River Flowing From The Sunrise

Aton, James M

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When the famous explorer John Wesley Powell passed the mouth of the San Juan River on 31 July 1869, he barely acknowledged it. During the next decade, when his geologists and archaeologists fanned out to explore, map, and generally reconnoiter the Colorado Plateau, the last blank spot on the United States map, they ignored the waterway the Utes call River Flowing from the Sunrise. For Major Powell, as for most nineteenth-century Americans, the San Juan River country remained a terra incognita. There were simply few pressing reasons—geological, agricultural, or cultural—for most Americans to know more about it. For the federal government, Powell was the main spokesman on western land affairs in the post–Civil War period, and for most Euro-Americans, the San Juan was a backwater.

Well into the twentieth century, even for Indians like the Utes and Navajos, the Lower San Juan functioned as a kind of refuge beyond the reach of Indian agencies at Shiprock, New Mexico, and Towaoc, Colorado. The San Juan’s exclusion from Rinehart’s *Rivers of America* book series in the 1940s likewise indicated its relative obscurity. Writing about the Colorado River for that series, Frank Waters noted that the San Juan is “the largest river in New Mexico. Its annual discharge of 2,500,000 acre-feet is over twice that of the noted Rio Grande. Yet it remains one of the least known rivers in America.” Past judgments aside, it should be better known—for both local and national reasons.

Today Utah’s San Juan River, like nearly all waterways in the West, is a river in demand both regionally and nationally. Its water is becoming ever more valuable in this always-arid landscape. Various Indian tribes are claiming their water rights as granted by the Supreme Court’s 1908 decision known as the Winters Doctrine; federal water engineers are controlling the river’s flow with two large dams, one near the Colorado-New Mexico border and one past the river’s end near the Utah-Arizona border; federal land agencies, obligated by the Endangered Species Act, are trying to save animals like the Colorado pikeminnow (née squawfish), the peregrine falcon, and the willow flycatcher; private and commercial river runners are demanding an equal say in the river’s use for their sport and businesses; farmers are trying to maintain their traditional water allotments; towns along the river are clamoring for their share of the water; and, amid all the arguing, Indians and Anglos alike are reasserting the spiritual significance of the river. The San Juan River today stands at a crucial juncture in its twelve-thousand-year history of human occupation and use.

While demands on the river are increasing each year, compared with many rivers draining into the Pacific, the San Juan is sparsely settled and has been intellectually neglected. Because of the area’s ruggedness and aridity, especially along the Utah section, relatively few people have settled the river’s sandy banks. Although the human population in the region has increased significantly over the past century or so, the San Juan below Four Corners remains an area where the human touch is not always obvious. Despite the increased use of the river and the two dams controlling it, it is still possible to talk about managing it in a “naturalized” way. Parts of the San Juan today, especially in its canyons, strongly resemble the river of hundreds, even thousands, of years ago. Still it is both a natural and social space. Historian Richard White’s description of the Columbia
River applies as well to the San Juan: an “organic machine . . . at once our own creation,” yet retaining “a life of its own beyond our control.”

Planning along the San Juan and litigation over its waters are also relatively recent, compared with other western rivers like the Colorado, the Gila, and the Columbia. National environmental laws and the significant amount of public land along the river intensify the need for coordination among numerous federal agencies, local governments, Indian tribes, and citizen groups. This kind of cooperation, as seen in the recent San Juan River Basin Recovery Implementation Program (SJRIP), is new. With local interest in and demands on the river increasing, this seems a propitious time to narrate the story of the San Juan and the people who have wrested a living from it.

The San Juan’s story, however, resonates beyond the Four Corners area. It is now one of the premier river-running destinations in the United States, attracting more than thirteen thousand boaters a year. This is just a few thousand shy of the number who float the Colorado through Grand Canyon. While most come from the Four Corners region, the San Juan attracts recreationists from every state in the Union as well as foreign countries. Given its prominence in the burgeoning river-running industry, its history becomes more important simply because more people are now paying attention to it.

The San Juan is also a neglected component of one of the most studied phases of western history: water development in the Colorado Basin. The flood of books on the topic has crowded the literary shoreline in recent years. Historians and
others writing about the Colorado have correctly called its history crucial to understanding western settlement; the rise of the environmental movement; cultural conflict between Anglos, Indians, and Hispanics; and the rise of federal hegemony in the West. They have tended, however, to overemphasize the Colorado River portion of the basin’s story at the expense of the San Juan and other tributaries. True, the Colorado is the main attraction and a symbol for water concerns, but the San Juan’s story in some ways tells us more about the way some of these issues have played out, especially settlement and cultural conflict. While the San Juan remains sparsely settled, it has certainly attracted more people to its cottonwood- and willow-lined banks than many portions of the Colorado. Moreover, it is one of the most “Indian rivers” in the United States. If the West, as Patricia Nelson Limerick claims in The Legacy of Conquest, is where we all met and where the study of race relations is most revealing, then the San Juan is an excellent place to watch that process unfold. With Navajos, various Ute bands, Paiutes, Jicarilla Apaches, Mormons, non-Mormons, and Mexicans all contending for its waters over time, the San Juan provides a superb case study of the way cultures deal with their environment and each other in a cauldron of cooperation, coexistence, and conflict. Few rivers’ histories open so many different windows onto race relations and the environment.

Finally, the San Juan’s story is important because it typifies much of the rural West today, caught between the resource-extraction era, with its depleted ecologies, and the New West, with its emphasis on environmental protection, tourism, and sustainability. All of these values currently compete for attention, both locally and nationally.

The San Juan is unique in another way. Despite the area’s relative obscurity, many of those who have traveled or settled there have recorded their impressions, either orally or in writing. From historic as well as contemporary Native Americans to explorers to various kinds of scientists to Mormon settlers to government agents, the material on the San Juan is rich and offers the researcher a specificity not often found elsewhere. This book’s scope is somewhat narrow—the two-hundred-mile stretch of Utah’s San Juan—but its coverage is deeply layered, like the eons of limestone deposits along parts of the river. The authors hope what is presented here will stimulate future studies of people and their interaction with western rivers.

How does the Lower San Juan compare to other western rivers? Stacked against those in the Intermountain West—the Gila, Colorado, Little Colorado, Green, and Rio Grande—the San Juan’s history holds much in common. These rivers are all significant water sources in arid lands, giving credence to what historian Charles S. Peterson wrote about the Little Colorado: “The River itself organized the people. It dictated the numbers who came and in a large degree molded their experience.” All these rivers are controlled to some extent by federal agencies, with large dams on the main stem river and/or tributaries. The Rio Grande has the fewest. The Colorado and Green, because they have the deepest canyons, have the largest: Glen Canyon and Boulder Dams and Flaming Gorge Dam, respectively. All these dams provide flood and sediment control, while some generate power. Unintentionally, they have also exacerbated the spread of tamarisk while negatively affecting habitat for native fish.

In cultural terms, perhaps only the Rio Grande in New Mexico is more Indian and multicultural than the San Juan. The Lower San Juan and parts of the Little Colorado, however, share the distinction of having Mormon settlements. For combinations of Mormons and Indians, the San Juan is unique. The trading posts along the San Juan also developed differently than elsewhere. The Gila and Rio Grande have larger population centers than the Lower San Juan, although in New Mexico the river has some decent-sized towns. It has also seen more oil development along its banks but is still best known for its recreation. Like the Green and Colorado in their canyon sections, the Lower San Juan has seen dramatic numbers of river runners arrive since the recreation boom following World War II. That is why many Americans think of the Utah canyons of the San Juan, having experienced them through river running.

To really understand the San Juan, one must know a little about its recent geological history. Between twenty and ten million years ago,

Twelve Millennia on the San Juan

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More than ten million years ago, this Honaker Trail section of the San Juan was a meandering stream flowing over a flat desert. When the country began to uplift—the Monument Upwarp shown in this 1910 photo—the San Juan kept cutting and incising. (E. G. Woodruff photo, #168, U.S. Geological Survey)

The broad alluvial plains between Four Corners and Chinle Wash, seen in this 1929 photo near Aneth, provided the base soil for agriculture and town building from 1500 B.C. to the present. (Herbert E. Gregory photo, #580, U.S. Geological Survey)
the river established itself as a flat meandering stream which flowed out of the San Juan Mountains of southwest Colorado and snaked its way across the desert toward the Colorado River. About that time, the country below present-day Bluff began to uplift into what is now known as the Monument Upwarp, a ninety-mile long, thirty-five-mile wide series of north-south–running anticlines and synclines between Comb Wash and Clay Hills Crossing. An uplift associated with Navajo Mountain, the Slick-Rock section, influenced canyon building between Clay Hills and the confluence with the Colorado.

An entrenched meander, the San Juan sliced into these upwarps at a rate comparable to the country’s rise, ultimately creating spectacular, thousand-foot canyon walls. In places like the world-famous Goosenecks, the deeply incised river loops back on itself like a folded ribbon. By five to six million years ago, the San Juan had definitively cut through softer, more easily eroded materials and was incising itself into its present course. Upstream from the Monument Upwarp in the Blanding Basin, the river continued its snaking pattern, shifting this way and that across the broad valleys that barely contained it. All the while, it was hauling down quarries worth of sediment from the San Juan Mountains and tributaries north and south.

The greatest effect on San Juan River geomorphology followed four major periods of glaciation during the last one-and-a-half-million years, part of the epoch known as the Pleistocene. Wetter and cooler, the period averaged about twenty inches of rain per year, as opposed to eight now. Consequently, it saw massive flows through the San Juan corridor, probably close to one million cfs (cubic feet per second). Compared to the highest flow of the Holocene (8000 B.C. to the present) of around one hundred thousand cfs, the Ice-Age San Juan was an awesome erosional and depositional force. The river at Bluff during a Pleistocene flood, for example, would have stretched from cliff to cliff—over a mile wide.
The results of those floods appear in the form of high alluvial terraces, cobble fields, and dunes between Four Corners and Chinle Wash. Those great sediment deposits of the Blanding Basin provide the base soil on which all plant and animal life along the river has sustained itself. That in turn attracted human beings to the area about twelve thousand years ago. Later those fertile terraces made farming possible along the San Juan, from the Basketmaker Anasazi period, circa 1500 B.C., to the present.

The river still originates in the San Juan Mountains of southwestern Colorado and flows for more than one hundred miles through northern New Mexico before entering Utah near Four Corners. In each of the three states it traverses, it exhibits different characteristics. The southwestern Colorado section is a somewhat-clear, free-flowing mountain river, bordered by big pines, pinyon-juniper forests, and dense vegetation and hemmed in largely by the igneous and metamorphic rocks of the San Juan Mountains. Just before it leaves Colorado, three small rivers join it: the Piedra, Rio Blanco, and Navajo. Not far into New Mexico, at the crease between the Rocky Mountain and Colorado Plateau geomorphic provinces, it suddenly drops to a desert plain, meandering through flatter, drier terrain. Here it begins absorbing great loads of sediment from tributary rivers and washes and assumes its characteristic brown color.

Since 1962, Navajo Dam near the Colorado-New Mexico border has controlled much of the San Juan's flow through New Mexico and Utah. Impoundment, however, has not greatly changed sediment loads. In much of the area above the dam, the river runs over crystalline rocks and is well vegetated. Consequently, the Colorado section contains far less sediment per water unit above the dam than below it, where sedimentary rocks such as sandstone, siltstone, and shale underlie the river and its tributaries. Siltstone and shale are especially erodible and significantly increase the sediment load. Moreover, those areas in New Mexico and Utah are more arid and less vegetated. This likewise contributes to sediment buildup. The dam, however, has cut probably by half the huge floods that formerly raced out of the San Juan Mountains and Nacimiento Uplift on the Jicarilla Apache Reservation.
While the New Mexico section resembles the Utah part more than the Colorado section, there are important reasons why this study focuses on the river from Four Corners to Lake Powell; the division is not merely artificial. Many of the physiographic factors have ultimately influenced the cultural history of the area. Geologists, for example, divide the river below the dam into five distinct geologic sections, three of which fall in Utah.

East to west along the river from Four Corners, the Blanding Basin comprises the first physiographic unit. An area of low mesas, buttes, and shallow drainages, the basin’s western boundary is Comb Ridge. From there, a broad anticlinal fold called the Monument Upwarp provides the setting for the incised meanders of the San Juan called the Goosenecks. Its western flank dips down at the Clay Hills Crossing-Paiute Farms area. Here begins the Slick-Rock section, a rugged area of mesas, canyons, and promontories associated in part with the uplift of Navajo Mountain southeast of the confluence of the San Juan and Colorado. Currently, Lake Powell backs up to the east into this section all the way past Clay Hills. The Utah sections are known collectively as the Lower San Juan, an area characterized by uplift and river incising.

Recent, more-comprehensive studies of the riparian corridor by SJRIP scientists have confirmed and refined the importance of geological divisions for all aspects of life along the river. SJRIP researchers divided the river into eight “reaches.” They used criteria such as river-valley geometry, riparian vegetation, channel gradient and patterns, tributary influence, human influence, and aquatic habitat to define each reach. The Utah sections comprise the first four reaches according to these scientists, who point out that these areas differ significantly from the Upper San Juan or upper four reaches.

In general the Lower San Juan experienced significantly less human influence than the Upper San Juan. For example, in the Upper San Juan in New Mexico, numerous diversion dams block the river’s flow, while in the lower part, the river surges freely. In the Utah sections, irrigation and agriculture are less prominent than in New Mexico, restricted mostly to the area between Four Corners and Chinle Wash. Below Chinle deep canyons largely prohibit farming along the river. Only the small-scale horticulture of Anasazi and later Paiute and Navajo Indians could take advantage of small plots of land along tributary streams.

In addition to affecting human occupation and land use, these divisions tell something about native fish. For example, Colorado pikeminnows appear more prevalent in the lower half of the river. This may have something to do with the concentration of their traditional spawning grounds in the Four Corners area and/or the impediment to upstream migration imposed by diversion dams at Shiprock and elsewhere.

Besides looking at the river’s immediate corridor, we will sometimes wander up various side drainages to see what happened there. Rivers are connected to other ecosystems and especially influenced by what occurs along their tributaries. Chinle Wash, Montezuma Creek, Cottonwood Wash, and the canyons cutting Cedar Mesa have exercised an enormous influence on the San Juan. Cottonwood Wash, for example, can dump huge amounts of sediment into the river, often creating havoc for Bluff settlers over the years. If this approach occasionally appears far ranging or inconsistent, we beg the reader’s tolerance and hope, in the end, that our geographical boundaries make sense.

The nature of the landscape directly influenced both the prehistory and history of the Lower San Juan. Anasazi, Utes, Navajos, and Jicarilla Apaches found that the upper river in New Mexico provided better camping and farming sites. Small groups of Basketmaker and Pueblo Anasazi lived along the Lower San Juan, but no significant population centers existed there like the Upper San Juan sites of Aztec, Salmon Ruin, Mesa Verde, or Chaco Canyon. Nearby Cedar Mesa, however, was heavily populated at different times during the Pueblo Anasazi period. Historic Indian use has followed that same pattern. Small populations of Paiutes have lived for hundreds of years at Navajo Mountain and along San Juan tributaries like Paiute Farms and Montezuma Creek. During the late-nineteenth century, however, the more populous and mobile Utes and Navajos found refuge on the Lower San Juan from federal troops and the influence of Indian agents at places like Shiprock (for Navajos) and Towaoc (for Utes).
Ute and Navajo activities along the Lower San Juan mirrored those in the upper, New Mexico section—hunting, gathering, farming, and grazing—but they took on a different personality. The Weeminuche Utes, in particular, found fewer hunting opportunities on the Lower San Juan. Despite the region’s ruggedness, Indians were drawn to it because of the river. It thus became a kind of expansionist frontier for Utes and Navajos as their populations increased, as members of both tribes sought to hunt and gather resources, and as Navajos, in particular, needed more land for their sheep. If Ute and Navajo use of the area was hesitant to develop, Euro-American hegemony was not much different. The Spanish influence, so prominent in New Mexico, affected the Lower San Juan only indirectly. Utes and Navajos adopted horses, sheep, farming methods, and tools from the Spanish. Except for a few explorers, military expeditions, and slave traders, Spain and then Mexico ignored the Lower San Juan. It lacked obvious agricultural, mineral, and trading potential and posed a prominent geographical barrier to trade with California. Moreover, Spain guarded its topographical information jealously. Although hard to document, the advent of Anglo fur trappers in the early nineteenth century may have wreaked environmental havoc by nearly eliminating beaver along the San Juan and its tributaries. Beaver dams control erosion and provide a rich environment for smaller birds and other animals. Despite its slow beginnings, the entrance of Europeans and Americans into the San Juan, starting in 1865, heralded a change. The technologies and values of the West, with its industrial production and secular view of nature, have continued to exert a profound effect on the San Juan landscape to this day.

By the early 1880s, the process of change had speeded up considerably. Texas cattlemen...
rode into the area, lured by its remoteness from government authorities and the availability of free land. The Texans’ reputed lawlessness was one reason the Church of Jesus Christ of Latter-day Saints (also known as the LDS Church or the Mormons) sent a colonizing mission to the San Juan country in 1879–80. The Mormons also wanted to control the entire Utah Territory, sought a warmer climate than the Salt Lake Valley for their converts from the South, and desired better relations with the Indians living in Utah’s most remote region.¹⁷ Trading posts, operated by
both Mormons and non-Mormons beginning in the late nineteenth and early twentieth centuries along the Lower San Juan, also shared some different characteristics. Isolated as they were, these Utah posts functioned not only as communal gathering places for Indians who were naturally drawn to the river but also reflected Mormon policy and practices.

Mormon relations with Utes, Paiutes, and Navajos differed from those of other Anglos in the Upper San Juan. A distinct theological cast colored Mormon paternalism. Their theology encouraged conversion of Indians rather than eradication or expulsion. They failed to convert many of the area’s Indians but enjoyed more peaceful relations than their neighbors. Mormons protested, nevertheless, when southwestern Coloradans tried to remove some Utes to San Juan County following the discovery of gold and silver in the San Juan Mountains and the so-called Meeker Massacre on the White River.¹⁸

When the Mormons arrived in 1880, their fumbling efforts to irrigate also set in motion a riparian-altering process unprecedented in the history of human interaction with the river. There were two significant results. First, farming, grazing, and, to a lesser extent, mineral extraction on the San Juan have been part of a worldwide phenomenon that has hastened more erosion than a Pleistocene flood.¹⁹ The second result is what appears to be ultimate control. Eighty years after Euro-American farmers planted their first crops, two dams, Navajo and Glen Canyon, came on line within a year of each other, in 1962 and 1963. These dams restrict a major part of the San Juan’s flow.

The challenge of water control in the Colorado Basin in turn occasioned the rise of the biggest government agency in world history, the Bureau of Reclamation. The specter of that agency’s power and the resulting dams in the Colorado Basin, however, also gave birth and focus to the modern environmental movement and its renewed set of values regarding nature.²⁰ Those politics and values manifested themselves in a set of national environmental laws in the 1960s and ’70s (the Wilderness Act, the National Environmental Policy Act, and the Endangered Species Act, to name but a few), as well as new missions for federal agencies (National Park Service, Bureau of Land Management, U.S. Fish and Wildlife Service, and Bureau of Indian Affairs) to enforce them.

In weaving the story of the riparian landscape together with that of Mormons, Indians, trappers, government agents, and recreationists, this narrative adopts a three-tiered approach to environmental history.²¹ In this model, the natural history of the landscape, with both organic and inorganic components—plants, animals, geologic processes, and weather, forms the basis of the analysis of the Lower San Juan.

Next come the technologies people use to control their environment, ranging from a Clovis hunting point to the adoption of corn and dam construction. Related to these technologies are the institutions formed to apply them—a hunting-gathering band, a Mormon colonizing mission, or a government agency like the Bureau of Reclamation.

Finally, one must account for the mythic and ideological levels on which a society functions. Artistic expression, like a petroglyph, a poem, or a photograph, speaks volumes about how people value their landscape and why they apply their tools and institutions to the environment the way they do. For example, consider the comments of two writers seventy-five years apart, speaking about the same San Juan wilderness. In 1875 Hayden Survey topographer George B. Chittenden wrote, “This whole portion of the country is now and must ever remain utterly worthless.”²² He spoke for the federal government and most Americans in valuing land according to its exploitable resources. This point of view underlay the decisions of government builders as they fundamentally changed every aspect of the river’s ecological makeup by constructing dams at either end. Novelist Wallace Stegner viewed that same empty space positively in 1949, saying, “This is the way things were when the world was young; we had better enjoy them while we can.”²³ Stegner placed recreational and aesthetic values above utilitarian ones and presaged the post–World War II environmental movement that was just beginning to find its voice. That attitude led to the enactment of important environmental laws and irrevocably changed the way people interacted with the river corridor. These two observations say much about
the way nineteenth-century frontier attitudes toward the San Juan had evolved by the mid-
twentieth century.

Even though these three approaches sometimes receive separate treatment, as historian
Donald Worster says, “in fact they constitute a single dynamic inquiry in which nature, social
and economic organization, thought and desire are treated as one whole. And this whole changes
as nature changes, as people change, forming a dialectic that runs through all of the past down
to the present.” The history of salt cedar, or tamarisk, in the Southwest, discussed extensively
in chapter 8, illustrates the interaction of all three levels of inquiry. This hardy, water-loving
tree originated in ancient Mesopotamia (modern-day Iraq), but American seed companies
imported it in the early nineteenth century to control erosion. It has now grown out of control
in the West, its spread greatly abetted by man-made dams like Navajo and Glen Canyon.
Reactions to its unexpected dominance range widely: valued for soil stabilization and erosion
control; criminalized as a water thief and beach-invading, insect-harboring weed; accepted as
part of the consequence of dam building.

As with many other aspects of the river’s history, speaking of the long-term viability of
native vegetation or consequences of introduced plants necessitates throwing in a big
dash of relative time—geologic and human. San Juan human history, with all its vicissitudes,
is little more than an interesting, if perhaps tragic, interlude in the processes that have
shaped the river. Recent geologic events, however, such as the deposition of massive alluvial
banks, specifically set the stage for the human drama played out in this arid and dramatic
river landscape.

This book covers all phases of the Lower San Juan’s environmental history but concen-
trates mainly on the late-nineteenth and twentieth centuries, when the most profound
environmental changes have occurred. This is not to say that the San Juan was an untouched
paradise before Euro-Americans came on the
scene. All the peoples who have lived in the San Juan corridor have sought to shape their environment and wrest a living from it. Negative impacts on plants and animals have not been the sole province of white people. The first Americans, the Clovis hunters, may have applied both a technology and mythology to a landscape they did not entirely understand and ultimately reaped unforeseen consequences. It is to their story that we now turn.