

NW Wind River Basin Geology Field Trip Dubois Badlands & Laramide Uplift

Friday–Saturday 19–20 June 2015

The GEOLOGISTS OF JACKSON HOLE had a great field trip to explore the geology of the colorful Dubois Badlands. The field trip was designed for anyone interested in the scenery and geologic history of the area between the Wind Rivers and Owl Creek Mountain ranges, but especially the Wind River Basin fill. This trip was led by Bruce Thompson (Dubois educator) with geologic input provided by John Heberger (Jr.), John Willott and other members of the Geologists of Jackson Hole.

Badlands

Badlands are the result of two complementary aspects: deposition and erosion. They derive their name from a topography that is dry, steep, and difficult to navigate either on foot or by vehicle. The Dubois Badlands are no exception. On the other hand, the goodness of badlands are the ways in which their softer sedimentary rocks and clay-rich soils have been extensively eroded by wind and water, providing the visitor with canyons, ravines, gullies and hoodoos, with spectacular color displays alternating from red, pink and orange to cream, lavender and gray. From a geologist's perspective, an additional draw is the challenge of piecing together the history that contributed to this flamboyant palette. Such is the essence of this field trip.

Field Trip Objectives

1. Immersion in a landscape unlike typical regional mountain country terrain.
2. To explore questions about how things came to look the way they do, and employ the diagnostics of the geologist to tease out the answers.
3. To examine relationships between major mountain systems, the Wind River and the Dubois Badlands.
4. To provide content of interest to both geologists and all members of the Geologists of Jackson Hole members seeking to learn about the natural wonders of our region.

Setting

Dubois Badlands provide a surprising cross section of wildlife and natural history with an elevational range between 6,720 and 8,179 feet. Spring wildflowers often grow in resplendence, Bighorn sheep, elk, mule deer and antelope inhabit the area, as do cougar, bobcat, coyote, wolf, black and grizzly bear, weasels, skunks, mice, woodrats, voles and shrews. Birds from bank swallows to golden eagles are also inhabitants. Much of the area we will explore is within the BLM Wilderness Study Area.

Field Trip Overview

DAY ONE (Friday 19 June)

Start: 9 AM at the Town Park in the town of Dubois.

Format: An auto tour with numerous stops and short walks to see and discuss features and geological relationships.

Focus: To set the stage for our badlands geology story, we begin with a scenic overview of badlands country, with backdrops provided by the older Absoroka Mountains to the north and Wind River Range to the south. We then travel to embrace a series of closer views that help frame our story of time and transition.

Level Of Exertion: easy; easy-to-moderate difficulty for some optional off-road walks on steeper, uneven ground.

End: Approximately 4:30 PM for camp setup and potluck dinner at the mouth of Byrd Draw.

DAY TWO (Saturday 20 June]

Start: 9 AM at the mouth of Byrd Draw and the Dubois Badlands Wilderness Study Area.

Format: Hiking tours into the upper reaches of Byrd Draw and the Dubois Badlands Wilderness Study Area. For this day of “badlands up close,” we’ll form two hiking groups based on energy and ability.

Focus: The two groups’ routes will likely begin and end together, and possibly meet midday. Group A will examine badlands upstream along the floor of Byrd Draw to explore its various canyons, drainages and incised strata. Group B will also explore the draw’s various canyons, drainages and incised strata, and climb some of the steep and loose slopes to some upper layers.

Level Of Exertion: Group A, moderate difficulty on sandy, uneven ground likely to be in full sun; Group B, moderate-to-difficult movement on steep, loose, sandy slopes likely to be in full sun.

CONCLUSION: The Field Trip ends at the base of Byrd Draw at 3PM for participants to return home.

Personal Preparation

- *Trip organizers will work with participants prior to the outing to organize car pools.* An excess number of vehicles will make roadside stops more complicated, time consuming and potentially hazardous, as well as exacerbate our impact in the parking/camping area at Byrd Draw.
 - For Travel On Both Days, Bring: pack lunches; durable, comfortable hiking shoes; layered clothing for cool mornings and warm afternoons, especially Saturday; a comfortable daypack with rain gear, sun hat, sunscreen, ample water and first aid kit. Useful options: walking stick, binoculars, sit pad, camera, bandana, field guide, notebook and pen.
 - Food for a Friday potluck dinner evening and Saturday potluck breakfast. *We ask that participants bring a dish as follows:*
 - Last name A–D : Hors d'oeuvre
 - Last name E–K : Main Dish
 - Last Name L–R : Salad or Side Dish
 - Last Name S–Z : Dessert(We will adjust this list as we see the actual list of participants.)
 - Tent, sleeping supplies and personal gear for camping Friday night.
- Field Trip Summary Prepared by Bruce Thompson with input from John & Joh*