you hike through rocky areas, watch for pikas, yellow-bellied marmots and golden mantled ground squirrels. In the waters of the park, you may spy a muskrat, beaver, or river otter swimming along.

No matter where you go in Grand Teton National Park, a mammal will not be far away. Their ability to adapt has allowed them to thrive throughout the park, and their presence brings a sense of excitement to this beautiful place.



Plants



Lichens

Growing only millimeters a year, some lichens are thought to be the oldest living things on Earth. Lichens are not single organisms, but rather a partnership, or mutualistic symbiosis, between fungi and algae or cyanobacteria. The fungus builds the body of the lichen while the alga or cyanobacteria live within this structure and are photosynthetic, producing energy and nutrients for both organisms. This partnership allows lichens to colonize harsh environments such as the alpine areas of Grand Teton National Park. Acids secreted by lichens dissolve

the surface of the substrate they grow on. This, along with their action of infiltrating and wedging apart pieces of rock, are the beginnings of soil formation. Lichens serve as food in times of stress for many organisms including bighorn sheep, elk, and humans. Many birds also use lichens for nest building.

Many lichen species are highly sensitive to air quality; therefore, they are vulnerable to habitat alteration and serve as useful bio-indicators. The presence or absence of lichens in an area is a good indication of the area's

air quality. Lichens absorb air pollution and heavy metals from their surrounding environment. Analyzing the pollutants absorbed by lichens allows scientists to determine the amount and kinds of air pollutants and how far they have traveled.

Mosses and Liverworts

A vertical rock face at 12,000 feet above sea level, the furrowed bark of a three-hundred-year old Engelmann spruce, a concrete bridge abutment on the Snake River; these are not places one thinks of as habitat for plant life, yet, in all of these, mosses and liverworts thrive.

Mosses and liverworts belong to a group of plants known as bryophytes. Bryophytes are believed to be the first green plants to establish themselves on land. Fossil records date bryophytes to at least the Carboniferous Period, 350 million years ago.

Although mosses and liverworts bear some resemblance to vascular

plants (plants with nutrient transporting tissues such as roots, stems, and veined leaves) they are actually quite different. Bryophytes have no transporting stems or roots. Instead, they absorb needed nutrients directly through surface tissues. This allows bryophytes to exist without soil. Bryophytes use tissues called rhizoids to attach themselves to surfaces on which to grow. Their chief method of reproduction is quite unlike vascular plants. Rather than being transported by wind or animals, the sperm of bryophytes must swim to the ovaries for fertilization to take place. These plants must have exposure to rainfall or live in a moist environment. This process

may be a remnant of their aquatic ancestry. The result of fertilization is the production of spores, which are then dispersed via wind to form new colonies.

Bryophytes serve the ecological community of Grand Teton National Park in a number of ways. They are excellent soil stabilizers. They provide food, moisture, and habitat to many animal species. They also provide the organic material needed for other plant types to colonize previously barren areas. Like lichens, bryophytes are valuable indicators of air and water quality.



Ferns



Lay a plant upon its side, sending roots directly from the stem into the soil with its leaves pointing towards the sky, and you have a fern. The rhizomes of a fern are comparable to a plant stem while its fronds are its "leaves." These ancient plants grow in moist, shady, forests, softening the landscape while adding cover and protection for small wildlife.

True ferns have a very different life cycle from seed bearing plants. Ferns produce tiny spores on the undersides of their fronds transported by wind. When a spore lands in a spot with enough moisture and shade it will begin developing into a gametophyte. This small reproductive body sends out a root, anchoring itself to the soil and then slowly grows

in size, adding one cell at a time, developing both female and male reproductive organs. As soon as the female organs mature, moisture allows fertilization to occur and a plantlet begins to grow. This dependence upon the presence of moisture at the right moment during the life cycle of the fern is what limits most ferns to damp wooded areas.

In Grand Teton National Park, you are likely to find bracken ferns colonizing open disturbed areas, such as recent burn areas. This is the largest fern in the park. Look for the triangular shape of its fronds. Bracken fronds turn a rusty orange during early fall adding color to the fall foliage. Another fern you might stumble upon on your hike is the rockbrake or

parsley fern, one of the few species of ferns that have adapted to grow in dry rock crevices and on talus slopes. On your way into one of the canyons look for lady ferns and shield ferns in the shaded forest understory.

As you walk through the park forests in early June, keep look for uncurling fronds, also called fiddleheads. Although many ferns are poisonous, the fiddleheads of some species are considered a delicacy. Indians in this area dried and ground the rhizomes of bracken ferns to make meal. However, these plants contain known carcinogens and should not be consumed.

Trees and Shrubs

Most of the trees found in Grand Teton National Park are cone-bearing otherwise known as conifers. Lodgepole pines inhabit areas that are periodically burned by forest fires. Their specially-designed serotinous cones open only when heated by fire causing them to drop a huge number of seeds on the newly sunlit and fertile post-fire soil. Whitebark and limber pines produce nuts that are an important food source for many birds, small mammals, and grizzly bears. Spruce-Fir forests consisting of blue spruce, Engelmann spruce, Douglas fir, and subalpine fir take over after other trees like lodgepole pine and quaking aspen have prepared and stabilized the soil.

In the fall, while the conifers are preparing for the long, cold winter to come, the leaves of the deciduous trees of the Tetons begin to change color. Along

river corridors and in wetlands, the leaves of the narrow-leaf cottonwoods and balsam poplar turn a golden yellow. These trees thrive in the changing water levels that come with the Teton seasons. Large hillside stands of Quaking Aspens change from bright green to yellow and orange. These trees, connected under the ground by spreading root systems, are all one organism, and therefore all change color at the same time! Many species of willow provide food and cover for moose, sandhill cranes and other wetland inhabitants. Big sagebrush and low sagebrush cover most of the central valley and grow well in water-deficient soil. Although sagebrush is only eaten primarily by pronghorn and sage grouse, these hearty shrubs provide essential habitat by creating shelter from the wind, rain and snow that blows across the flats.

In early summer, the bright pink

flowers of the wild rose and spreading dogbane compete for attention with the beautiful white clusters of mountain ash and serviceberry flowers. The fragrant aroma of snowbrush and chokecherry flowers float on the wind, and the yellow flowers of rabbitbush add some variety to the grey-green sagebrush flats.

As summer wanes, flowers turn to fruits and berries begin to appear. Visitors and wildlife alike hunt succulent huckleberries, thimbleberries, and wild raspberries. Other shrubs like bracted honeysuckle, black elderberry, mountain ash and snowberry are poisonous to humans but still appeal to bears, birds, and other animals. The berries found here are an important source of food for animals needing to store up fat for the long winter to come.



Grasses



With towering peaks and beautiful stands of conifers and aspens, Grand Teton National Park tends to draw your attention upward. All the while, below your gaze, tickling your ankles, padding your footsteps, helping cool a hot summer day, are the unsung heroes of the park - the grasses.

Grand Teton National Park is home to over one hundred different species of grasses. Grasses make up one of the most widely distributed plant types in existence. Grasses are present in every community in the park from wetlands, to sagebrush flats, to forests, to the alpine zone. Wherever they grow, grasses are an integral element of the

ecological tapestry. Grasses are the chief food source for much of the native wildlife: bison, elk, marmots and many insect species. Other animal species use grasses to supplement their diets. Grasses also provide cover and nesting material. Many small mammals, as well as birds, use grasses to build nests and insulate burrows against the severe climate.

Grasses stabilize soils and help provide a substrate for other plants to grow. The dense root structure of grass holds soil in place reducing erosion. This is essential in an area such as Grand Teton National Park with steep-slopes and high levels of precipitation. When you visit, take time to consider the grasses.

View them from afar to appreciate the wonderful colors they add to the landscape. View them from near and marvel at their fine structure. Contemplate the vital role grasses play in one of the most vibrant ecosystems in the world.

Native Species: Alpine Timothy, Bearded Wheatgrass, Idaho Fescue, Kentucky Bluegrass, Pinegrass, Sanberg Bluegrass, Spike Trisetum, Ticklegrass, Timber Oatgrass, Tufted Hairgrass

Non-native Species: Cheatgrass, Common Timothy, Crested Wheatgrass, Orchard Grass, Smooth Brome

Wildflowers

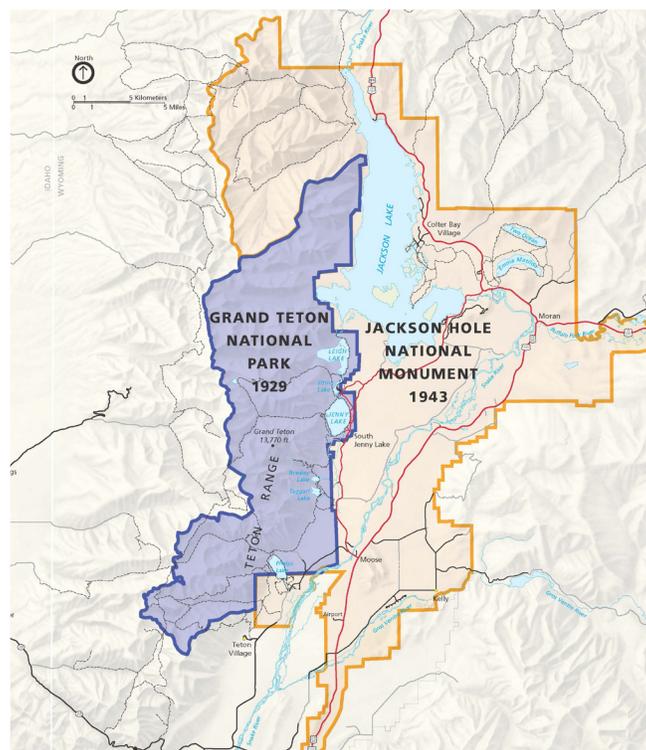
The wildflowers of Grand Teton National Park usually bloom May through September. There are only about 60 continuous frost-free days a year in Jackson Hole, so the growing season is very short and the dominant blooming flowers change quickly from week to week.

Grand Teton National Park can be separated into three distinct zones: the sagebrush valley, the forest floor, and the alpine zone. Skyrocket gilia, larkspur, and indian paintbrush bloom in the valley as temperatures rise. Flowers like fireweed, columbine, monkshood, and the rare calypso orchid enjoy

the moist environments found in forests. The flowers of the alpine zone grow close to the ground and the flowers are very small; examples include moss campion, alpine forget-me-not, and sky pilot.



History



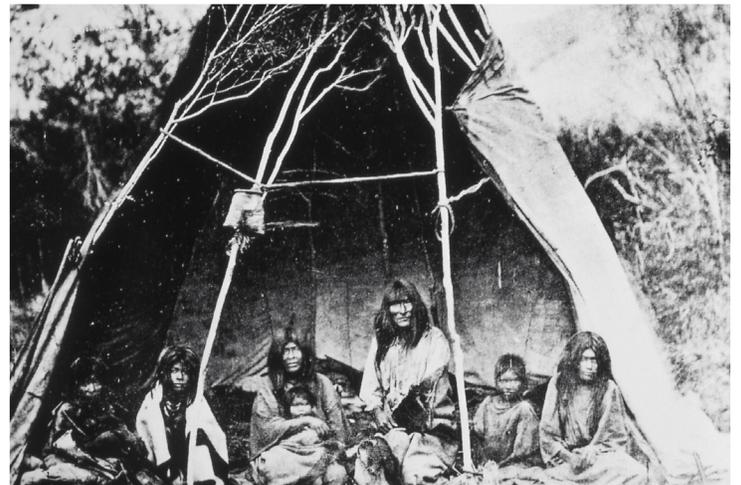
Jackson Hole has a rich history of human habitation. Despite the harsh environment, humans have been using the valley for about 11,000 years, beginning with American Indians and continuing through to the present National Park.

American Indians

People first ventured into this valley as glaciers receded. The earliest evidence of humans in this area dates back at least 11,000 years. By the time Europeans arrived, tribes such as the Shoshone, Bannock, Blackfoot, Crow, Flathead, Gros Ventre, Nez Perce and others were harvesting the valley's seasonal riches. Native people came to hunt animals, gather plants and collect rocks and

minerals. These mountains also held spiritual meaning for American Indians, a connection that endures today.

Indians camped near rivers and lakes to hunt wildlife and harvest roots and berries, often roasting camas root in underground pits. Both wildlife and plants were essential to their diet. With the coming winter, Indians often left the valley for milder locales as did most of their prey.



Explorers and Trappers

By the 1820's, mountain men were following wildlife and Native American trails into the valley to trap beaver. These fur trappers coined the term "hole" to describe a valley that is surrounded by mountains. Jackson Hole was named for a trapper named David E. Jackson that is said to have spend the winter of 1829 along the shore of Jackson Lake.

Richard and Jenny Leigh

Richard "Beaver Dick" Leigh, a British expatriate and fur trapper, arrived in Teton Valley, Idaho with his Shoshone wife Jenny in 1863. The Hayden Expedition of 1872 named Leigh and Jenny lakes for their assistance, breaking from the tradition of naming landmarks after expedition team members. Jenny and their six children died of smallpox in 1876. Later, Beaver Dick expressed his grief in a letter to a friend: "I am all alone and I keep doing at some thing from day light to dark every day. I am very lonsome."



John Colter

Little is known about John Colter. He may have passed through the valley in 1807 over Teton Pass after he split off from the Lewis and Clark Expedition from Fort Manuel. In 1931, a farmer plowing a field unearthed a stone inscribed "John Colter" on one side and "1808" on the other side near Teton, Idaho. It is not clear if Colter actually carved this stone or not.

Homesteaders and Ranchers

Jackson Hole was one of the last places to be settled after the Homestead Act of 1862. Harsh weather, rocky soils and difficult access made this a challenging place to settle. Read a few of the homesteading and ranching stories and how their struggles lead to the establishment of Grand Teton National Park.

Mormon Row

Leaders of The Church of Jesus Christ of Latter-day Saints, or Mormons, sent parties from the Salt Lake Valley to establish new communities and support their expanding population. Mormon homesteaders, who settled east of Blacktail Butte near the turn of the 19-century, clustered their farms to share labor and community, a stark contrast with the isolation typical of many western homesteads. These settlers first arrived in the 1890s from Idaho establishing a community (named Grovont by the U.S. Post Office) known today as “Mormon Row.”

Homesteaders established 27 homesteads in the Grovont area because of relatively fertile soil, shelter from winds by Blacktail Butte and access to the Gros Ventre River. Despite the harsh conditions of Jackson Hole, Mormon settlers grew crops by using irrigation. These hardy settlers dug ditches by hand and with

teams of horses, building an intricate network of levees and dikes to funnel water from central ditches to their fields between 1896 and 1937. Water still flows in some of these ditches.

Mormon Row Historic District was added to the National Register of Historic Places in 1997 as an Historic District.



Moulton Barns

Today, two picturesque barns highlight Mormon Row. Settlers John and Thomas Alma (T.A.) Moulton built these barns on adjacent homesteads. After nearly 30 years of working the land, John replaced his log home and barn with a new carpenter-constructed, pink stucco frame house and impressive, two-story gambrel barn north of Antelope Flats Road. South of John’s homestead, T. A. took over 30 years to build his gable-with-shed style barn. Photographers from around the world stop by T. A. Moulton’s barn to capture this iconic historic structure with the Teton Range in the background.



Menor's Ferry

Menor's Ferry General Store

Bill Menor traveled from Ohio to Montana before settling in 1892 on the Snake River "where the river was altogether in one place." He found that the river flow near present-day Moose narrowed to a single channel that could be crossed more easily than the wide, braided channels that comprise most of the Snake River. During the next decade, he built his cabin one room at a time. His brother, Holiday, settled on the other side of the Snake River and operated a limekiln.

Bill painted the general store with whitewash from Holiday's limekiln. In the early 1900s, the store and ferry drew homesteaders and dudes alike, ordering supplies and crossing the river. Bill also operated a smokehouse and blacksmith shop, raised

vegetables supplying produce to the local dude ranches, and served as postmaster. In 1918, he sold his homestead and ferry operation to Maud Noble. Today, period furnishings fill the cabin, and the storekeeper still sells period goods to visitors who venture to the store. Grand Teton Association manages the store; open seven days a week during the peak summer season.



Menor's Ferry

Bill Menor recognized the single channel of the Snake River offered an ideal crossing point, one of only three crossing points in the valley. His "reaction ferry" design dates back to ancient times, using the river current to propel the boat. During winter when the river was low, he would shuttle people across in a cable car. The ferry operated until 1927 when the State of Wyoming built a bridge. Today, visitors can enjoy a ride on a replica ferry that operates in the late summer months (dates and hours vary).



Maud Noble's Cabin

On July 26, 1923, Maud Noble hosted a landmark meeting in her cabin. Yellowstone National Park Superintendent Horace Albright joined a small group of local businessmen and ranchers. They launched a plan that planted the seed for the creation of Grand Teton National Park.

Maud Noble was the daughter of a prominent Philadelphia family, who first visited Jackson Hole in 1915 looking for adventure. She built her cabin the following year on Cottonwood Creek and moved it to Bill Menor's homestead in 1918 when she bought his ferry operation. Today, the cabin welcomes visitors with exhibits on the history of the park.



From Ranching to Recreation

J. P. Cunningham Cabin

The Cunningham Cabin stands as one of the valley's few remaining structures from the homesteading era when settlers filed nearly 400 claims in Jackson Hole. In the 1880s, John and Margaret Cunningham staked a claim for the Bar Flying U Ranch. Cunningham built his cabin in 1888 in the Appalachian style, commonly called "double-pen" or "dog-trot." John lived in the

cabin until 1895 when he finished his main residence, and it later became a smithy and barn.

Cunningham ran a profitable ranch until drought ruined his crops and cattle prices fell at the end of World War I. As an agricultural depression persisted through the 1920s, Cunningham and other ranchers recognized the valley's potential as a "playground." Cunningham teamed up with

neighbor Josiah David "Si" Ferrin to write a petition signed by 97 valley ranchers. The petition proposed a buyout of ranches to create a national recreation area for public enjoyment. In 1928, Cunningham sold to the Snake River Land Company who later donated 35,000 acres for park expansion.



Dude Ranches

The first homesteaders moved into the Jackson Hole valley in the 1880s. Many of these settlers quickly realized that the valley was poorly suited to raising crops and livestock. At the same time, wealthy Easterners wanted to enjoy the western experience. As a result, many ranchers turned to hosting “dudes” rather than raising cattle. Enjoy the stories of several dude ranches below.



JY Dude Ranch

Dave Spalding established a homestead near Phelps Lake in 1903. The picturesque setting could not make up for poor, rocky soils that were unsuitable for agriculture. In 1906, he turned the land over to Louis Joy who partnered with Princeton-educated Struthers Burt opening the first dude ranch in Jackson Hole. Joy and Burt brought together western ranching experience and eastern connections to attract visitors. The ranch earned its name from the abbreviation of Joy's last name to “JY”.

Jackson Hole was a center for

dude ranching from the early 1900s until the 1940s. During the first summer, the JY Ranch housed six dudes. In 1927, they housed 65 guests each paying \$65 per week for food, lodging, and the use of boats and horses. Dude ranches provided a western outdoor experience without the discomforts of actual ranch life, and a more relaxed atmosphere than Eastern hospitality.

In the 1920s, attitudes began to change. John D. Rockefeller, Jr. toured Jackson Hole with Yellowstone Superintendent Horace Albright. Disturbed by the development he saw,

Rockefeller founded the Snake River Land Co. to purchase land for conservation in the valley. Over a six-year period, Rockefeller purchased 35,000 acres including the JY Ranch in 1932. The JY Ranch became his family's private summer retreat for nearly 70 years. Between 1969 and 1983, Laurance S. Rockefeller transferred roughly 2,300 acres to Grand Teton National Park through a variety of means. The final 1,106 acres passed to the park in 2007 marking the end of the JY Ranch. The cabins are now relocated throughout the park as housing, warehouses and work centers.

Bar BC Dude Ranch

Experienced dudes, Struthers Burt and Dr. Horace Carncross opened Jackson Hole's second dude ranch in 1912, the Bar BC Ranch. Burt described dude ranching as cattle ranching modified to care for "dudes"—visitors willing to pay handsomely for a quaint cowboy experience. During its peak years, as many as 50 dudes could stay at a monthly rate of \$300 each. These rustic destinations copied the layout of working cattle ranches. Only six dudes stayed the first summer, but the Bar BC soon became Jackson Hole's most

famous dude ranch.

Unlike traditional dude ranches, the Bar BC entertained a well-heeled clientele with costume parties, performances of original plays and literary discussions. Burt, a popular author, attracted many artists, socialites and writers to his ranch. Some guests even arrived with their typewriters.

Struthers Burt used his literary talents to lobby for protection of the valley's open space as a wildlife park or "a museum on the hoof." Burt—a Princeton graduate and popular author—published *The*

Diary of a Dude Wrangler in 1924. He originally opposed the creation of a national park in Jackson Hole. Later he became concerned that developments—such as the nearby Elbo Ranch racetrack—would spoil the area's frontier and wilderness qualities.

Today, many of the ranch buildings remain along the western bank of the Snake River providing a sense of the solitude and wilderness that past visitors enjoyed.



Creation of a National Park



Evolution of a Dream

The birth of present-day Grand Teton National Park involved controversy and a struggle that lasted several decades. Opposition to expansion of governmental jurisdiction in Jackson Hole, combined with a perceived loss of individual freedoms, helped to fuel anti-park sentiments—which nearly derailed establishment of the original national park. In contrast, Yellowstone National Park benefited from an expedient and near universal agreement for its creation in 1872. The world's first national park took just two

years from idea to reality. Grand Teton National Park, however, materialized over 50 years through a burdensome process requiring a series of compromises and three separate governmental acts: The initial Grand Teton National Park—set aside by an act of Congress in 1929—included only the Teton Range and six glacial lakes at the base of the mountains. The Jackson Hole National Monument—decreed by Franklin Delano Roosevelt through presidential proclamation in 1943—combined Teton

National Forest lands with other federal acres, plus Jackson Lake and a 35,000-acre donation by John D. Rockefeller, Jr. The Rockefeller properties continued to be privately owned until December 16, 1949 when an impasse for inclusion into the initial national park was resolved. On September 14, 1950, the original 1929 Park and the 1943 National Monument (including Rockefeller's acreage) were united into a 'new' Grand Teton National Park, with its current, more expansive boundary.

An Idea is Born (1897-1919)

As early as 1897, Colonel S.B.M. Young, acting superintendent of Yellowstone, proposed to expand Yellowstone's boundaries southward to encompass portions of northern Jackson Hole and protect migrating elk herds. In 1898 Charles D. Walcott, head of the U.S. Geological Survey, made a similar proposal, suggesting that the Teton Range get included along with northern Jackson Hole. Neither the Department of the Interior nor Congress acted on either of these early proposals. In 1916, a new bureau—labeled the National Park Service—was created within the Interior Department.

This brand-new bureau could promote ideas both locally and at the national level through creation of a Washington DC office. The first director of the National Park Service, Stephen Mather, and his assistant, Horace Albright, affirmed their commitment toward expansion of Grand Teton National Park in a report to Secretary of the Interior Franklin Lane in 1917. Their report stated that adding part of the Tetons, Jackson Lake, and headwaters of the Snake River to Yellowstone National Park was "one of seven urgent needs facing the Park Service." Mather and Albright worked with the

Wyoming congressional delegation to draft a bill addressing the expansion of Yellowstone's boundaries into Teton country. Congressman Frank Mondell of Wyoming introduced the bill in 1918, and the House unanimously approved a revised bill in 1919. However, this bill failed because Idaho Senator John Nugent feared the loss of sheep grazing permits with expanded Park Service jurisdiction. As historian Robert Righter stated, "An opportunity had been lost. Never again would park extension be so noncontroversial."



A Fledgling Park Emerges (1919-1929)

In addition to Idaho sheep ranchers, other groups opposed park extension; these parties included regional U.S. Forest Service personnel, Jackson Hole businessmen, and several local ranchers. Horace Albright, serving as superintendent of Yellowstone, was unaware of the pervasive anti-park attitude in Jackson Hole in 1919. As a result, he was practically “run out of town” when he arrived in Jackson to explain and promote his vision for a ‘grand’ national park. Ranchers worried that expansion of Park Service jurisdiction would reduce grazing allotments; Forest Service employees feared their loss of authority over previously managed areas; and dude ranchers opposed potential road improvements, hotel construction, and concessioner monopolies. In 1919, several proposals emerged to dam the outlets of Jenny Lake and Emma Matilda and Two Ocean lakes. Alarmed local businessmen and ranchers gradually admitted that some form of protection by the National Park Service might just be their only salvation from commercialization and unwanted destruction. As a result, local residents gathered

at Maud Noble’s cabin on July 26, 1923 for a significant meeting with the Park Service. The participants included: Yellowstone Superintendent Horace Albright; Bar BC dude ranchers, Struthers Burt and Horace Carncross; newspaperman, Dick Winger; grocery storeowner, Joe Jones; rancher, Jack Eynon; and ferry owner, Miss Noble. The group devised a strategy. Their idea, dubbed the Jackson Hole Plan, sought to find private funds to purchase private lands to create a recreation area or a reserve that would preserve the ‘Old West’ character of the valley, basically creating what they called a “museum on the hoof.” With the exception of Horace Albright, the other attendees did not support a national park, because they wanted traditional hunting, grazing, and dude ranching activities to continue. A coordinating commission on national parks and forests met with Jackson Hole residents in 1928 and reached consensus for park approval. Local support, and the commission’s recommendations, led Senator John Kendrick of



Wyoming to introduce a bill to formally establish a Grand Teton National Park. Senator Kendrick said that once he saw the Tetons he, “realized that someday they would become a park dedicated to the Nation and posterity...” The U.S. Congress passed Senator Kendrick’s bill, and President Calvin Coolidge signed it on February 26, 1929, creating a 96,000-acre park that included the Teton Range and six glacial lakes at the base of the peaks. Because the 1929 Park did not protect a complete, all-encompassing landscape, Albright and the other participants of the 1923 meeting continued to pursue their dream of seeking private funds to purchase private lands in the Jackson Hole valley.

Rockefeller's Interest Grows (1929-1943)

John D. Rockefeller, Jr. became involved in the 'Jackson Hole Plan' after two visits to northwestern Wyoming: once in 1924 and again in 1926. These visits captured his attention and interest for not only the spectacular Teton scenery, but also the shabby developments littering the roadway from Menor's Ferry to Moran and along the shores of Jenny Lake. Yellowstone Superintendent Albright seized an opportunity to explain to Rockefeller the essence of the Noble cabin meeting and the collective hope of protecting "this sublime valley" from unsightly commercial development. Rockefeller decided to purchase "offending private properties" with the intention of donating those lands for national park designation. He created the Snake River Land Company as

a purchasing agent to mask his association and keep land prices affordable, since he knew landowners would undoubtedly inflate their asking prices if they knew of his connection. The Snake River Land Company launched an ambitious campaign to buy over 35,000 acres for approximately \$1.4 million. What seemed like a simple and clear-cut plan developed instead into 20 years of bitter struggle, nearly tearing apart the Jackson Hole community. Intense hostility surrounded land acquisitions, and attempts by Rockefeller to gift the properties to the National Park Service met with strong resistance. Economic hardships suffered by ranchers during the 1920's helped ease some acquisitions. Many ranchers were actually relieved to sell and get out of business during

a time of economic difficulty. In 1925, several ranchers circulated a petition in support of the private buyout, which countered conflicting opinions by Jackson Hole neighbors. Ninety-seven ranchers endorsed the petition's statement which stated, "...this region will find its highest use as a playground...The destiny of Jackson's Hole is as a playground, typical of the west, for the education and enjoyment of the Nation, as a whole." Perhaps this sentiment bears more credibility as an outright admission that ranching in Jackson Hole was difficult—if not impossible—than it does as a genuinely selfless act by the ranchers.



A Valley in Discord (1943-1950)

Because allegations were made that the Snake River Land Company used illegal tactics during the purchase of properties, a Senate subcommittee convened hearings in 1933 to investigate. When the hearings concluded, it was clear that claims about unfair business dealings by the Snake River Land Company and National Park Service were unjustified, and both agencies were exonerated. Wyoming Senator Robert Carey introduced a bill in 1934 to once again expand park boundaries. A compromise of this bill dealt with the reimbursement to Teton County for lost tax revenues. This bill, and another drafted in 1935, failed in the U.S. Senate. The tax issue, along with objections about including Jackson Lake because of the dam and reservoir, fueled anti-park sentiments all over again. During 1937 and 1938, the National Park Service prepared a document outlining the history of park extension and defending the importance of national park status on tourism. Again, divided sentiments flared and the expansion issue grew politically hotter. A group of locals calling themselves the Jackson Hole Committee vehemently opposed the park plan and encouraged the Wyoming delegation and Congress to follow their lead. The park dream remained bruised

and battered as controversy over park enlargement continued into the 1940s. After purchasing 35,000 acres and holding the land for 15 long years, Mr. Rockefeller became discouraged and impatient with the stalemate surrounding his generous gift. In a famous letter to President Franklin Delano Roosevelt, Rockefeller wrote that if the federal government did not want the gift of land or could not "arrange to accept it on the general terms long discussed...it will be my thought to make some other disposition of it or to sell it in the market to any satisfactory buyers." This threat persuaded FDR to use his presidential power to proclaim 221,000 acres as a Jackson Hole National Monument on March 15, 1943. Robert Righter believes that Rockefeller threatened to sell in order to provoke action. His bold threat provided FDR with the motivation and a reason to circumvent obstacles created by Congress and the Wyoming delegation. Local backlash immediately followed as park opponents criticized the National Monument for being a blatant violation of states' rights. They also believed the Monument would destroy their local economy and rob their county tax base. Hoping to force a confrontation, armed

and defiant ranchers trailed 500 cattle across newly created monument. Park officials ignored this stunt, but the cattle drive focused national attention on the Monument. The controversy grew more strident, prompting Wyoming Congressman Frank Barrett to introduce a bill to abolish the Jackson Hole National Monument. The bill passed both the House and Senate, but President Roosevelt exercised a pocket veto to nullify it. In yet another attempt to overturn the proclamation, the state of Wyoming responded to the President's veto by filing suit against the Park Service. Although that suit failed in the court system, the acrimonious battle continued. The proclamation directed transfer of lands from the Teton National Forest to the National Park Service, which simply motivated Forest Service administrators to oppose the Monument as well. Transition between federal jurisdictions provoked several vindictive deeds; one vengeful act involved gutting Jackson Lake Ranger Station before turning it over to Park Service staff. Throughout these turbulent years, local park supporters often faced hostilities and boycotts of their businesses.



The Storm Passes

After World War II ended, attitudes began to change in Jackson Hole. Between 1945 and 1947, bills were introduced in Congress to abolish the Monument, but none passed. Local citizens slowly began to realize that tourism offered an economic future for Jackson Hole that they couldn't previously imagine. Eventually, opinions about park enlargement became more congenial. By April 1949, interested parties had gathered in the chambers of the Senate Appropriation Committee to work out a final compromise. Though it took decades of controversy and conflict, discord and strife,

the establishment of a 'new' Grand Teton National Park finally occurred September 14, 1950, when President Harry S. Truman signed a bill merging the 1929 Park with the 1943 Monument to form a single enlarged 310,000-acre unit. Preservation of the Teton Range, Jackson Lake, and much of Jackson Hole was finally entrusted to the National Park Service as a less divided and more intact natural environment. Difficulties in the ultimate creation of Grand Teton National Park illuminate and emphasize the visionary goals of Horace Albright, John D. Rockefeller, Jr., and other citizens

who were pro-park. Legislation for the 1950 Grand Teton National Park contained significant compromises: 1) protection of existing grazing rights and stock driveways; 2) reimbursement to Teton County for lost tax revenues; 3) provisions for the controlled reduction of elk within park boundaries; 4) agreement that in the future, presidential proclamation could not be used to create a national monument in Wyoming; and 5) allowance for certain existing uses and access rights to forest lands and inholder (private) properties.

Heritage Preserved

Congress enlarged Grand Teton to its present size, "...for the purpose of including in one national park, for public benefit and enjoyment, lands within the present Grand Teton National Park and a portion of the lands within Jackson Hole National Monument." The conservation battle for Jackson Hole coupled with the philanthropic dedication of Mr. Rockefeller continues to impact the character of

Jackson Hole to this very day. Imagine how different the Teton landscape would look if unbridled development had triumphed over preservation of natural resources. In celebrating Grand Teton National Park's 50th anniversary, we recognize and honor the dedication, perseverance and aspirations of visionary men and women who believed that the greatest good for the Teton landscape was to create a "public

park or pleasure ground for the benefit and enjoyment of the American people." Robert Righter, author of *Crucible for Conservation: The Struggle for Grand Teton National Park*, asserts that what these visionaries achieved was "perhaps the most notable conservation victory of the twentieth century."



References:

Written in January 2000 by Jackie Skaggs, 50th anniversary coordinator, with research, references, and quotations taken from *A Place Called Jackson Hole* by John Daugherty and also from *Crucible For Conservation: The Struggle for Grand Teton National Park* by Robert Righter. Revised in 2013 by Jackie Skaggs, past public affairs officer for Grand Teton National Park.

Conclusion



The clock shows 4:30 am and the landscape begins to stir as another day in Grand Teton National Park begins. In the dark twilight, a group of four—led by their guide—leaves camp at the Lower Saddle and begins the arduous climb to the summit of the Grand Teton.

6:00 am: the sun's first rays escape the horizon and paint the very tops of the peaks in alpenglow. On the Snake River, a guide lends a hand to each member of a family as they load into a raft for a sunrise float. At a park lodge, a safari van pulls up to the front door, and a guide excites otherwise sleepy guests with the tempting prospect of spotting a moose, elk, or even a grizzly.

The sun's trek across the sky is well underway by 7:00 am, but the long light across the valley makes the grasses and sagebrush glow gold and green around their soft edges. A chestnut horse, saddled in western tack, follows a trail through those meadows with a wrangler upon it's back, while a line of modern 'dudes' from the ranch follow behind.

The day has started, and the entire park is alive with possibility. There have been many mornings like it, ever since the first tourists arrived in Jackson Hole at the turn of the 19th century. Truly, guiding in Grand Teton is a tradition with a long-standing history that guides today uphold; from river trips on the valley floor to climbs on the Grand, countless visitors have discovered meaning and made memories in the park because of the interpretive efforts of guides.

Indeed, to the visitors embarking on what may become experiences of a lifetime, the potential of the day is limitless. However, the memories made on the trail from horseback, the outcome of the climb, the journey of a 10 mile float, or the encounters with wildlife have one thing in common: the opportunities and meaning that visitors find in each are in the hands of the guides that led them. For one moment in time—whether on a trail, river, road, or mountain—guides in Grand Teton make a meaningful, memorable experience possible for each

visitor they encounter.

...

In turning back the clock to the earliest tourists, the era of the dude rancher marks a beginning of sorts. Jackson Hole has one of the longest traditions of dude ranching in the West—it continues today, in many forms, in both function and in nostalgia for the culture that originally brought prosperity to an otherwise rugged, unforgiving valley. The term 'dude' started initially as a local's derogatory term for the tourists who would stay for a week or more at one of the valley's ranches while living the cowboy lifestyle. However, after the construction of Jackson Hole's first dude ranch in 1908, dude ranching became widely regarded as one of the most viable ways to make a living in the harsh valley, as "dudes wintered better than cattle". Dude ranching was a way to experience the scenery of the West on the 'American Plan'- all meals, horseback riding, and lodging at one price. As to the visitor's motivations, one author explained that "a need to confront wilderness and relive the frontier experience lured dudes blinded by romantic notions west" (Daugherty, 1999, p 257).

Many dude ranches were established prior to the park's creation in 1929 and considerably before its 1950 inclusion of the valley. When the prospect of a preserve arose—whether in the form of an expansion of Yellowstone, a new national park, or something else—the dude ranching community was of mixed opinions. As controversy bubbled around the inception of Grand Teton National Park, conservationists, locals, outfitters, business owners, and opponents of federal land control took sides. One of the valley's earliest and most prominent dude ranches, the Bar BC, was run by Struthers Burt, a Philadelphian author and businessman. Though initially on the fence, Burt became convinced of the need to protect the valley in order to preserve the dude ranching way of life. After watching development explode around his homestead, and witnessing the rise of the automobile and the

consequent 'tin can tourist', Struthers Burt was definitive on his stance on protecting the valley in order to preserve the dude ranching way of life: "For God's sake let's put this thing over—It is the biggest idea of its kind since the actual inception of Yellowstone itself—a natural history museum on the hoof; the only thing of its kind in the world... that's big enough to fire any man's imagination."

Today, dude ranching continues to be a part of many visitors' experiences in Jackson Hole. Whereas some visitors may only drive through Grand Teton or stay a day, dude ranch guests often stay a week or more. They explore the park by horseback, and relive the West as it once was by taking wagon rides, riding to remote cookouts or camps, and even square dancing. Over a course of a week, they get to know their wranglers, who, in the eyes of a modern 'dude', may embody the living history of dude ranching and the West itself. The opportunities for personal connection to the culture of place are numerous, but perhaps experiencing the open expanses and blue skies of the park from the saddle is about something bigger: as artist Veryl Goodnight puts it, "Horses and freedom are synonymous."

...

If dude ranching was a beginning for guiding in Jackson Hole, then climbing embodies the next pinnacle in the valley's guiding traditions. Climbing a mountain like the Grand Teton is a both a risk and challenge for many, and leads to a meaningful accomplishment—a statement as true today for those who endeavor to climb the range as it was for the notable pioneers of climbing in the Tetons. Paul Petzoldt, later joined by Glenn Exum, created the Exum Mountain Guides in 1926—three years prior to the park's creation. Exum described the Grand Teton eloquently: "The Grand Teton is endlessly different, with its changing moods and attitudes, its eternal beauty."

Climbing quickly became one of the park's major draws. Interestingly, climbing in the Teton's marked

a significant deviation from the European model of guided climbs. Instead of pulling clients up difficult parts of the mountain, climbers with Exum were taught how to climb and essentially held responsible for their own ascent. That model of climbing added new layers to the experience, and provided countless many with the chance to physically and emotionally connect with the mountain. This included some visitors whose journey to the summit was notable for historic as well as personal reasons. For example, one of Petzoldt's earliest 'clients' was Geraldine Lucas, a retired schoolteacher and Jackson Hole homesteader who became the second woman to climb the Grand (Daugherty, 1999). That same gumption demonstrated by her ascent was evident through her part in the history of the park, as she was one of the strongest holdouts to Rockefeller's Snake River Land Company and their attempts to purchase homesteads around the valley to create a national park. Truly, the new model of independence in guided climbing allowed for an experience that better reflected the personality of men and women like Geraldine Lucas.

Today, the Exum Mountain Guides is widely recognized as the oldest climbing guide service in the nation. They are joined by the Jackson Hole Mountain Guides, who add to the rich culture and tradition of climbing in the Tetons. Combined, the two guiding services make a summit of the Grand possible for over 3,000 visitors every year (NPS, 2014). Environment, fitness, endurance, fatigue, and physiological needs all impact the experience, but the way a guide facilitates the opportunities to connect to place has perhaps an even greater hand in how the experience resonates with each individual. Adding layers like responsibility in climbing, and information that provides context to the historic significance to the mountain and route being climbed can make an experience more meaningful. Whether the trip is made in a day, or from the Lower Saddle—regardless of if the summit is reached or not—each individual finds

something different along the way. Guided climbing was well established as local tradition by the 1950's, while guiding traditions on the Snake River were just beginning. The Snake did not experience heavy use until after World War II. The first company to offer scenic floats was the Grand Teton Lodge Company in 1956 (Husner, 2001). From there, several more operators joined the game and thus began a tumultuous period of change in the way guiding was conducted and the way that the river was managed. The best practices concerning safety, river etiquette, and wildlife interactions were established through trial and error. But by 1966, the river running tradition was so established that notable river operators Dick Barker and Frank Ewing, along with their friends and competitors, used their combined knowledge to design a vessel crafted specifically for the water they guided: the Snake River model (Husner, 2001).

The river runner tradition is one chocked full of interesting characters and stories. Perhaps one of the most entertaining stories comes from an unexpected passenger. The story goes that Walt Disney went on a float trip down the Snake sometime in the early 1960's and witnessed otters playing on the cobbled banks. He decided to come back and re-create that experience for his 'Wonderful World of Color' series. In filming, "the Disney crew released two otter-actors there... the otters never came back" (Husner, 2001). The otters were reportedly spotted several weeks later when they began harassing valley resident Dick Dornan as he fished (Husner, 2001). Whether entirely accurate or not, the story nonetheless illustrates that Disney was convinced that the Snake River was a place worth sharing, in no small part due to his first guided trip—misguided though his otter-release may have been.

River guides facilitate journeys in which people can experience the Snake and their part in it. Those short journeys happen over and over again on the stretches of the Snake that run through Grand Teton:

over 50,000 visitors take a guided float trip through the park each year (NPS, 2014). Though the scenery speaks for itself, guides are in a position to spend an extended time with visitors, facilitating exploration, learning experiences, and memories that make each trip more than simply an hour or two on a raft.

...

Though wildlife can be spotted on most any type of guided activity in the park—whether on a trail ride, on a guided climb, or on the river—wildlife tour guides specialize in sharing the wildlife of Grand Teton with park visitors. Indeed, wildlife has always played a central role in guiding traditions in Jackson Hole. Initially, wildlife were more often thought of as 'game', but are increasingly the focus of many non-consumptive uses. Hunt outfitting rose to prominence in the 1910's and 1920's, and continues to this day. Ben Sheffield and Stephen Leek, for whom Sheffield's Creek and Leek's Marina are respectively named, were two of the earliest outfitters in the valley. Outfitting was often tied to dude ranching, but also existed independently of it.

Once Grand Teton was created in 1929, the rise of auto-based tourism lent well to wildlife watching. Some early park managers tried to manufacture wildlife encounters by creating the Jackson Hole Wildlife Park near the Oxbow Bend in 1948. In effect, it was a zoo with bison and elk on display. Historic accounts tell us that one day the bison broke the fences and insisted upon roaming free in the valley, an event which established the wild bison herd visitors witness today. The National Park Service abandoned the wildlife park effort shortly thereafter (NPS, 2015).

Visitors today seek out wildlife in their natural environment. Many choose to do so through the keen eyes of a guide. While the other prominent guiding traditions discussed here continue with momentum at the present day, we may be experiencing the era of the wildlife tour. The number of visitors partaking

in activities associated with commercial use authorizations (CUAs) more than tripled between 2009 and 2013—in no small part because of the proliferation of wildlife safari tour companies. While many of the wildlife viewing opportunities in the park may seem obvious once a ‘jam’ begins and cars line up on each side of the road, a local guide can bring knowledge and insight to the experience that visitors might not otherwise have. By sharing the stories of Grand Teton’s fauna, guides create detailed, interesting, and compelling lenses through which visitors can view wildlife.

The level of engagement and connection people feel to the world around them while watching wildlife is remarkable. Truly, when guides reveal the ways in which wildlife enliven the landscape, visitors can form a profound emotional connection to the wildlife they watch. Put one way, “the greatest value in our interest in wildlife watching may be that it encourages us to engage the natural world on its terms, not ours. Watchers become participants in... the lives of wild animals” (Humane Society, 2015). Wildlife guides make those exciting, wondrous, humbling moments possible. The tradition of guiding wildlife safaris in Jackson Hole is still evolving, but will doubtless continue to touch visitors to Grand Teton for many years to come.

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A common thread runs through the inception, progression, and history of each guiding tradition: guides in Grand Teton make a meaningful, memorable experience possible for each visitor they encounter. Perhaps one of the best examples of the necessity of guiding is illustrated in the relationship between Horace Albright and John D. Rockefeller, Jr.

As superintendent of Yellowstone National Park in the 1920’s, Horace Albright watched closely as development of Jackson Hole began flourishing. The need to protect the Tetons became a closely-held conviction of Albright’s. In 1926, Horace Albright

was asked to take the Rockefeller family on a tour of Yellowstone and Jackson Hole. He readily accepted the task, and carefully planned the day. He was their guide of sorts, and in conducting their trip through the valley, he created opportunities for the Rockefellers to appreciate the beauty of the place, while fostering the realization of the dire threats it faced without protection.

The central thesis of interpretation was most concisely laid out by Freeman Tilden: “Through interpretation, understanding; through understanding, appreciation; through appreciation, protection” (Tilden, 1957). In effect, that is exactly what Horace Albright facilitated in his role as a guide to John D. Rockefeller, Jr.: Rockefeller later went on to purchase private lands throughout the valley and donate them to the federal government for the purpose of expanding Grand Teton National Park.

While not every interaction a guide has with a visitor will create a new park advocate like John D. Rockefeller, Jr., there is a potential for a spark of understanding or increased appreciation in each moment. Depending upon their field, guides must have certain sets of skills, like wrangling, rowing, swift water rescue, climbing, or scientific knowledge. But another skill belongs in that set: interpretation. At its best, interpretation is a way for guides to help visitors find their own meaning and connection to park resources, and perhaps, inspire appreciation and protection of Grand Teton National Park and wild places everywhere. Interpretation helps guides to seize the opportunities present in their trips by making emotional and intellectual connections to the park possible.

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As has happened for over a hundred years, each summer morning in Jackson Hole buzzes with possibility as the sun rises and guides across the park take their visitors on experiences of a lifetime.

But the end of the day always follows, and visitors go their separate ways. What will stay with them once the day is over? The clock keeps ticking, day in and out, not just through the routine movements of guiding traditions and visitor experiences in the parks, but in a countdown toward the time limits we have to enjoy the park's current state. National Parks face threats. Boundaries around a park are not enough to protect the resources within. Historic resources and cultural traditions like those involved in dude ranching can be lost if they are not tended. Even resources that seem as unchanging as mountains can be impacted if recreational activities like climbing aren't undertaken responsibly. Water—including the Snake—flows in and out of landscapes without recognition of boundaries. Wildlife cannot be fenced in, and face an array of threats as they

enter the developed areas that continue to creep toward wildlands. And transcending each guiding tradition, the threat of climate change continues to demonstrate its potential to affect every inch of the planet, regardless of whether a landscape is protected as a national park. Interpretation is not just about telling stories of the past, or conveying a wealth of information, or ensuring an entertaining experience as we move through the moments of 'now'. It's also about the future. What these places and these moments mean to people will influence the connections they form, and whether their appreciation of these places is strong enough to affect how they act toward national parks into the future. Truly, the interpretive opportunities guides have in each visitor experience they influence are too great, too important, too meaningful to pass up.

