

## South Park Colorado – An Exploration of the Complex Geologic Framework

Registration for this trip includes box lunch, water, snacks, and transportation

**Leader:** Peter Barkmann

South Park undoubtedly is one of Colorado's crown jewels in many respects. It cradles the headwaters for the South Platte River. Not only does this river system form the primary water supply for much of Colorado's bustling Front Range metropolis and agricultural economy, but it also creates habitat for world-class fisheries and supports vast wildlife populations. The sublime landscape seen at the surface conceals a complex geologic setting that records a long history of sedimentation and tectonic deformation. The geology, with its variety of strata and structures, creates a groundwater regime which feeds world class unique and productive fens – prehistoric bogs that have existed since the Pleistocene and are unique for the rare species of flora and fauna. Situated at just under 10,000 feet, the fens of South Park are astonishing vestiges of the last Ice Age. The fens provide the most ecologically diverse, floristically rich bogs known to exist in the Southern Rocky Mountains. This field trip will explore how Paleozoic, Mesozoic and Cenozoic strata record, and even create, varied tectonic fabrics defining unique habitat for fen existence. We will cross the Elkhorn-Williams Range fault system into the structural block caught between Laramide uplifts preserving synorogenic sediments from the Penn-Perm ancestral Rocky Mountain tectonic episode in juxtaposition with synorogenic sediments from the subsequent Laramide tectonic episode. On our traverse, we will visit some spectacular fens formed by this complex geologic framework.