

## Case Statement

**Title:** Resolving “Interpretive Conflict” between the Geological and Human Time Scales at John Day Fossil Beds National Monument

**Description.** John Day Fossil Beds National Monument consists of three noncontiguous units located in a sparsely populated part of Oregon. All of the units had their beginnings as state parks, though development of visitor facilities waited until transfer to the National Park Service in 1975. Most development has since occurred at the largest unit (Sheep Rock) which contains a historic ranch managed by the NPS and a separate visitor center that houses paleontological exhibits, curatorial storage, and staff offices. Although fossils and the associated time span (50 million years ago to 5 *mya*) dominate interpretation of the park “story,” there is also self-guided interpretation in an early twentieth century ranch house surrounded by several trails where associated items are exhibited. Most of the roughly 100,000 visitors to the park each year come during the summer season, a time when hot weather prevails and often dictates that people remain indoors at either of the two facilities.

**Issues raised.** For the sake of brevity, these will be enumerated:

1. The monument’s primary significance lies in its representation of fossil assemblages associated with the entire Tertiary Period (the “Age of Mammals” as opposed to the earlier “Age of Reptiles”) in unbroken sequence. This does not include the span of time covering human evolution, which begins later (in the Quaternary Period) so scientific interpretation focuses on past environments and biotic responses to change over a time scale difficult for most people to fathom.

2. Sheep ranching over the past century and a half represents something of a secondary theme at the monument, especially at the ranch house located across from the

visitor center, yet it is entirely disconnected from the fossil and their paleontological context and is somewhat removed from the cattle ranching which now dominates the area.

3. The Sheep Rock Unit of the monument contains the two visitor facilities and some short trails, but lacks a formalized circulation pattern that could be labeled as a “tour,” like ones associated with show caves, or features like Crater Lake (some 200 miles away) which have a road circuit. This situation can make the juxtaposition of ranch house and visitor center more incongruous for visitors.

**Strategies for resolution.** The suggestions below are ideally aimed at the goal of unifying NPS interpretation of geological and human time scales associated with the monument; short of that, lessening dissonance between interpreting the fossil record and that of far more recent patterns in agricultural use.

A. Start with an overt explanation of what “deep time” is, and how humans are the only known life form which uses memory to draw from previous experience, but also seeks to organize the past, and uses this awareness to inform decisions made in the present. Deep time allows humans to discern patterns in both time scales, and there is the possibility of using stories as a way of illuminating concepts to be seen or applied universally. Park founder John C. Merriam wrote *The Living Past* with this idea in mind, though he did not include the John Day Fossil Beds as a setting for any of those stories.

B. Interpreting past paleontological work in the area, especially those scientists who used the ranch as a reference point, might allow for visitors to be introduced to people like Merriam who wanted to answer specific questions about past environments and biotic change. This “hook” could be used to physically join the visitor center with

the ranch house by means of an existing trail that includes a developed overlook oriented to Sheep Rock. How those questions (and the assumptions made in asking them) have changed over a century might also be the subject of a leaflet or other interpretive media. One idea is to make the analogy of a scientist assembling a story about the deep past from fossil fragments, whereas the historian often has to interpret more recent events from fragmentary evidence; one example is the different accounts about where the name “John Day” originated and how it became affixed to fossil-bearing localities within its namesake river basin.

C. Changes in land use patterns over the past century might serve as a way to extend the existing interpretation of early sheep ranching more fully into the present. These changes (like switching to beef cattle, consolidation of individual ranches, and dependence on highway infrastructure for shipping animals) are applicable to the wider landscape of eastern Oregon and the semi arid western United States. Just as agriculture continues to change, it has dramatically altered how humans have interacted with their environment over the past century or so.