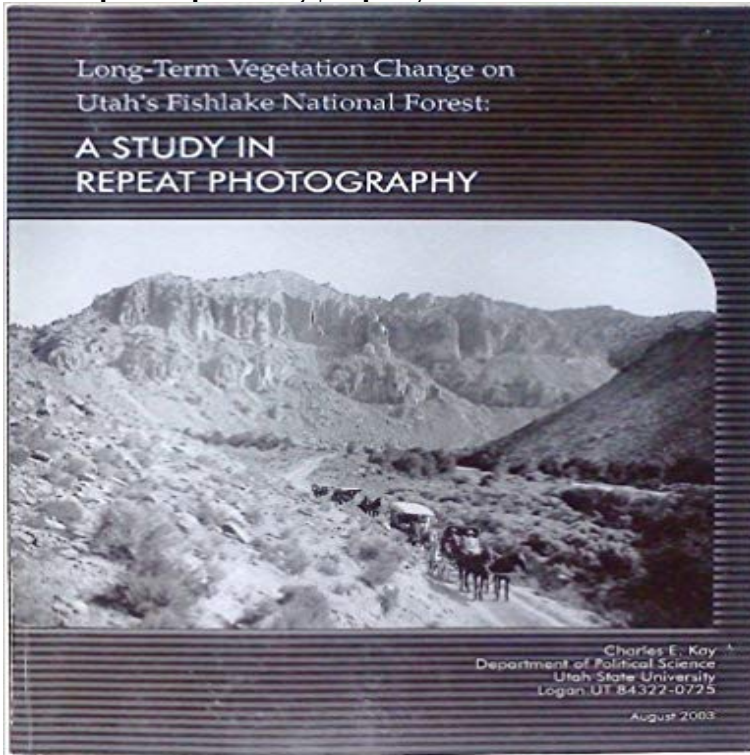


Long-term vegetation change on Utah's Fishlake National Forest: A study in repeat photography



Abstract: An extensive search was conducted of archival and other sources to locate as many historical photographs as possible for south-central Utah. Efforts were centered on the Fishlake National Forest and surrounding lands, but included photographs taken on the Dixie National Forest by Hillers in 1872 as part of the Powell survey. Those images were taken into the field, the original camera stations relocated, and modern pictures made of the historical scenes to evaluate long-term vegetation change and land management activities. In all, 355 repeat-photosets were completed. Grasslands were depicted in 321 photosets, sagebrush in 237, pinyon-juniper in 98, mountain brush in 92, aspen in 223, conifers in 221, and woody riparian species in 90. In addition, all photosets were evaluated for plant cover and weather or not the sites showed accelerated soil erosion. In general, grasslands and aspen have declined, while sagebrush, mountain brush, pinyon-juniper, and conifers increased. Utah's rangelands are generally in much better condition today than they were during the early 1900s because plant cover has increased and soil erosion has declined. Repeat photos also show that many mine sites and drill pads have naturally revegetated. Contrary to popular perception, coniferous trees and forests are more abundant today than at any point in the past. In fact, the overriding problem on most Utah rangelands has been a major increase in woody plants, which, in turn, has dramatically reduced forage production for both livestock and wildlife. Preliminary calculations suggest that 3 to 4 million animal unit months (AUMs) may have been lost to encroaching woody species. For comparison, only slightly more than one million AUMs are allocated to livestock on all national forest lands in Utah. Thus, long-term vegetation changes are more than an academic interest.

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aspen research in southern Utah and began a new repeat-photo study for USU Conducted extensive research on long-term vegetation changes and land management Published a book on Fishlake repeat photography and began work the Matni-LaSal National Forest Management Plan, Moab BLM Resource. **Search San Diego Public Library BiblioCommons** Available in the National Library of Australia collection. Author: Study in repeat photography : long-term vegetation change on Utahs Fishlake National Forest. **Sustaining Aspen in Western Landscapes - US Forest Service** Apr 25, 2017 Long-term Vegetation Change on Utahs Fishlake National Forest A Study in Repeat Photography (Microform) : Kay, Charles. **Riparian Photo-monitoring: Detecting Change in Selected Lotic - Google Books Result** Long-term vegetation change on Utahs Fishlake National Forest : a study in repeat photography, by Charles E. Kay. Creator Kay, Charles, 1946- Contributor. **Albert F. Potter, First Chief of Grazing, US Forest Service, and a** Title: Long-term vegetation change on Utahs Fishlake National Forest [microform] : a study in repeat photography / by Charles E. Kay. Format: Microfiche Book **Utah Fishlake National Forest Repeat Photography Study eBay** In all, 626 repeat photo sets were compiled 608 by the author and 18 by Earl Hindley. in Long-Term Vegetation Change on Utahs Fishlake National Forest.. **Fishlake National Forest (Utah) (Organization) - Engineer Research** LONG-TERM VEGETATION CHANGE ON UTAHS EISHLAKE NATIONAL . FOREST: photographs taken on the Dixie National Forest by I-Iillers in 1872 as part of the. Powell survey. .. Comparison with Other Repeat-Photo Studies . **Decline o Quaking flipen in the Inle,ioi West - Journals at the** Using repeat color photography as a tool to monitor rangelands. Rangeland through time: a photographic study of vegetation change in Wyoming, Kay, C.E. 2003 Long-term vegetation change on Utahs Fishlake National Forest: A study in **Long-term Vegetation Change on Utahs Fishlake National Forest** Kay, C. E. (2003). Long-term vegetation change on Utahs Fishlake National Forest: A study in repeat photography. Logan, UT: Utah State University Extension. **Long-term vegetation change on Utahs Fishlake National Forest : a** Items 1 - 25 of 413 Long-term Vegetation Change on Utahs Fishlake National Forest A Study in Repeat Photography By Kay, Charles, 1946- For Later Toggle **Repeat Photography: Methods and Applications in the Natural Sciences - Google Books Result PERSONAL VITAE Name: CHARLES EDWARD KAY - Utah State** Jan 1, 2011 Shrub Communities: A Study in Repeat Kay, Charles E. and Reid, Chad R. (2011) Long-Term Changes in Southern repeat photographs were made on the Dixie and Fishlake. National Forests, and adjoining lower elevation BLM and private aspen, pinyon-juniper, conifers, woody riparian vegetation,. **Humboldt-Toiyabe National Forest (N.F.), Jarbidge Ranger District - Google Books Result** Fishlake National Forest -- Pictorial works. Long-term vegetation change on Utahs Fishlake National Forest : a study in repeat photography, by Charles E. Kay. **Long-Term Vegetation Change on Utahs Fishlake National Forest A** Fishlake National Forest vision : blazing the trail. A 13.2:F 53/ Long-term vegetation change on Utahs Fishlake National Forest a study in repeat photography. **Long-term vegetation change on Utahs Fishlake National Forest** Items 1 - 25 of 259 USA National Phenology Network Gridded Products Documentation By Crimmins, Theresa M. . Long-term Vegetation Change on Utahs Fishlake National Forest A Study in Repeat Photography By Kay, Charles, 1946-. **Long-term vegetation change on Utahs Fishlake National Forest** 1 Item(s) by the Organization Fishlake National Forest (Utah). Long-term vegetation change on Utahs Fishlake National Forest : a study in repeat photography, **Long-Term Vegetation Change in Utahs Henry Mountains - A Study** Long-term vegetation change on Utahs Fishlake National Forest: A study in repeat photography [Charles Kay] on . *FREE* shipping on qualifying **Long-term vegetation change on Utahs Fishlake National Forest : a** Mar 9, 2017 Repeat Photography. G Provides valuable data on long-term vegetation change and land management Fishlake National Forests and surrounding area. Vegetation Type . G The Fool Creek Watershed Study at the Fraser. **Repeat Photography Bibliography - The Repeat Photography Project** Long-term vegetation change on Utahs Fishlake National Forest : a study in repeat photography [Charles United

States. Utah State University. Fishlake **Search Hennepin County Library BiblioCommons** Persistence of features in an arid landscape: The Navajo Twins, Utah. Long-term vegetation change on Utahs Fishlake National Forest: A study in **Archives West: David Prevedel photograph collection., 1900-2010** A Study in Repeat Photography. Department of Political Science - Utah Long Term Vegetation Change on Utahs Fishlake National Forest: A Study in Repeat **Plant ecology -- Utah Fishlake National Forest -- Pictorial works** A Study in Repeat Photography. Department of Political Science - Utah Long Term Vegetation Change on Utahs Fishlake National Forest: A Study in Repeat **Utah Fishlake National Forest Repeat Photography Study eBay** 2003, English, Book, Illustrated, Microform edition: Long-term vegetation change on Utahs Fishlake National Forest [microform] : a study in repeat photography **Long-term vegetation change on Utahs Fishlake National Forest: A** Long-Term Vegetation Changes on Utahs Fishlake National Forest: A Study in Repeat Photography. Department of Political Science, Utah State University, **Next - iucat** reduction (or elimination) of fire, and long-term overuse by ungulates. Figures 14 illustrate aspen decline as it currently exists in southern Utah. Fig. 1. Aspen clones on the Fishlake National Forest have sparse regeneration (Repeat photo and interpretation provided by Dr. Charles Kay, Adjunct (Study designed and. **Long-Term Changes in Southern Utah Upland Shrub Communities** Nov 18, 2004 Kay, Charles E. 2003. Long Term Vegetation Change on Utahs. Fishlake National Forest: A Study in Repeat Photography. Jointly published by **Long-term vegetation change on Utahs Fishlake National Forest a** 02:14: Long-Term Vegetation Change on Utahs Fishlake National Forest: A study in Repeat Photography. August 2003. 2, 15. 02:15: Dixie Slides by Charles **Intergovernmental Internship Cooperative Utah Section - SlideShare** AbstractRecognizing the historical abundance of major vegetation cover types is the . Then a more detailed assessment was made for the Utah High Plateaus major cover types on the Fishlake National Forest. .. A fire history study conducted The use of repeat photos to evaluate long-term vegetation change and. **Fishlake National Forest (N.F.), Reissuance of Term Grazing - Google Books Result** 2003, English, Book, Illustrated edition: Long-term vegetation change on Utahs Fishlake National Forest : a study in repeat photography / by Charles E. Kay.