

Introduction



Stream during Run-off Season with River Birch attacked by Black Canker

Source: Art from Author's photograph, 2017.

"Knowing Salt Lake City means knowing its canyons, too, for no city of my acquaintance . . . breaks off so naturally and easily into fine free country. ... Up in the Wasatch is another world, ..." Pulitzer Prize winning author and naturalist Wallace Stegner, "At Home in the Fields of the Lord" in "The Sound of Mountain Water" (1980).

The two-hundredth anniversary of Henry David Thoreau's birth was celebrated on July 12th, 2017, and one-hundred and fifty-five years ago, Thoreau wrote that, "[i]f we unconsciously yield to it [Nature], will direct us aright" ([Thoreau 1862](#), 662). He spent four hours per day observing nature across a lifetime. Can Thoreau's experience be replicated in modern urbanized America, and if so, how would that experience change one? Would it set you "aright"? The second question explored here is how natural areas come to be preserved. Is this the result of city leaders planning for the future needs of a community or does the impetus to preserve come from the aggregate of the actions and emotions of ordinary citizens? The stage used to answer these questions is City Creek Canyon - a small canyon to the north of downtown Salt Lake City, Utah.

This book has four themes. First, it is a snapshot in time of changes in an undeveloped canyon close to an urban center over the course of year. Second, as common temperate zone natural events are seen, like the annual growth of leaves and their falling in autumn, recent scientific literature about that event is reviewed. Third, the history of the development of the adjacent city and the natural area is reviewed from an ecological perspective. Fourth, the limitations of the scientific method in guiding social and personal decision making are examined. That discussion emphasizes how citizens should use critical thinking skills to approach interpreting the many scientific study results in our daily news. A separate "[Table of Essays](#)" and "[Table of Days](#)" in the Appendices provides enhanced navigation to those scientific and historical discussions. *Also see* "[Navigation in the Digital Edition](#)" in the Appendices.

This book is an invitation directed first to residents of Salt Lake City and secondly to urbanites everywhere with access to a nearby natural area. It is a daily journal of one particular natural area adjacent to a major city for one year. This journal is about *seeing* a place for what it is and not through the lens of how we desire to use it. Many would find City Creek Canyon unremarkable, even commonplace, but by the act of looking closely at nature much occurs that the casual observer misses. Barnes in his "Natural History of a Mountain Year" noted that "[n]ature divulges its innermost secrets only to them who consistently tread its by-paths . . ." (Barnes, 4). Thoreau noted what the mind observes depends on what is of immediate importance to the viewer: "A man receives only what he is ready to receive, whether physically, or intellectually, or morally, as animals conceive their kind at certain seasons only" ("Journal", January 5th, 1860). Thus, he concluded that an open mind was necessary: "Nature is reported not by him who goes forth consciously as an observer, but in the fullness of life" ("Journal", July 2nd, 1852). Only by staying in one place and observing nature repeatedly, Thoreau advised, as Barnes did, that you will see "strange sights" ("Journal", October 18th, 1859).

By looking with focus and by quieting the mind during part of the day for one year, a change in personality also occurs. In the busy modern life, getting to the point of being able to do this for one year can be journey of a lifetime. This book is intended as an invitation in the hopes that others will be inspired to start that year's journey in their own nature areas. For Salt Lake residents,

this work can act as a guide to what might be seen in City Creek on a particular day prior to leaving for a walk in the canyon.

How people, plants and animals interact in this canyon - its human and natural ecology - is this book's principal focus. This journal primarily concerns that portion of the canyon that begins at the intersection of Bonneville Drive and City Creek Canyon Road in Salt Lake City and ends along that road two-miles up-canyon of the start point. An attempt was made to be in the City Creek each day of the year. By this daily presence, subtle changes in the canyon might be seen that would otherwise go unnoticed. Science calls the study of the cyclical and seasonal changes in nature "phenology", and observation of such changes is another focus of this journal. Although the roles of humans (*Homo sapiens*) in the canyon are discussed, the central character of this journal is the canyon and its plant and animal residents. This writing is organized to maintain the canyon and its wildlife as its central focus.

City Creek Canyon illustrates relationships between plate tectonics, local geology, natural resources, urbanization, wildlife, and recreation. The canyon and Salt Lake City sit in the Bonneville sub-basin on the eastern shore of the Great Basin. Although the Great Basin is about 750 by 1,000 miles in extent, there is no natural drainage from it to the ocean. Crustal spreading beginning at the Pacific Plate in California created the Great Basin region.

The Great Basin is a series of grabens and horsts bounded by parallel normal faults, and the faults raise north-south mountain ranges that begin in western Nevada near Reno and end at Utah's Wasatch Mountains and Salt Lake's City Creek Canyon. The most eastern of these horst mountain ranges is the 8,000 to 11,000 foot high Wasatch Front Range, which runs for some 75 miles north and south of Salt Lake City, Utah. Those mountains capture rainfall and allow large cities like Salt Lake to exist in this otherwise arid state.

Numerous canyons run east-to-west off the range's western face to the valley floor at 4,300 feet of elevation and, thence into the basin's lowest point at the Great Salt Lake at 4,206 feet above sea level. One of these east-west running canyons is City Creek Canyon. Fourteen mile long City Creek Canyon begins at high-rise office towers of downtown Salt Lake City, but the canyon

abruptly transitions into a natural area that provides water and recreation for the City of 192,000. The canyon is a refuge for many native animals ([Map](#)). The Wasatch Front as a whole contains about 1,100 species of plants and 250 species of birds and animals (Jones in Garber 2012, 46). City Creek Canyon consists of three main parts: the lower canyon below Bonneville Drive is a city park called Memory Grove. The first four and a half miles above Bonneville Drive is Gambel's oak woodland. The remainder higher-altitude portion of the canyon is montane habitat of firs, spruces and aspen. In this writing, I record about 290 species of plants, insects and animals.

This journal was done in the spirit of a predecessor book, Claude T. Barnes' "The Natural History of a Mountain Year: Four Seasons in the Wasatch Range." Barnes' journal was originally published in a four-volume series between 1956 and 1959 as an intermittent collection of essays, each based Barnes' experiences in the Wasatch Mountains on a specific day. His entries were assembled from field journals spanning twenty years during which he was occasionally accompanied by botanists Louise Atkinson and Marcus E. Jones (*id*, 193). Barnes was a Salt Lake City attorney, a businessman, and a recognized authority on Utah mammals who for many years owned a home near Inspiration Point (11th Avenue and B Street). Inspiration Point overlooks lower City Creek Canyon. Barnes's work is geographically broader in scope and covers adventures in all canyons of the Wasatch Front Mountain Range. Of Barnes' 365 entries, only 24 specifically concern City Creek Canyon. In contrast, all of the entries here concern City Creek across one year.

I originally encountered a copy of the first edition of Barnes's work by accident on a dusty shelf in the basement of Sam Weller's Zions Bookstore on Main Street in Salt Lake in 1979. It took some years to locate a full set of the four volumes in the series. As then Red Butte Garden botanist Pamela M. Poulson noted in the Preface to the 1996 second edition of "Four Seasons", the principal value of Barnes' work is that it provides a snapshot of the state of nature in Wasatch Front canyons, as it existed in the 1950s. The city below the canyon has changed substantially since Barnes published "Four Seasons". Within Salt Lake City limits, the population has remained slowly increased from 160,000 persons to 182,000 persons since the 1950s, but the population of Salt Lake County as a whole has increased from some 200,000 to 1.2

million persons. While most of the recreational users are from Salt Lake City, the new county residents have increased visitation to the canyon and this has changed its character since Barnes' time.

Barnes wrote in a different era between 1920 and 1956. The year 1920 marked the end of exploitation phase of Utah's development. The gold and silver mining boom of the 1870's was over; the Wasatch Front canyons had been devastated by an initial round of logging; the Mormon pioneers and non-Mormon "Gentile" miners had used the canyons as a free source of food and hunted livestock predators without limitation ([March 20th](#) to [March 26th](#)). (The description of non-Mormons as "gentiles" by Mormons relates to their Book of Mormon's narrative that a lost-tribe of Israel came to the Americas in the sixth century B.C.E., and the Mormons' use of the term parallels Israelite use of that word in modern translations of the Old Testament that also refer to non-Israelite nations as "gentiles".)

The result of such exploitation was predictable. Utah followed the national trend in that its deer population dropped to one-tenth its original size; the Utah elk herd was reduced to about 327 individuals in 1917 (Barnes, "Mammals" at 14); and moose were also nearly eradicated. With respect to predators, Barnes notes that in 1915, 72 Wolves (*Canis lupus lupus*) were taken by Utah's predator bounty program; that the last Wolf was killed in Salt Lake City's limits in July 1918; but that a residual population still existed in La Sal Mountains (Barnes, "Mammals" at 114). In the 1910s, grizzly bears were still present in south and central Utah (*id*, 128).

Barnes' time was the era of conservation and reclamation. The conservation era begins with a visit by Gilford Pinchot to Utah, a 1902 survey of the Wasatch Front Mountain Range by U. S. Forestry Division representative Albert F. Potter and subsequent federal appropriations to the Forest Service to reclaim and reforest the canyons. Cities and counties looked to preserving the canyons as a watershed resource and they sought to abate mine entrances. As a result, at the end of the reclamation era, the deer herds were restored to pre-colonization levels, and the canyons were viewed principally for pleasure deer hunting.

My own era covers 1980 to the present (2018), and this is the era of recreation and restoration. Now the Salt Lake canyons are viewed primarily

as watershed open space on an urban interface that is used recreation such as running, biking or skiing. The focus now is on how these open spaces can be preserved for future generations; how some of the ecological damage from invasive grass and insects brought here by previous generations can be reversed; and how the land can be restored. It is also an era when technological advances in genetics and biology have fundamentally changed how we understand and relate to nature. With knowledge of these technological advances and social evolution, this journal focuses more on an ecological perspective as compared to Barnes or Thoreau.

This journal was also kept in the spirit of prior classic American nature journalists and the British nature writer John Alec Baker. Henry David Thoreau famously kept from 1837 to 1862, a twenty-five year journal of philosophical and nature observations for his then rural Concord, Massachusetts forest. Concord and Salt Lake City are at nearly the same latitude, and therefore, events and animals are similar between this western and eastern location. I have annotated this Salt Lake journal with summaries limited to the natural observations from Thoreau's Journal (Thoreau, Blake ed.), but I do not note those portions of his entries regarding his Transcendentalist philosophical or social commentary for which he is so well-known. Edited copies of Thoreau's journals have been published in sections in the titles that may be familiar: "Early Spring in Massachusetts", "Summer", "Autumn", and "Winter". Another famous nature journal keeper was John Muir, founder of the Sierra Club, who wrote about the Sierra Nevada mountain range of central California which is also located at a similar latitude (Muir, Wolfe ed. 1979). Muir's journals predominantly contain revelry for nature and relatively less natural observations, and annotations summarizing his natural observations are not included here.

Baker wrote two nature journal books in the late 1960s. A draftsman, an avid walker and an amateur naturalist, Baker was facing two challenges. First, he foresaw what in 1967 was the then probable extinction of the Peregrine falcon. Second, he was facing a debilitating illness that would shortly prevent him from walking any distance. Seeking to make some statement before his demise or the demise of the peregrines, he wrote two wonderful books: First, in journal form was his 1967 "The Peregrine". The second came in 1969: "The Hill of Summer". In "Peregrine", he followed and noted the activities of

peregrine falcons near the west coast of England during the winter of 1966 (Baker 1967). His journal entries made almost every other day for six months are emotionally charged, condensed literature that puts the reader in the mind of another species. Like Thoreau, they are a model of one ordinary human reacting to the power of the natural world.

In his second and last book, "The Hill", Baker organizes his nature observations for a wide area of the English country-side by month for April through September, and he summarizes twelve years of observations in a chapter narrative form (Baker 1969). Stylistically, this journal follows Baker's first-person style of "Hill", but like Thoreau, it focuses on daily observations for each day during a single year. Again following Baker's "Peregrine", but unlike Thoreau, this journal focuses on a single well-defined location.

Despite the differences in the respective times of Barnes, Thoreau, and myself, I share with Barnes and other predecessors a love for the natural environment. The Wasatch canyons remain in a predominantly natural state despite many man-made alterations. By comparing my experiences with Thoreau's, I found that what Thoreau saw in 1840-1860, in terms of nature observations, was not really that much different from what any person today who looks closely at the outdoors would see and experience. His experience remains universal. I hope this journal provides an updated snapshot similar to Barnes, albeit less scientific and more personal, of one of the Wasatch canyons sixty years after his "Four Seasons".

In addition to literary DNA, books can also have a geographical genealogy. Jeff Carlstrom and Cynthia Furse's 2003 "The History of Emigration Canyon: Gateway to Salt Lake Valley" concerns the history of the Salt Lake Valley canyon to the immediate south of City Creek. Charles Keller's 2010 "The Lady in the Ore Bucket: A History of Settlement and Industry in the Tri-Canyon Area of the Wasatch Mountains" concerns the history of three other Salt Lake Canyons to the south of City Creek: Millcreek, Big Cottonwood and Little Cottonwood Canyons. Barnes' "Year" covers the Wasatch Front Mountain Range north to Farmington and south to Provo.

The Great Salt Lake lies to the west of the City Creek Canyon. Between 1894 and 1896, Mormon immigrant ink-wash artist Alfred Lambourne lived on

Gunnison Island in Great Salt Lake, and his "Pictures of an Inland Sea" was an early attempt to capture the solitude induced by the Great Basin landscape (Lambourne 1902; Lambourne 1895). Terry Tempest Williams's 1991 eco-feminist biography, "Refuge: An Unnatural History of Family and Place" concerns her mother's passing from cancer caused by above ground nuclear testing, but its physical settings, in part, are birding outings at the Great Salt Lake to the west of the City Creek.

Stephen Trimble's 1999 "The Sagebrush Ocean: A Natural History of the Great Basin" is an essential classic that puts the mid-elevation Gambel's oak and Big tooth maple forest of City Creek Canyon in the context of eleven other major habitats in the west's Great Basin (Trimble 1999, 2nd). Trimble holds a masters in ecology and his professional career has been as nature photographer. Both expertise are evident in "Sagebrush Ocean". Another classic is Ronald Lanner's 1984 "Trees of the Great Basin." In what may be the best written general nature book about the ecology of the Great Basin, forester Lanner discusses the biology and distribution of about thirty key Great Basin tree species, including the principal trees of City Creek Canyon, with both professional insight and sensitivity of someone who made a career out of nature because they love it. John McPhee's 1981 "Basin and Range" is another essential nature classic that covers the geology of the Great Basin at the regional scale.

Local physician Howie Garber's 2012 "Utah's Wasatch Range: Four Season Refuge" is a photographic tour-de-force covering Wasatch Front Mountain Range from Ogden in the north to Payson, Utah on the south. It includes short-essays by 23 environmental and governmental residents who have been involved in issues concerning the Front's preservation and development over the last fifty years. Garber's book is a unique pictorial record of the natural Wasatch Mountain Range as it exists at the beginning of the second Millennium. "Four Season Refuge" does not include photographs of City Creek Canyon and only mentions City Creek in passing with respect to the Salt Lake Valley's early colonization.

Too many other excellent books exist that all cannot be listed here, and many of those concern the history of Salt Lake City and also touch in passing on the history of City Creek Canyon.

This journal also discusses the history of early Salt Lake City, because the canyon's natural history is inexorably intertwined with its social and political history. Where historical analysis occurs, some lengthy quotations from contemporary actors are included. The purpose of those quotations is to bring history alive. The voices of our predecessors are a more forceful version of history than modern summaries of their statements. In order to maintain a focus on nature, a historical record from newspaper accounts that mention the canyon are included as a separate daily section and historical analysis is similarly segregated. Another invaluable resource that gives a sense of contemporary daily life in historical Salt Lake City from 1913 to 1929 is the City's "Municipal Record", a monthly journal of City operations. Summaries of the Municipal Record for that period are included at the beginning of each calendar month in that entry's historical section.

Historical review raises some common ethical issues. The first is the implied right-to-be-forgotten. The right-to-be-forgotten means that ordinary individuals have the right to have their names removed from the public record. The embarrassment for minor acts by persons that are not public figures should not extend into the future. The right-to-be-forgotten is recognized in European Union law, but is not recognized as a legal right in United States jurisprudence. In the United States, the balance weighs towards preserving history over privacy. The right-to-be-forgotten can skew historical narratives by reducing history to the recording the acts of public figures and by omitting the stories of individuals.

Included here are references to many ordinary individuals whose ancestors are or who may themselves be still alive. This was not done out of a desire to exploit salacious details, but rather to fill-in the human story of how ordinary citizens use the canyon as a public resource and advocated for its preservation as a natural area. Some moral limits have been imposed based on common courtesy. The names of children who have drowned in the canyon and the names of persons who have committed suicide in the canyon are omitted. One exception is the name of the first child to drown in City Creek: the three year-old daughter of pioneer George Therikill who died on August 11th, 1847. A few murder and kidnap victims are named, and to the extent that this causes them or their descendants renewed anguish, I offer my apologies in advance.

The second ethical issue of historical review is to what extent ancillary opportunities for historical reconciliation should be explored. History provides several useful public goods, one of which is historical reconciliation. Historical reconciliation is the process by which communities can free themselves of the social poison of mistrust that comes from a one-sided view of history. In this journal, the history of the canyon intersects with the history of the Euro-American colonization of the valley by the Latter Day Saints and their doctrine of theodemocracy. As a part of their early form of theodemocratic government, City Creek Canyon was deeded to Young as both his private property and as a public trust. Mormons claim a historical and religious tradition of environmental preservation and that cultural value led in part to the preservation of the Salt Lake valley's canyons ([July 12th](#)). How the early Mormon theodemocracy related to the early colonists' relations with the Ute First Peoples is also explored ([March 7th](#), [March 8th](#)).

The third ethical issue of historical review is to what extent should ancillary historical events be explored to illuminate the present. Here again, the implications of Mormon theodemocracy on the current social and political structure of Utah are discussed ([April 6th](#), [July 7th](#)). With respect to these historical reviews, I acknowledge that the modern Church of Jesus Christ of Latter Day Saints has now transformed into a modern global spanning religion, and thus, parts of its early history should not be extrapolated to the present. An example is the church presidency's support for the "housing first" approach to homelessness in 2017, as discussed in the entry for [July 15th](#). Similarly, many events during Brigham Young's life in the Salt Lake Valley are discussed, but these too are limited to one segment of his overall existence and should not be extrapolated to entirety of his legacy. As of 2017, the Salt Lake valley is again experiencing in influx of non-Mormon immigrants related to a financial and technology boom, and it is hoped that the historical review of the development of City Creek Canyon and of the early state will help in their understanding of some present trends in Utah and Salt Lake City culture.

Essays on nature and history use some basic mathematics. Occasionally, references will be expressed in the fixed-point, scientific number system, *e.g.* - 38 trillion is written as 3.8×10^{13} , where the caret "^" symbol refers to an exponential power. The simple mathematics of guesstimation is used.

Guesstimation is a thinking process in which the reasonableness of a proposition is investigated in terms of reasonable quantitative boundaries to a question, given simplifying assumptions (Harte; Weinstein and Adam). For clarity and documentation, some computations that support an estimated value are enclosed in parentheses following an estimate's use, but these can be ignored when reading for general pleasure.

Like Thoreau's "Journals" that were published in a series of four books of two-hundred to three-hundred pages each, this journal is long. The equivalent physical version would span about eight-hundred pages. Despite its length, the book's core nature observation journal and scientific and historical essays comprise about three-hundred and fifty pages, and the book can comfortably be read in two or three days. Readers should treat this journal as a coffee-table book - skip between entries, read only one of the daily tracks (observation, Thoreau digests, science and history essays), and skip others. Frequent cross-referencing within entries and the "[Table of Essays](#)" in the Appendices give many paths of entertaining reading and other means of accessing its many topics. Many statements are followed by parenthetical citations to news and scientific articles, and the "[References](#)" section provides hyperlinks to opportunities for more hours of exploratory reading of original background materials.

Again, the primary focus of this writing is not history or science; it is the experience of nature in a small canyon outside of a remote but sizeable western urban center. This story of a natural year may inspire others to appreciate how much nature exists on their urban boundaries and to go an experience it for themselves. I hope this illustration moves them to act to preserve similar refuges in and outside of their neighborhoods.

References

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