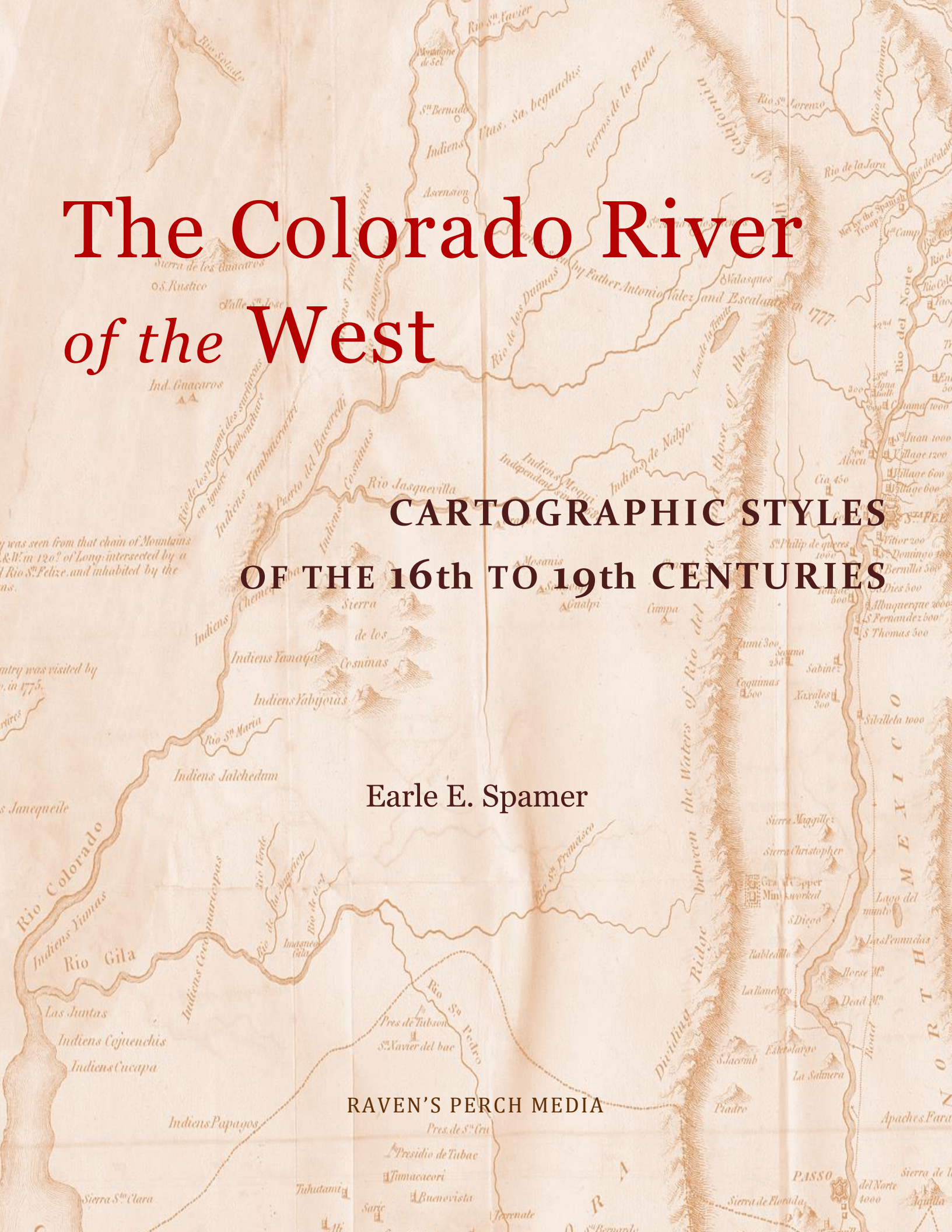


# The Colorado River of the West

## CARTOGRAPHIC STYLES OF THE 16th TO 19th CENTURIES

Earle E. Spamer

RAVEN'S PERCH MEDIA



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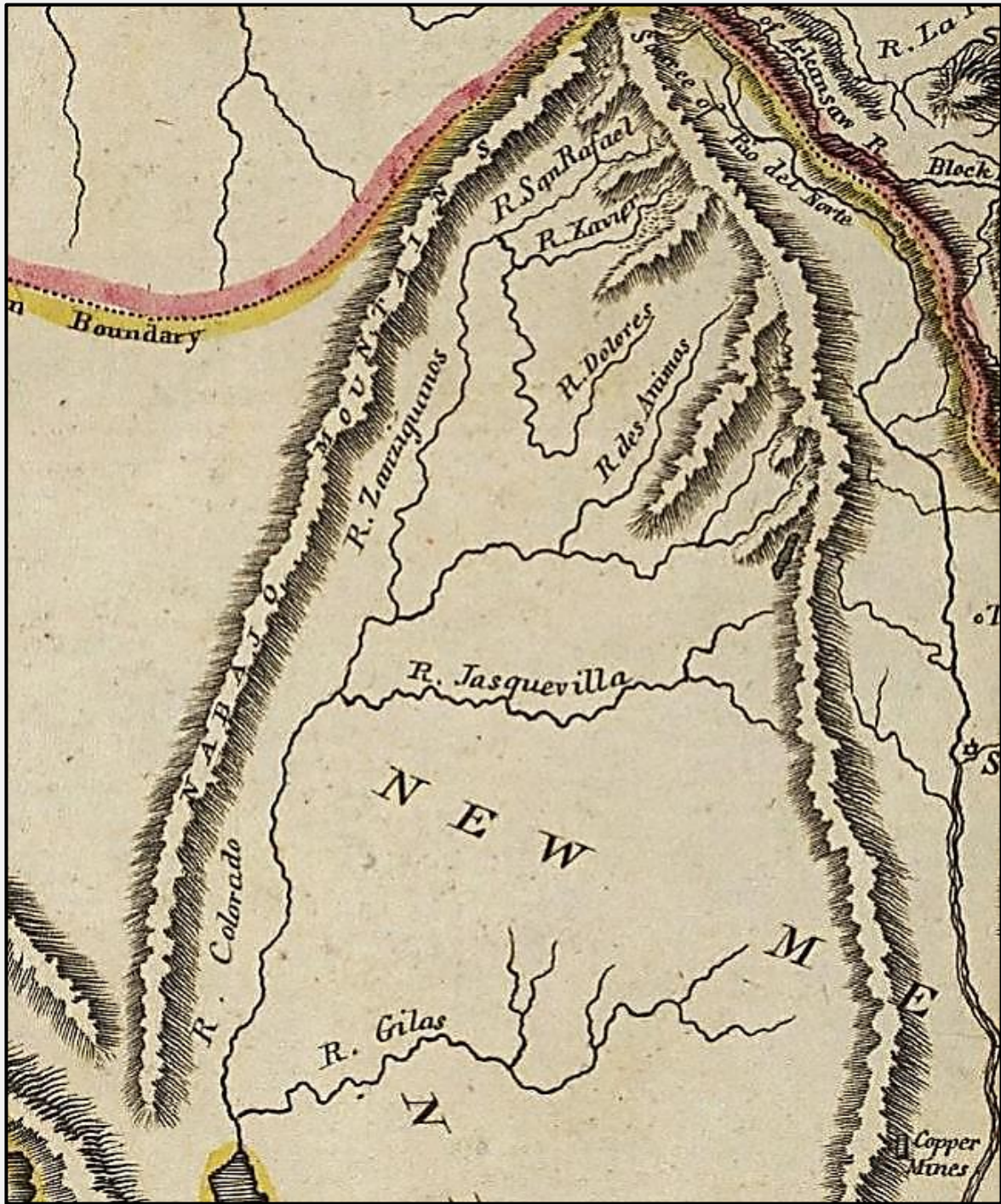
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COVER ILLUSTRATION: *Detail from A Map of the Internal Provinces of New Spain. The Outlines are from the Sketches of but corrected and improved by Captain Zebulon M. Pike, who was conducted through that Country, in the Year 1807, by Order of the Commandant General of those Provinces. In Z. M. Pike, An account of expeditions to the sources of the Mississippi, and through the western parts of Louisiana, to the sources of the Arkansaw, Kans, La Platte, and Pierre Jaun, rivers : performed by order of the government of the United States during the years 1805, 1806, and 1807. And a tour through the interior parts of New Spain, when conducted through these provinces, by order of the Captain-General, in the year 1807 (C. and A. Conrad, and Co., Philadelphia, Pennsylvania; Somervell and Conrad, Petersburgh, New York; Bonsal, Conrad, and Co, Norfolk, Virginia; and Fielding Lucas, Jr., Baltimore, Maryland, 1810).*

The better part of this region was replicated, with errors and without acknowledgment, from a copy of a manuscript map by Alexander von Humboldt that had been made with his permission in Washington, D.C., in 1804 while en route to Europe following his historic travels through South and Central America. The Colorado River (along the left side of the image) displays the "Linear Colorado River" style described in the present volume.

# THE COLORADO RIVER OF THE WEST







# The Colorado River *of the* West

*Cartographic Styles of the  
16th to 19th Centuries*

Earle E. Spamer



RAVEN'S PERCH MEDIA PHILADELPHIA 2023



A Raven's Perch Digital Production



**RAVEN'S PERCH MEDIA**

Bibliographical and Historical Resources on the  
Grand Canyon and Lower Colorado River Regions of the  
United States and Mexico

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES OF THE 16TH TO 19TH CENTURIES

by Earle E. Spamer

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**FRONTISPIECE** — *Detail from Missouri Territory formerly Louisiana, in Matthew Carey, Carey's general atlas, improved and enlarged: being a collection of maps of the world and quarters, their principal empires, kingdoms, &c.* (M. Carey, Philadelphia, 1814). R[iio]. Colorado, with its upstream contributor R[iio]. Zanziguanos (Green River), displays the "Linear Colorado River" style described in the present volume (see Fig. 4.6).



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## Pause for a Moment

EVERYONE who has had the privilege of river-running the Colorado River knows “where it is.” That was not always the case. For years—centuries, actually—the Colorado (by whatever name it had at a given time) ran all over the place. At first, its course was simple—straight to the sea, just like that. Later, the ingenuity of cartographers, using good, awful, and “inspired” data alike, kinked, curved, and waggled the Colorado across the landscape that is the southwestern part of North America. While their maps concentrated more on political boundaries, the locations of cities and towns, and the broad generalizations of mountains, seas and straits—done really well, or roughly portrayed, or sometimes made up, based on the “best” information of the day, or levitated straight from the works of other mapmakers so as to make some headway and a few dollars, crowns, or Louis—the tightly confined Colorado River went this way and that, picking up along the way a variety of tributary rivers and creeks (or sometimes not). It was not much of a learning process, but willy-nilly. One had to wait for boots on the ground and oars in the water to create a sensible Colorado River.

All of this comes to light when one pauses long enough to look carefully for the intricate details of a map, not the gross features that its title may advertise. Taking the time is the key. This seems to be harder to do in this day and age of web-based and social media offerings delivered like they are on little silver platters, that are swept away in an instant, and on to something else. (It will have to suffice that I not “credit” anything in particular for this observation, especially in a footnote that would just randomly cite one or two of a profusion of web pages. Instead, search online the phrase, “people aren’t wearing enough hats.”)

Take time to closely examine the map details presented here. The Colorado River voices its history loudly, but mumbles a lot. So, at the end of an enjoyably focused time perusing and discovering the intriguing, often head-scratching, details within this little selection of maps (perhaps hunting for more information along the way), pause for a moment to tip your hat to the legions of cartographers, ateliers, and modern-day librarians and digitizers who made this survey possible. ⌚





## Introduction

THIS IS A cartobibliographical primer on drawing the Colorado River during the sixteenth to nineteenth centuries. It contrasts contemporary understandings of geographical relationships with current knowledge. The examples here focus on the river; how its course, tributaries, and outlet to the sea were depicted over time. In some later cases a finer focus is had on the Grand Canyon region.

Eight basic styles are identified here that describe how the Colorado River's course was drawn across the North American Southwest, and how its mouth was depicted where the river meets the sea. For each particular style, the maps presented here are chosen from among many similar ones, without particular regard to the absolute range of years of production or publication for a given style, since maps were reused or reprinted for years without improvements to the physical geography portrayed on them. Further, it is not the purpose of this survey to produce a historiographical accounting of these styles. This volume utilizes illustrations that focus only on the Colorado River region, from maps which otherwise encompass far broader geographies. Users even of these detailed views will surely take note of interesting points or displays that are otherwise not relevant to this survey, which always is one of the pleasures of perusing maps. Although only cropped quadrangles are usually presented, the maps are fully cited from the much more comprehensive *Cartobibliography of the Grand Canyon and Lower Colorado River Regions in the United States and Mexico*.<sup>1</sup>

The selected maps do not imply they are the “first” or “last” among such examples; they have been picked for clarity or special note. They do, however, help bracket the times when various styles were in vogue, and it is for this reason that within each

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<sup>1</sup> Although that cartobibliography is still chorographically focused, it accounts for a much larger set of maps, complete with pertinent chorographical notes (Earle E. Spamer, *Cartobibliography of the Grand Canyon and Lower Colorado River Regions in the United States and Mexico*, Raven's Perch Media, <https://ravensperch.org>); the second edition (2021) is currently available, with a third edition in preparation.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

style the examples are given in chronological order by dates of publication, which nonetheless does not represent a progression in geographical knowledge. In fact, recopying maps could be a slipshod affair, such as with careless identifications and placement of specific geographic localities, like towns. This aspect is not particularly of interest in this survey, though comparative studies of maps that do look at these placements are of great interest to historians and cartographical scholars. Such forms of erroneous presentations were partly due to the fact that printing blocks and plates were shared, inherited, and otherwise reused in various fashions, often copied, sometimes plagiarized; many with modifications, supported and baseless alike. In more recent times, in the nineteenth century notably, we sense the angst of ateliers who, to make a living, regularly turned out new maps and charts that posed as new, often barely revised if only to change the date. Sometimes there were multiple editions during a year that may have meant to keep up with rapidly revised political boundaries and civil concerns. Physical geography often fell to the wayside, with some maps relying on outdated bases on which newer boundaries and other data were printed.

For the most part, the area we know as the lower Colorado River region was rarely one of cartographic arbitration except occasionally for international boundaries (when they were of any particular concern). Rather, the depiction of physical geography was seemingly an autonomous reflex—an acceptance of the status quo when it was easier to re-use available plates or to simply copy from others, right or wrong, for an area of the world of relatively little interest. Sometimes this was in the extreme, such as when a plate was exactly reused, or with only a minor emendation to title, date, or imprint, even decades after its creation, ignoring geographical corrections made by other cartographers during that time. Such convenience for the cartographer or the atelier sometimes ignored recent discoveries that should have called for a change in how the physical geography of the area was shown, particularly in the courses of rivers (and for a while even whether California was an island and hence the Gulf of California truly a gulf or a strait). Physical geography often was ignored in favor of promoting the ideas of new political information. Revising river courses and mountains was more labor intensive and required more academic attention. Despite a publisher's trumpeting "the most recent authorities" and so forth, the reuse of severely outdated base maps simply to present redrawn political boundaries, or those that were used indiscriminately for the purposes of assembling atlases for common use, needlessly unleashed floods of misrepresented geographies that were carried forward past their primes. The profit-focused commercial map publishers should have known better, though in some cases even the government cartographers are caught in the act.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

The contrast between styles of portraying the course of the Colorado River is the objective here. Maps with minor variants have been overlooked because the overall style is the same; among them minor differences in river courses, labels, and so on are the norm and do not make the style jump to another type. Cartographical historians and collectors track variant states of maps, too, but such states are not especially of interest here except where major differences in style are seen. The widely different styles that do appear on these maps are sufficient to illuminate the breadth of cartographical imaginations and geographical hearsay. In some cases, particularly among the maps that are small-scale or ornamentally condensed, they were meant to be diagrammatic rather than geographically precise (especially if such precision was not to be had anyway). The fact that specific courses of the Colorado (and its tributaries) are shown fancifully regardless of their cardinal vectors, never implies that the reaches were surveyed; the jittery details and wanderings usually express only the conceptual “idea” of river meanders and course changes while passing through a given region, especially those that had not been, or were only cursorily, explored. What is of primary importance in this survey are the gross styles of portraying the Colorado’s course.

Scholarly studies of—and critical judgments about—the usefulness and impact of the kinds of cartographical projections used over time are worthwhile readings, too, even among their bewildering hundreds. But, this survey, holding only a chorographical focus on the Colorado River and its Grand Canyon, does not address these aspects, the same as it does not speak to the historiographical significance that a map may hold among scholars. Such a pedestrian focus on the chorography of the Colorado River admittedly overlooks the many fascinating, often remarkable, physiographic, political, and historical elements portrayed on or implied by these maps, and for which they are much better known. *The Colorado River of the West* instead is a contributory study, for aficionados of the river and its grand canyons, which may be useful in a more general fashion to cartographical historians of the Southwest.

Regarding access to the maps cited and illustrated here, while I have seen many of them in person, substantially more were visited through high-resolution digitized copies online, as a part of years of continuing research on the *Cartobibliography of the Grand Canyon and Lower Colorado River Regions*. The images reproduced here are from my research files, a large number of which were accessed through the Library of Congress. Scholarly libraries comprise the chief part of the balance, of which perhaps the

most widely known is the David Rumsey Historical Map Collection,<sup>2</sup> although libraries around the world were accessed. Also, some auction houses maintain online collections of past offerings, which is a helpful kind of resource because particular notes about variant states or other commentary might be offered, which comprises information that is not always a part of an academic library's metadata or informational webpages. In many cases, more than one copy of a map has been digitized, by different parties, and a researcher thus has the ability to switch between them if resolutions or imperfections require it.

Sometimes, miscataloging or other misinformation leads us astray; and not all of the digitized maps are in adequate resolutions for finely detailed study, which may be a hindrance. Though the modern digital environment has made detailed map inspection incredibly more easy, we nonetheless are, pointedly, at the mercy of those who choose which maps to digitize, and to the creators of websites. That such vast digital libraries of the public domain are available, though, has made possible analytical research projects like this one in ways that could not have been imagined even a few decades ago. Most images in this volume are small details captured from images of much larger maps. They have been altered digitally in order to make the details clearer, procedures that in the pre-digital age required special photography or auxiliary drawings to bring attention to special features.

Once, in order to examine maps that were not in one's own library, travel to far-flung places was necessary in order to see maps that were of particular interest. It is astonishing that now so many important maps can be viewed online, in places around the world. We are beneficiaries of institutions and governments that have digitized maps and make them so widely available. We may wondrously take heed and solace in the remarks made by Adolf Erik Nordenskiöld in 1889: ". . . even printed maps of this period [15th–16th centuries] have become very rare, and extensive collections of them are only to be found in a few libraries. Many of the most important of these documents are therefore not easily accessible to students—a difficulty the unfavorable influence of which may be traced even in elaborate geographical treatises of the most distinguished authors."<sup>3</sup> Concluding, Nordenskiöld hoped that his work would "promote new disco-

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<sup>2</sup> Library of Congress map collection online, <https://www.loc.gov/maps/>. David Rumsey Map Center, Stanford University Library (<https://www.davidrumsey.com/>; <https://library.stanford.edu/rumsey>).

<sup>3</sup> A. E. Nordenskiöld, *Facsimile-atlas of the early history of cartography with reproductions of the most important maps printed in the XV and XVI centuries. Translated from the Swedish original by Johan Adolf Eklöf, Roy. Swed. Navy and Clements R. Markham, C.B., F.R.S.* (Printed by P. A. Norstedt & Söner, Stockholm, 1889), 141 pp., 51 plates. [coverage to 1550, actually]. Also a



veries in the recesses of libraries and map-collections.” What he would have thought of the world wide web!

### **Historical Note: Nomenclature for *Río Colorado* and Colorado River**

Historical, bibliographical, and cartographical research in the Colorado River basin can be confusing given the number of names by which the river has been known since its first visit by Europeans in 1539. “Colorado River” appears elsewhere, too: in Texas (United States) and as “Río Colorado” or “Rio Colorado” in various places in the Spanish- and Portuguese-speaking worlds.

For the benefit of newcomers to the study of this region, and as a refresher for those who are more familiar with the region, a summary of names is below. These names include manuscript and published materials (maps and texts both), and misspellings; all of them are listed here for historical completeness, thus most will not be found on the maps shown in the present volume.<sup>4</sup> Some names, particularly those from the 19th or 20th centuries, are mixtures of Spanish and other languages; a few are misapplied from, or confused with, other (usually presumed) rivers. All names in this list pertain to the originally named stretch of the river—from the confluence of the Grand and Green Rivers in present-day Utah to the sea. (The name “Colorado” was legislatively applied to the Grand River in 1921, to allow the Colorado River to locate its headwaters in the state of Colorado.)

Big Colorado River  
Boñagua R[ivière] [*in French*]  
Caramara flu[vius] [*in Latin*] [see Rio Coromara]  
Collerado river [*sic*]  
Collorado Fl[usse]. [*in German*]  
Colorado de los Martyres  
Colorado del Oeste  
Colorado Grande  
Colorado River  
Colorado River of California  
Colorado River of Mexico

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facsimile reprint 1961, 1970, Kraus Reprint Corp., New York. Also a facsimile reprint, with new introduction by J. B. Post (Dover Publications, Inc., New York, 1973). Original Swedish edition: *Facsimile-Atlas till kartografiens äldsta historia innehållande afbildningar af de riktigaste kartor tryckta före år 1600* (Printed by P. A. Norstedt & Söner, Stockholm, 1889).

<sup>4</sup> See instead the *Cartobibliography of the Grand Canyon and Lower Colorado River Regions in the United States and Mexico* (Raven’s Perch Media, <https://ravensperch.org>).

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

Colorado River of Sonora  
Colorado River of the Gulf of California  
Colorado River of the West  
Coloratus fl[uvius]. seu Nord-Strom [*sic; in mixed Latin and German*]  
Coloredo River  
Cotorado R[ivière]. [*sic; in French*]  
Firebrand River [*in translation of the original Spanish, Río del Tízón; see below*]  
Fl[usse] Colora de los Martyres [*sic; in mixed German and Spanish*]  
Fl[uvius]. boni præsidii [*in Latin*]  
Gran Rio Colorado [*and as Gran Río Colorado*]  
le grand fleuve Colorado ou du Nord [*in French*]  
le grand rio Colorado [*in French; and as le grand rio Colorado de Californie*]  
Great Colorado River [*and as Great Colorado*]  
Great Rio Colorado of California  
Great River of the Apostles [*a conflation of the Gila and lowermost Colorado Rivers as one stream*]  
Green River or Colorado of the Gulf of California [*sic*]  
Good Hope River [*in English; as a tributary to Tison R.*]  
Martyrs River [*and as Martyr's River*]  
Muddy River [*a literary liberty*]  
Nord-Strom [*North River in German; see Coloratus*]  
North River [*not the Rio Grande*]  
Red River [*also applied to the Little Colorado River, and at least once in error to the San Juan River*]  
Red River of California  
Red River of the West  
Río Buena Esperanza  
Rio Colerado [*sic*]  
Rio Colorabro [*sic*]  
Rio Colorada [*sic*]  
Río Colorado  
Rio Colorado II [*presumably to distinguish it from the Rio Colorado of Texas*]  
Rio Colorado (West)  
Rio Colorado de la California  
Rio Colorado de las Balzas  
Rio Colorado de los Estados Unidos por el Norte [*sic*]  
Río Colorado de los Martyres  
Río Colorado de México  
Río Colorado del Norte [*and as Rio Colorado del Norte*]  
Río Colorado del Occidente [*and as Rio Colorado d'Occidente*]  
Río Colorado del Oeste  
Rio Colorado del Sur  
Río Colorado Grande [*and as Rio Colorado Grande*]  
Río Colorado Grande de la California

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

Río Colorado Grande de los Martyres  
Rio Colorado of California  
Rio Colorado of the Gulf of California  
Rio Colorado of the North  
Rio Colorado or Grand River [*sic*]  
Rio Colorado or North River  
Rio Colorado or of the North [*sic*]  
Rio Colorado ot Totontoac [*sic*]  
Rio Colorado ou R[ivièr]. Verde [*sic, in French; labeled for the reach between the Bear River (Utah) and Little Colorado River (Arizona)*]  
Rio Coromara [*assumed by contemporary geographers to be that of Marco Polo's river in China; also seen as "R. de Coramara" and as "Caramara flu."*]  
Rio de Aguchi, ò de Bona Guia [*in Italian*]  
Río de Alarcon  
Rio de Anguchi [*in Latin source*]  
Río de América Septentrionale  
Río de Buena Guía [*and as Rio de Bona Guia*]  
Rio de Colorado [*and as Rio-de-Colorado*]  
Rio de Colorado of California [*sic*]  
Río de los Martires [*and as Río de los Martyres*]  
Río de los Tiburones [*sic; in fiction*]  
Río del Norte [*not Rio Grande del Norte, which is the Rio Grande of the Gulf of Mexico*]  
Río del Tízón [*and variant contemporary spellings; e.g., "Taon", "Teco", "Tecon", "Teçon", "Thicon", "Ticon", "Tiguex", "Tisan", "Tison", "Tocon", "Toucan"*]  
[RIO GRAN DE COLORADO *may only be due to awkward map lettering of RIO GRANDE COLORADO*]  
Río Grande [*not Rio Grande del Norte, which is one name for the Rio Grande of the Gulf of Mexico*]  
Río Grande Colorado  
Río Grande Colorado de los Martyres [*in 1710 manuscript, as "Rº Gº Colorado de los Martyres"*]  
Río Grande de Buena Esperanza  
Río Grande de Colorado  
Río Grande de los Cosninos  
Río Mysterioso  
Río Totonteac [*also as Rio Totontean and Rio Tontontec*] <sup>5</sup>  
Riv[ier]. Colorado of Del Norte [*in Dutch*]  
R[ivièr]. Colorado ou des Martirs [*in French*]  
Rivier de Colarado [*sic; in Dutch*]  
rivière de Calorado [*sic; in French*]

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<sup>5</sup> Obscure; the name *Totontec* usually pertains to a presumed Indigenous "kingdom". Regarding *Totontec* see for example, William K. Hartmann, *Searching for golden empires : epic cultural collisions in sixteenth-century America* (University of Arizona Press, Tucson, 2014), p. 271 ff; and Helda B. Barracco, *Os "dourados" de Parima : um problema de anticomunicação* (EBRAESP Editorial, São Paulo, 1978; in Portuguese, which is an ebook only), p. 149.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

Rivière de Coral [*in French*, the Colorado mislabeled; should have been labeled on Gila River]

Roode Rivier Colorado [*sic; in Dutch*]

[?] Tigna fiume [*in Italian*, "Ringworm River"]

Tontonteach f[iume]. [*in Italian*] [see also Río Totonteach]

Totonteach fluvius [*in Latin*] [see also Río Totonteach]

Western Colorado

The Colorado had also been referred to as the "Seedskeeter," "Seedskadee," and variant spellings, which are corruptions of an Indigenous American pronunciation actually for the Green River. The Little Colorado River has been given comparably overlapping names, including a redundant "Río Colorado."

### **Historical Note: *Puerto de Bucareli***

Notable among many maps and in other literature is the name usually misreferred to the confluence of the Colorado and Little Colorado Rivers. It originates with padre Francisco Tomás Garcés soon after he had visited the Havasupai on Cataract Creek in 1776. Viewing the expanse of the canyon to the north and east, he bestowed on it the name "Puerto de Bucareli," Bucareli's Pass, honoring then-Viceroy of New Spain, Antonio María de Bucareli y Ursúa. He did not see the confluence of the Little Colorado. When Alexander von Humboldt passed through New Spain in 1803, he examined various maps of the territory and took up the name that had first been set down in 1777 by Bernardo de Miera y Pacheco, who had adopted Garcés's honorific. (Although in the Geographical Introduction to his *Political Essay* on New Spain<sup>6</sup> Humboldt devotes several pages of discussion to the astronomic location of the confluence of the Colorado and Gila Rivers, and mentions source information for specific locales in what today are northern Sonora and southern Arizona, he did not mention anything farther to the north, leaving such information solely to his map. He does provide a lengthy annotated list of the maps, principally manuscript, that he consulted to create his entire map of New Spain.<sup>7</sup>) Humboldt's manuscript map was published in 1808 (which was pirated in

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<sup>6</sup> Alexander von Humboldt, *Essai politique sur le royaume de la Nouvelle Espagne : ouvrae qui présente des recherches sur la géographie du Mexique . . . .* (Chez F. Schoell, Paris, 1808). (Numeous reprintings and translations.)

<sup>7</sup> The maps included: "Mapa de la California, carte manuscrite des pères Francisco Garces et Pedro Font, 1777. Elle a aussi été gravée à Mexico, mais avec une erreur de trois minutes en moins pour toutes les latitudes. Elle est intéressante pour la Pimeria alta et pour le Rio Colorado." (p. 104 in the 1811 ed.). (Transl.: 'Mapa de la California, manuscript map by Fathers Francisco Garces and Pedro Font, 1777. It was . . . engraved in Mexico City, but with a diminution error of three minutes for all latitudes. It is interesting for the Pimeria alta and for the Rio Colorado.')



1810 before Humboldt’s better-known edition of 1811), on which manuscript he had been the first to alter the name, as “Puerto de Bucarelli” (*see Fig. A*). Later copyists continued to offer up even more variant spellings (listed below). After Humboldt’s usage, the name was simply reapplied without knowledge of Miera’s label, which was Garcés’s physiographical neologism; even Humboldt had had no understanding of its special context. Some labels that appeared on subsequently copied maps were even accompanied by place-name symbols, the result of which was to group the name among Miera’s cartographical plotting of many ecclesiastically named campsites of the Domínguez–Escalante expedition of 1776 that circumambulated a good portion of the Colorado Plateau. All variants of *Puerto de Bucareli* that have been found on maps (manuscript and published alike), and occasionally in other matter, are listed here for historical completeness. Most of these names will not be found on the sampling of maps in the present volume: <sup>8</sup>

Bucarelli	Puerto Bucarelli
Bucaretti	Puerto Bucarello
Bucaretty	Puerto de Bucareli
Bucuretti	Puerto de Bucarelli
[llamó] de Bucareli	Puerto del Bacorelli
P. Bacarelli	Puerto del Bacorilli
P. Bucarette	S. Bacarelli [perhaps thought to have been a mission,
P. Bucaretti	which were actually the camps shown on Miera’s maps]

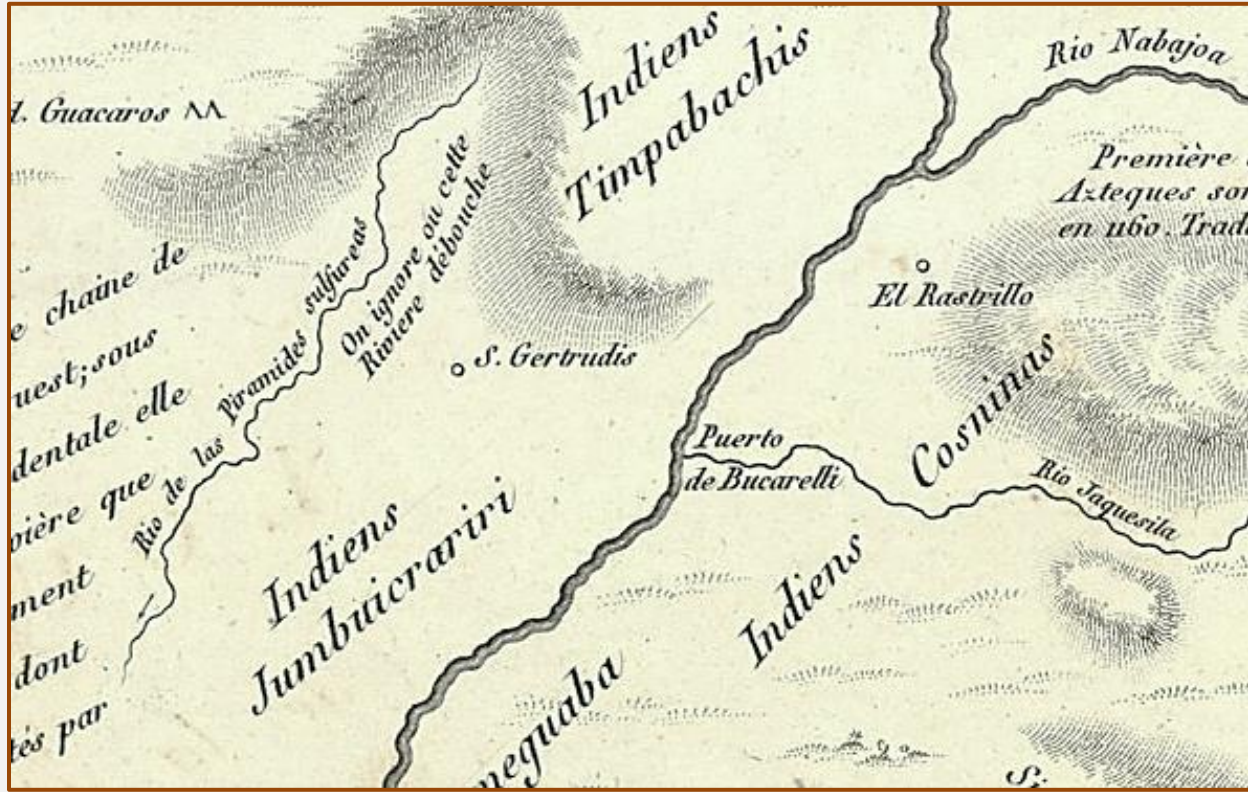
### Historical Note: The so-called “River of the Sulfurous Pyramids”

On numerous maps of the Southwest, originating with Alexander von Humboldt’s influential 1808/1811 map of New Spain, there often appears some variant or translation of the peculiar name, “River of the Sulfurous Pyramids”; for example, “Rio de las Piramides sulfureas” (Humboldt’s label; *see Fig. A*), “R. de los Pyramides Sulfurcas,” “R. de Pyramides,” and “R. Pyramid,” even the remarkably butchered “Rio de los Panami des surfurcas.”

The name was derived from the 18th century Spanish cartographer Bernardo de Miera de Pacheco, who had accompanied the Domínguez–Escalante Expedition of 1776 and whose manuscript map(s) Humboldt had relied upon when he was in Mexico. The name is a corruption, as masterfully explained by C. Gregory Crampton:

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<sup>8</sup> See Earle E. Spamer, *Cartobibliography of the Grand Canyon and Lower Colorado River Regions in the United States and Mexico*; also see Earle E. Spamer, *Mapping Grand Canyon : a Chronological Cartobibliography* (both from Raven’s Perch Media, <https://ravensperch.org>).



**Fig. A.** Detail from Humboldt's 1811 map of New Spain. "Rio de las Piramides sulfureas" appears on the left, on which the additional label appears (translated here), "we do not know where this river flows." (Note also the label for "Puerto de Bucarelli" at the confluence of the Little Colorado and main Colorado Rivers.)

THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES



**Fig. B.** Detail from the map, "Freistaat von Nordamerika Berlin 1824 von R. v. L.", in R. v. L. [Johann Jakob Otto August Ruhle von Lilienstern], *Allgemeiner Schulatlas : von R. v. L.* Berlin: [no imprint] (1825). "R de los Piramides Sulfureas," employing Humboldt's "rio" and curiously not using the German "flüsse" as he has with other rivers on this map. The "sulfureas" river is aligned with "Martires fl[üsse] and an imaginary stream contributing to the northwestern head of the Gulf of California.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

They crossed over the rim of the Great Basin and descended Ash Creek along the Hurricane Cliffs until they reached the Virgin River, called by them the Rio Sulfureo, or Sulphurous River, for they discovered or were near the mineralized La Virken Hot Springs at the mouth of Timpoweap Canyon. The Virgin (a later Spanish name—Virgen) appears as the *Rio de las Piramides Sulphureas*, a corruption on the Humboldt map of one of the names Miera applied to the Virgin. But the term Miera most frequently uses is the Rio Sulfureo de los Piramides, or the Sulphurous River of the Pyramids, and from a study of his maps it is clear that the word pyramid is intended to describe the mountainous towers and temples to the east of the trail at this point and to the north of it as they headed back toward New Mexico. This may be regarded as the first description of the intricately carved escarpments peculiar to the southern exposures of the High Plateaus of Utah which find classic expression in Zion National Park and Monument not far from the Spanish Trail of 1776.<sup>9</sup>

One example, selected from the maps herein to introduce the confused geographical relationships of the River of the Sulfurous Pyramids, is that shown in the 1825 school atlas in German by Johann Ruhle von Lilienstern (*see Fig. B*). Paralleling the “Colorado fl” (Colorado flüsse, or river) to its west, depicted by a mostly dotted line beginning north of the latitude of the San Juan River, is a river labeled on its upper reach and drawn with a solid line, “R. de los Pyramides Sulfurcas” [*sic*], and on its lower reach shown with a dotted line labeled “Martires fl” (*i.e.*, the supposed River of the Martyrs); this river then arcs south and southeastward to enter the upper western side of the Gulf of California, depicted only at its end by a “definitive” short solid line.

Other maps are even more confused; some of them show this same, combined river running off to the Pacific Ocean on California’s coast, or the “pyramid” river is an orphaned stream without clear headwaters or confluence with a receiving river; further, the so-called River of the Martyrs is usually drawn as a separate river, when it does appear. Of course, many of these relationship simply repeat (or sometimes tweak) information displayed on preexisting maps; and given the poor geographical knowledge of a good portion of the Southwest, these depictions were not really intended to show precision, despite boastful advertising efforts by the commercial ateliers.

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<sup>9</sup> C. Gregory Crampton, “Humboldt’s Utah, 1811,” *Utah Historical Quarterly*, Vol. 26, no. 3 (July 1958), p. 275.



**Historical Note: Regarding California as an Island and the Gulf of California a Strait**

The geographical presentation of California variously as a peninsula and an island is well studied. It is not the object here to summarize this mightily interesting story, though for one outstanding example of the amount of material that is available visit Stanford University Library's Glen McLaughlin Collection of California as an Island, <https://searchworks.stanford.edu/view/zb871zd0767>. The entire collection has been digitized, which includes numerous maps in books. See also a complementing catalogue by McLaughlin, to which cross-listings in the present cartobibliography are made where pertinent, though it largely omits world maps, deferring to the cartobibliographies by Rodney W. Shirley.<sup>10</sup> Whether California is portrayed as peninsular or insular alerts us to where to look for the Colorado River; that is, how it was accommodated in the North American geography.

It was rarely for pure geographical knowledge that the question of California's insularity was sought to be resolved. Rather, it was the overbearing political and commercial need to discover a Northwest Passage by sea between Europe and the Far East. Identifying this passage by connecting it, if need be, to the Gulf of California, was the goal, which cartographers were eager to present so as to convey support for the existence of this passage. We see in those attempts various "western", "northern", or "icy" seas, straits named in different ways "Anian," and other contrivances. Some of these were either Arctic channels, or seas that (on the map anyway) wiped out the entire North American landscape. In reality, the known waterway of the Gulf of California was either a convenience or an awkward bit of knowledge to accommodate in these constructions. The gulf really played second fiddle to the Northwest Passage (whatever it was called), though it was clear to many mariners and other hopefuls that the north-south strait should somehow connect with the passage. In the background, always, was the problem of configuring the Colorado River into the strait, although it was not itself an important concern.

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<sup>10</sup> Rodney W. Shirley, *The mapping of the world : early printed world maps, 1472-1700*. Holland Press (London, 1984), XLVI, 669 pp.; with newer eds., 1987, 1993, 2001, which differ only in corrigenda. Glen McLaughlin, with Nancy H. Mayo, *The Mapping of California as an Island : an Illustrated Checklist*. California Map Society, Occasional Paper 5 (1995), 134 [143] pp. The collection is "almost certainly the largest existing assemblage of maps depicting California as an island." (p. ix). In this catalog, many, though not all, maps are illustrated, although at resolutions that are not generally useful for examining the geographical region of interest to this cartobibliography.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

Even though at the close of the 17th century Eusebio Francisco Kino demonstrably showed, in the field, that Lower California is a peninsula, that the Gulf of California is in fact a gulf and not a strait (Kino, manuscript, 1701; first in print, 1705, and redrawings thereafter), some map makers and geographers defiantly or carelessly continued to present the island well through the 18th century. Maps from the 19th century, particularly those produced in eastern Asia, that still depicted the island are usually simple reprintings of older maps, using original blocks or plates. The cartographical distinction between the island and peninsula by this time does not reflect geographical currency and thus is not practically realistic.

The idea of the Californian island has been traced to a novel that may have been written as early as 1496. Garci Rodriguez de Montalvo wrote the chivalric romance novel, *Las Sergas de Esplandián*, a sequel to *Amadís de Gaula*, Esplandián being a son of Amadís. Geographical scholars determined that it is the Adventures of Esplandián that first introduces the name, "California." The novel presents the island as one inhabited by Black women, ruled by its queen, "Calafia." The idea perfectly complemented the legend from the earliest Spanish explorers of this region that to the west of Mexico was an island supposed to be inhabited by Amazon women. Some exhibits and notations have intimated that the Rodriguez de Montalvo novel is the source of the mapped island of California, although the novel was not illustrated. Perhaps written as early as 1496, the earliest known edition is 1510. Yet imagination and speculation are every much a part of historical accounts as they are of the writings of more modern scholars, who create the texts of historiographies that treat questions such as this. They have identified even earlier literature, of the 10th to 13th centuries, that may have influenced Montalvo.

A map by Henry Briggs (1625) is the first proper map to have displayed California as an island, thus also the Gulf of California as a strait; it appeared in Samuel Purchas's *Porchas His Pilgrimes. In five bookes. . . . The fourth, English Northerne Nauigations, and Discoveries: Relations of Greenland, Groenland, the North-west passage, and other Arcktique Regions, with later Rossian Occvrrents.* (printed by William Stansby for Henrie Fetherstone, London). The earliest cartographical depiction of any kind that shows California as an island is that of Antonio de Herrera y Tordesillas, in 1622, on a small, ornamented map of the western hemisphere on the title-page of *Descriptio Indiæ Occidentalis per Antonium de herrera Regium Indiarum et Castellæ Historiographum* (Amsterdam). The map displays no place names or rivers, except some coastal embayments of the continents that are river mouths.

A manuscript map from circa 1535–1537 is in Hernán Cortés’s legal papers in the Archivo General de Indias, in Seville. This records the European recognition of the Gulf of California as a separate waterway. Even though there is no determination on the map that California is an island or a peninsula, cartographers and other historians have used this map and later contemporary documents of the 1540s to indicate that the island is meant. However, such final recognition came after the entrance to the gulf—and either offshore islands or the Baja peninsula itself—were first reached in 1533 by an expedition sent out by Cortés. The pilot Ortuña Ximénes (after having, with troops with him, murdered the overbearing captain, Diego Bezerra de Mendoza) found the islands, or Baja itself, but was himself killed by local inhabitants. Reports from surviving sailors eventually reached Cortés, who himself set out to the new land, arriving in the beginning of May 1535. In a matter of years, though, Baja California was more generally perceived to be a peninsula, though the idea of the island never went wholly away, and in the 1620s insularity was forcefully resurrected.

That so many of the insular California maps accommodate the Colorado River region by peculiarly sandwiching it midway along the east side of the strait, the concept may be unfamiliar to readers who are new to the subject. Bear in mind that the progress of thought on insularity or peninsularity of California was never advancing over the span of decades, but that one concept or another was usually copied from other maps or was adopted as a matter of convenience, thus the concept of insularity continued well through the 18th century despite the matter having been factually settled in the early 1700s.

### **Cross-listings to Wheat, McLaughlin, and Spamer**

The descriptions of individual map details for the eight styles considered here include cross-listings, as pertinent, to the cartographical publications by Carl Irving Wheat (for maps of the Trans-Mississippi West), Glen McLaughlin (for maps displaying California as an island), and Earle Spamer (for maps of the Grand Canyon and lower Colorado River regions).

**Wheat.** The five-volume cartobibliographical compendium of Trans-Mississippi West maps by Carl I. Wheat (1957–1963, and reprintings) is a definitive, widely used checklist on the subject. Sometimes it may be awkward to use, given that Wheat’s sequential enumeration of maps in his cartobibliographies do not follow in order within his greatly informative narrative text, but the separate, chronologically ordered “Bibliocartography” (as he called it) in each volume is invaluable. Each volume also

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

contains numerical indices. (For a combined index to all volumes, see Seavey, Charles A. *Mapping the Transmississippi West, 1540-1861 : an index to the cartobibliography*. Winnetka, Illinois: Speculum Orbis Press, for Map and Geography Round Table, American Library Association, Map and Geography Round Table, Occasional Paper no. 3, 1992.) The format used herein lists items by volume number, and then, following convention, the map number as listed in Wheat's "Bibliocartography." For example, Wheat II:259 would usually be cited as "Wheat 259," but I add the volume number (II) as a matter of convenience for users who may not be familiar with the cut-off points of enumeration through five volumes in six books. Wheat's numbers are consecutive, 1–1302, though with an omission or two and a few expansions by the use of suffixed letters.) The separate volumes and the cross-listing identifiers as used herein, are as follows:

### **Wheat, Carl Irving**

1957–1963 *Mapping the Transmississippi West, 1540–1861 . . . .* San Francisco: The Institute of Historical Cartography, 5 volumes in 6.

#### **Wheat I:\_\_\_**

1957 *Mapping the Transmississippi West, 1540-1861. Volume One. The Spanish entrada to the Louisiana Purchase, 1540-1804.* San Francisco: Institute of Historical Cartography, xiv, 264 pp.

#### **Wheat II:\_\_\_**

1958 *Mapping the Transmississippi West, 1540-1861. Volume Two. From Lewis and Clark to Fremont, 1804-1845.* San Francisco: Institute of Historical Cartography, xiii, 281 pp.

#### **Wheat III:\_\_\_**

1959 *Mapping the Transmississippi West, 1540-1861. Volume Three. From the Mexican War to the boundary surveys, 1846-1854.* San Francisco: Institute of Historical Cartography, xiii, 349 pp.

#### **Wheat IV:\_\_\_**

1960 *Mapping the Transmississippi West, 1540-1861. Volume Four. From the Pacific railroad surveys to the onset of the Civil War, 1855-1860.* San Francisco: Institute of Historical Cartography, xiii, 260 pp.

#### **Wheat V:\_\_\_**

1963 *Mapping the Transmississippi West, 1540-1861. Volume Five. From the Civil War to the Geological Survey. Part One [and] Part Two.* San Francisco: Institute of Historical Cartography, *Part One*, pp. i-xviii, 1-222; *Part Two*, pp. 223-487. [The bibliocartography for both parts appears in Part Two.] [“Although the limiting dates for the whole work are 1540-1861, as set forth on the title page, I have found it desirable . . . to consider a number of maps published after the stated dates. In fact, this volume contains a rather extended discussion of significant maps published all through the 1860’s, and a final chapter touches upon various notable maps of the 1870’s—and even a few of still later date, down to 1884—which one way or another round out the work.” (Volume V, Part One, p. xi)]

**McLaughlin.** As noted farther above, there is an interesting historical period when California was cartographically portrayed as an island. One outstanding example of the amount of research material that is available is Stanford University Library's Glen McLaughlin Collection of California as an Island, which is online at <https://searchworks.stanford.edu/view/zb871zd0767>. The entire collection has been digitized, including numerous maps in books, though it largely omits world maps, deferring to the cartobibliographies by Rodney W. Shirley. See also a complementing catalogue by McLaughlin, to which cross-listings in the present cartobibliography are made where pertinent.<sup>11</sup> Whether California is portrayed as peninsular or insular alerts us to where to look for the Colorado River; that is, how it was accommodated in the North American geography. Citations in the present volume that pertain to the Californian island and strait refer to McLaughlin's illustrated checklist.

**Spamer.** While Spamer's work is not with the same robust historiographical focus on whole maps as are the works by Wheat and McLaughlin, it is the most comprehensive cartobibliographical accounting of maps that pertain in some fashion to the Grand Canyon and lower Colorado River regions. Each map citation is also annotated with chorographical notes that point out specific features pertinent to the cartography of the Grand Canyon–lower Colorado region. This is the ongoing series, *Cartobibliography of the Grand Canyon and Lower Colorado River Regions in the United States and Mexico*. Its various editions are presented as searchable, book-format PDF files accessible through the Raven's Perch Media website, <https://ravensperch.org>. The *Cartobibliography* is an outgrowth of the much larger general bibliography, *The Grand Canon: A Worldwide Bibliography of the Grand Canyon and Lower Colorado River Regions in the United States and Mexico*, also accessible through the Raven's Perch website. The *Cartobibliography* is Volume 2 of *The Grand Canon* set. These documents may also be present in the digital collections of some libraries. Originally, a separate section (Part 25) of the bibliography was devoted to "General Maps," which was re-edited and produced in 2021 as the first edition of the *Cartobibliography*. Every citation in *The Grand Canon* is enumerated non-sequentially with a unique identification number (assigned when a citation is recorded) that is made up of a prefix corresponding to the

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<sup>11</sup> Rodney W. Shirley, *The mapping of the world : early printed world maps, 1472-1700*. Holland Press (London, 1984), XLVI, 669 pp.; with newer eds., 1987, 1993, 2001, which differ only in corrigenda. Glen McLaughlin, with Nancy H. Mayo, *The Mapping of California as an Island : an Illustrated Checklist*. California Map Society, Occasional Paper 5 (1995), 134 [143] pp. The collection is "almost certainly the largest existing assemblage of maps depicting California as an island." (p. ix). In McLaughlin's catalog, many, though not all, maps are illustrated, although at resolutions that are not generally useful for examining the geographical region of interest to this cartobibliography. Website-based maps are more easily examined for their finer details.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

Part number and a suffix that is a sequential counter for citations added to that Part of the bibliography. The numbers from Part 25 were retained when the *Cartobibliography* was created, in order to maintain a perspective with the remainder of *The Grand Canon* series. It is with these numbers, called “Item Nos.” in the main bibliography, that users may be more certain that the proper publication or map is located when there may be multiple listings for an author or cartographer under a given year. In the present volume, the cartographical Item Nos. are referred to using Spamer’s name, to be more uniform with citations of Wheat and McLaughlin numbers. For example, the map detail in Fig. 1.1 herein includes cross-listings to each of the works cited above—McLaughlin 17, Spamer 25.1769, Wheat I:50.

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## **Basic Colorado River Course Styles—Compared**

THE FOLLOWING pages highlight a few examples from among the maps exhibited in the eight principal sections of this volume (see the “Examples” section). They graphically contrast the various cartographic styles drawn for the courses of Colorado River and some of its tributaries. The differences might not be as understandable when the sets of maps are examined separately.

Line styles, colors, and their word descriptions have been selected such that they may also be differentiated in a black-and-white copy of these pages. Base maps in this section have been changed to grayscale—a few with modifications to brightness and contrast—to allow the superimposed lines to be more easily seen in both color and black-and-white.

The user is reminded that the identifications of the rivers on these comparisons are modern, but that the illustrated geographical relationships of the Colorado and its tributaries are as they were interpreted, inferred, or fabricated by the original cartographers. Many of the waterways, as shown on the referred maps in the eight principal sections of the present volume, are labeled on those maps with a variety of contemporary names; these all are identified in the chorographical notes that accompany the illustrated map details throughout the eight sections.



THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES



**Style 1. Insular California**

Parallel dashed vermillion lines delineate the strait labeled “Mar Vermejo.”  
Solid red line = Colorado River (which enters an unlabeled embayment).

(See Fig. 1.1)

**Style 2. Peninsular California Displaying Variant Heads of the Gulf of California**

All of these examples are from Section 2 of the present volume. They do not represent a progression in geographical knowledge.



1581



1599



1600



1646



1755



1793



1804



1806

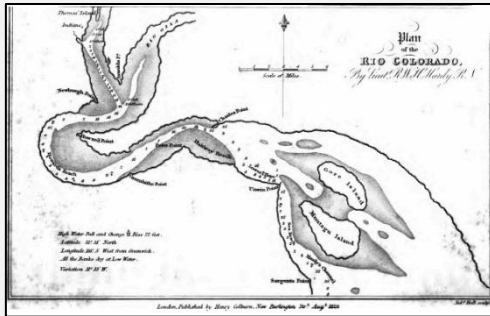


1808

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1818



1829



1844



1851

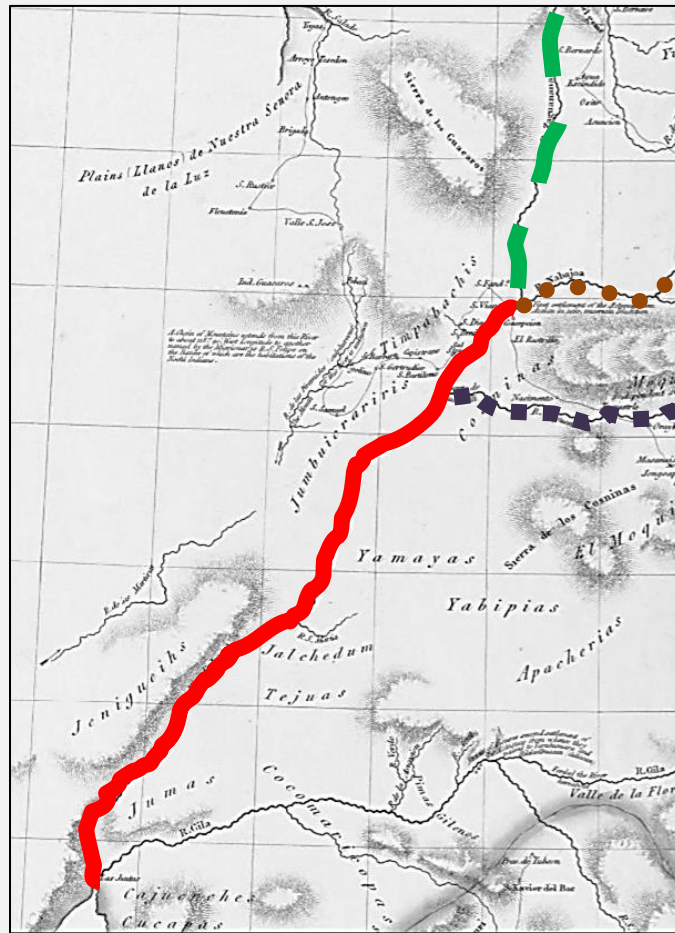


1856



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

Style 3 is omitted here because the Colorado River is absent, despite other rivers being shown.



### Style 4. Linear Colorado River

Solid red line = Colorado River.

Long-dashed green line = Green River.

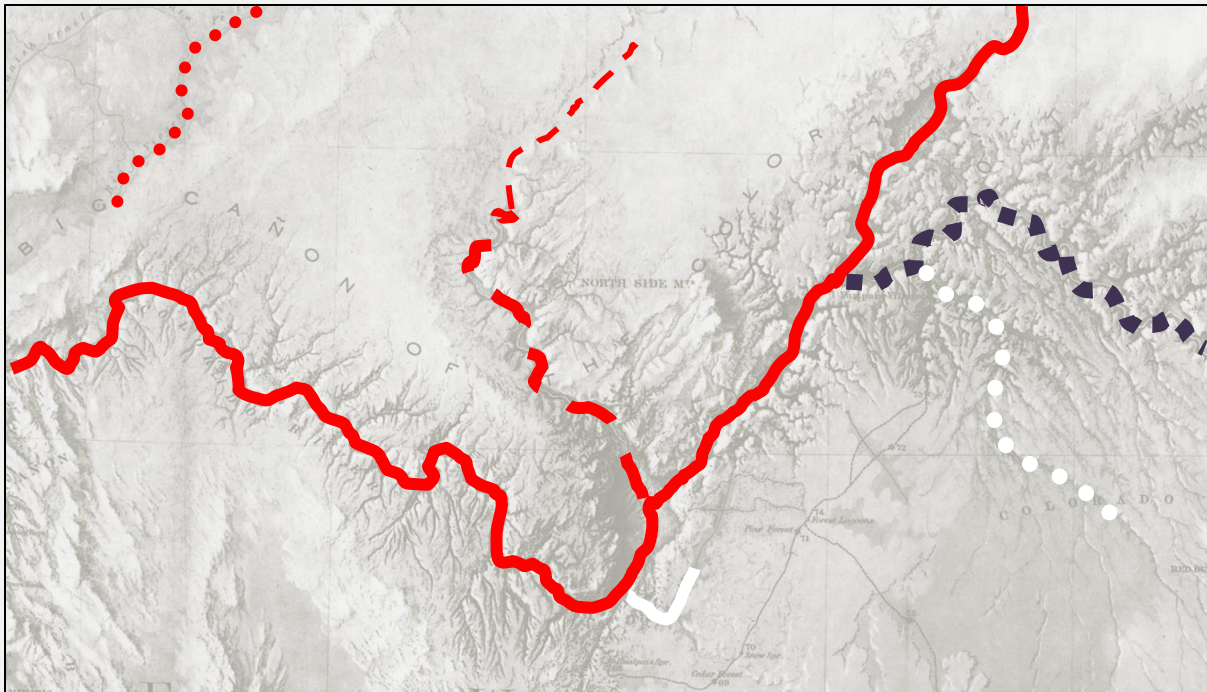
Dotted deep orange line = San Juan River.

Short-dashed dark purple line = Little Colorado River.

(See Fig. 4.2)







### Style 6. Egloffstein Model (Original)

*(see facing page for examples of variants)*

**Solid red line** = Colorado River.

**Long-dashed red line** = Parashant Canyon tributary, on some Egloffstein map variants implied to be the course of the Colorado River (*see facing page*), omitted or modified on others. (The dashed line is made narrower where Egloffstein's projected course seems conjectural.)

**Short-dashed dark purple line** = Little Colorado River.

**Large-dotted white line** = Cataract Creek.

**Solid white line** = Diamond Creek.

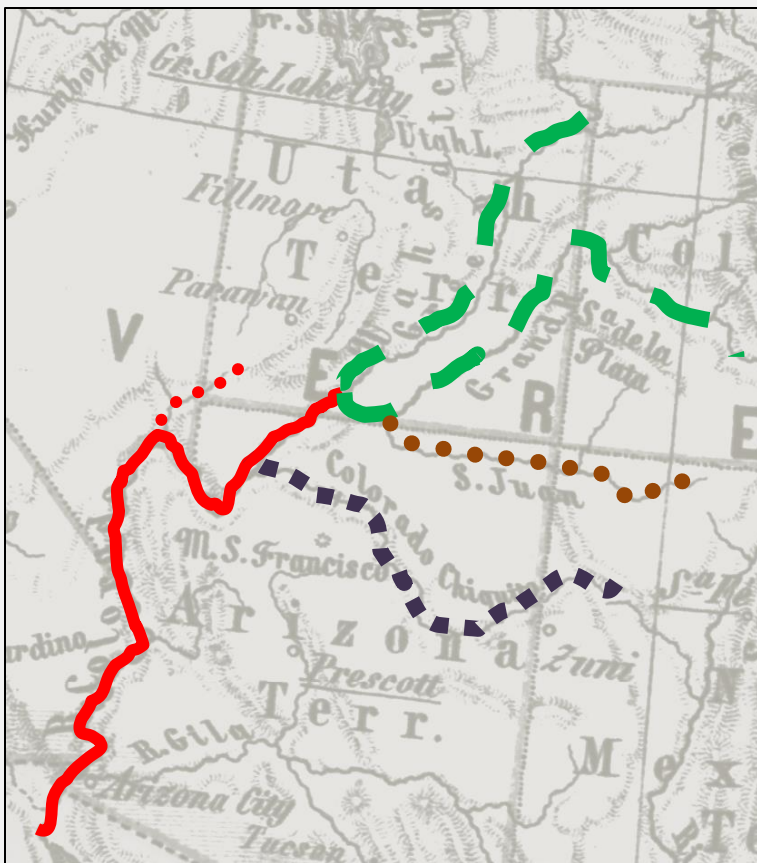
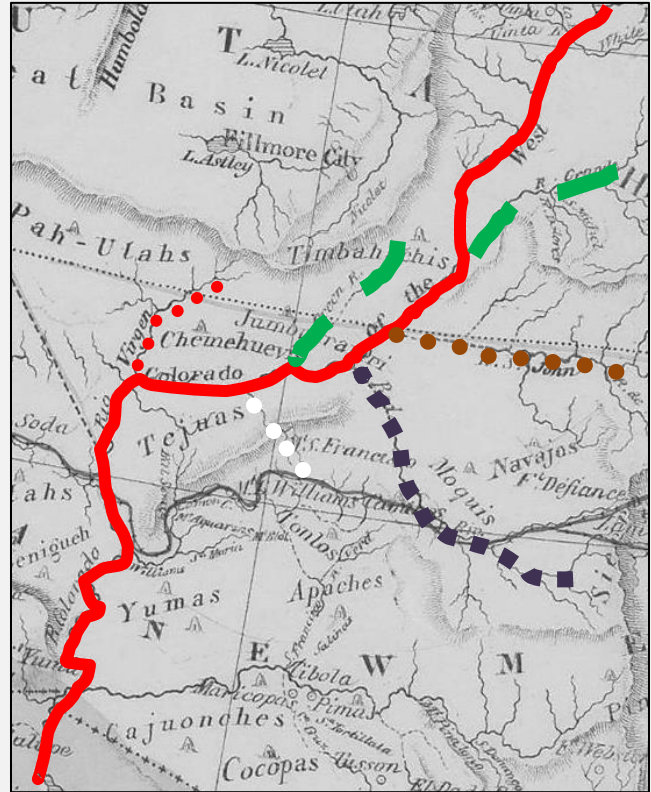
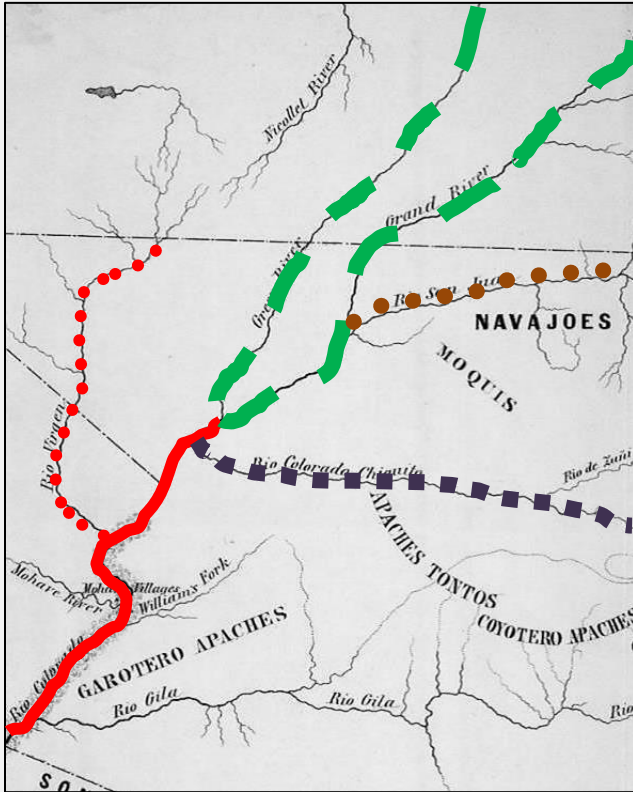
**Small-dotted red line** = Virgin River. (The confluence area was not interpreted by Egloffstein.)

*(See Fig. 6.1)*





THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES



**Style 7. Parallel Green and Grand Rivers as Colorado Tributaries**

**Solid red line** = Colorado River. (Some maps seem to employ elements of the Egloffstein model [Style 6].)

**Long-dashed green lines** = Green and Grand Rivers.

**Large-dotted deep orange line** = San Juan River.

**Short-dashed dark purple line** = Little Colorado River.

**Large-dotted white line** = Cataract Creek.

**Small-dotted red line** = Virgin River.

(See Figs. 7.2, 7.7, 7.8)



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES



### Style 8. The Colorado's Bactrian Course in the Grand Canyon

Solid red line = Colorado River.

Short-dashed dark purple line = Little Colorado River.

Large-dotted white line = Cataract Creek.

Small-dotted red line = Virgin River.

(See Figs. 8.1, 8.4)





# EXAMPLES

These pages are laid out to be best examined as opposing pages,  
in book format

Citations of these maps are taken from the *Cartobibliography of the Grand Canyon and Lower Colorado River Regions in the United States and Mexico* (Earle E. Spamer, Raven's Perch Media, <https://ravensperch.org>). They are typographically faithful to the titles and captions on the maps themselves. When searching for such titles online or in the catalogs of scholarly libraries, one should keep in mind that many metadata are (but not always) standardized; for example, "Le Novveav Monde," as printed on the map, may be replaced with "Le Nouveau Monde," or "St. Iacque" with "St. Jacque." Occasional unadvised informational improvements may also be encountered; for example, "L<sup>r</sup>. California" might be spelled out, "Lower California."

In the chorographical notes for the maps in the present volume, some map nomenclature is quoted from the map in *italics* rather than between more distracting quotation marks. These are usually also followed by explanatory updated nomenclature, with those that are in non-English languages also in translation; for example, "*Mer Vermeille* (Vermilion Sea)", "*R. S<sup>t</sup>. John* (San Juan River)", "*Rio Jaquesila* (Little Colorado River)", or "*Red River* (Little Colorado River)".

## **1. Insular California**

**(Examples 1656-[1757?])**

The earliest cartographical depictions of the Colorado River may be seen beginning with maps of the 16th century. While the peninsularity of Baja California was understood early on, for a long period California was reconfigured as an island, which of course meant that the Gulf of California was a strait, so the Colorado River delta region had to be mapped from a wholly different geographical perspective.

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# THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

## 1. Insular California



▲ ► Fig. 1.1. Sanson d'Abbeville, N. [Sanson d'Abbeville, Nicolas] [Sanson, Nicolas] 1656 *Le Nouveau Mexique, et la Floride : Tirées de diverses Cartes, et Relations. Par N.Sanson d'Abbeville Geogr ord<sup>e</sup> du Roy. A Paris. Chez Pierre Mariette, Rue S. Iacque a l'Esperance Avec Privilege du Roy, pour vingt Ans. 1656.* (McLaughlin 17, Spamer 25.1769, Wheat I:50)

*R. de Tecon* is the Colorado River, which arrives in the same embayment on the east side of the strait, *Mar Vermeio*, as where also the *R. de Coral* (Gila River) arrives independently.

(Of interest on this map is the *Rio del Norte*, heading in a large lake, which actually is the Rio Grande of the Gulf of Mexico, but which is interpreted on this map as flowing to the Californian strait, a common contemporary interpretation. The mixing of multiple languages for the labels on maps in this period is not unusual.)



THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

1. Insular California



# THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

## 1. Insular California



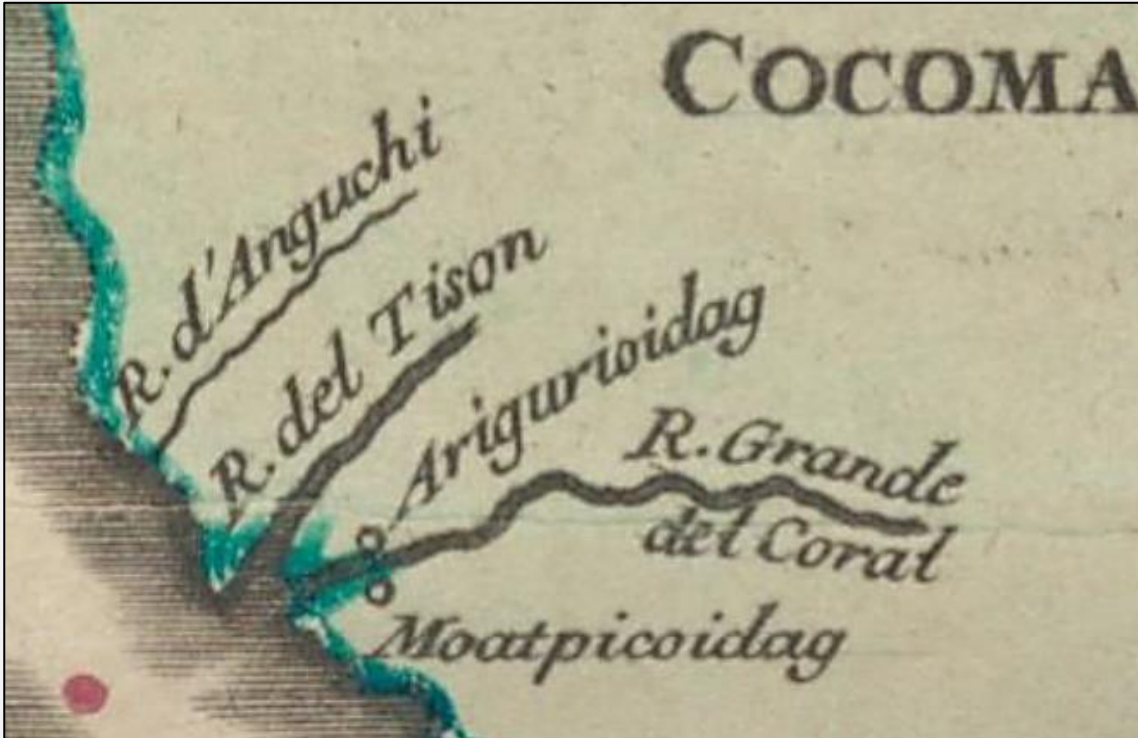
▲ ► Fig. 1.2. Fer 1713 Carte de la Mer du Sud. et des costes d'Amerique et d'Asie situées sur cette mer. Carte de la Mer du Nord, et des costes d'Amerique, d'Europe, et d'Afrique, situées sur cette mer. Par N. de Fer Geographe de sa Majesté Catolique. avec Privilege du Roy 1713. (McLaughlin 185, Spamer 25.1807)

*R. del Tison* is the Colorado River, which is not as imposing as is the *R. Grande del Coral* (Gila River). They arrive independently in the eastern side of the strait, *Mer de Californie ou Mer Vermeille* (Sea of California or Vermilion Sea), although there is a suggestion of an embayment at that point. Both rivers are significantly reduced in size compared to depictions of the same style on other maps.

(Comparing Fig. 1.1, the *Rivière du Nord ou Brave* is the Rio Grande, here correctly depicted as flowing to the Gulf of Mexico, although it still is shown as heading in a large lake, *Lac de Canibas*.)

THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

1. Insular California







THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

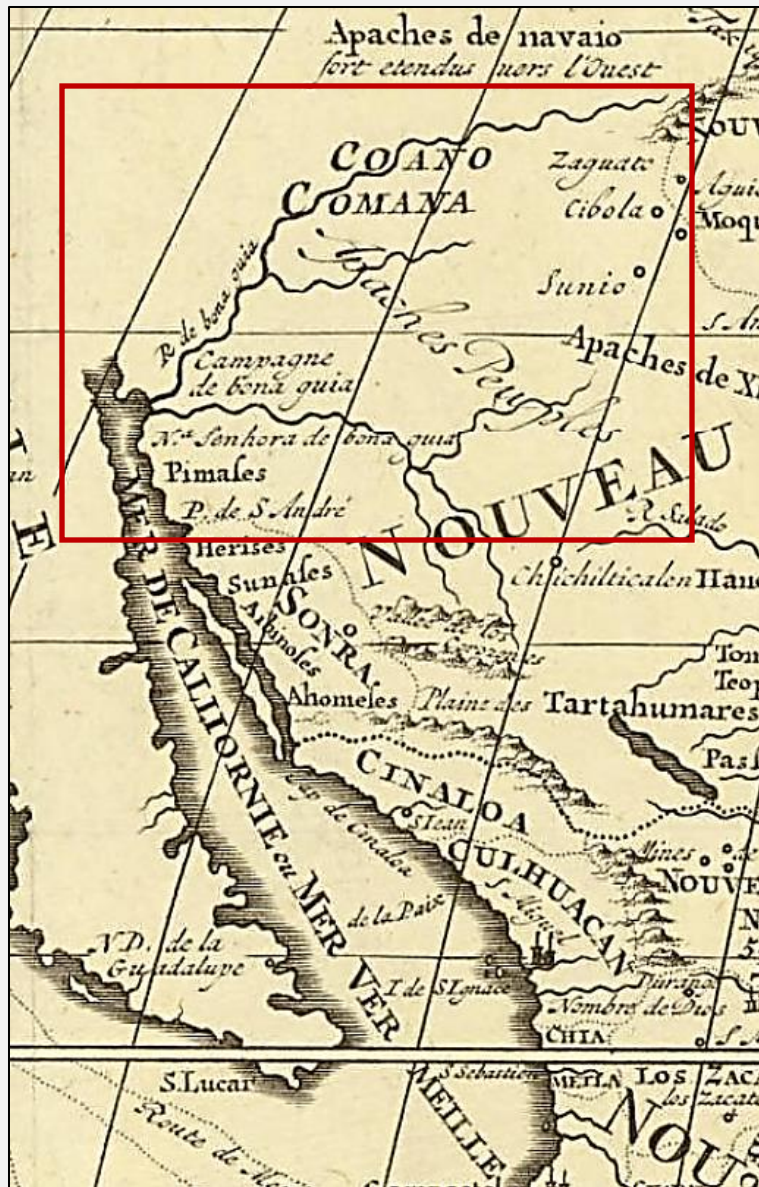
1. Insular California





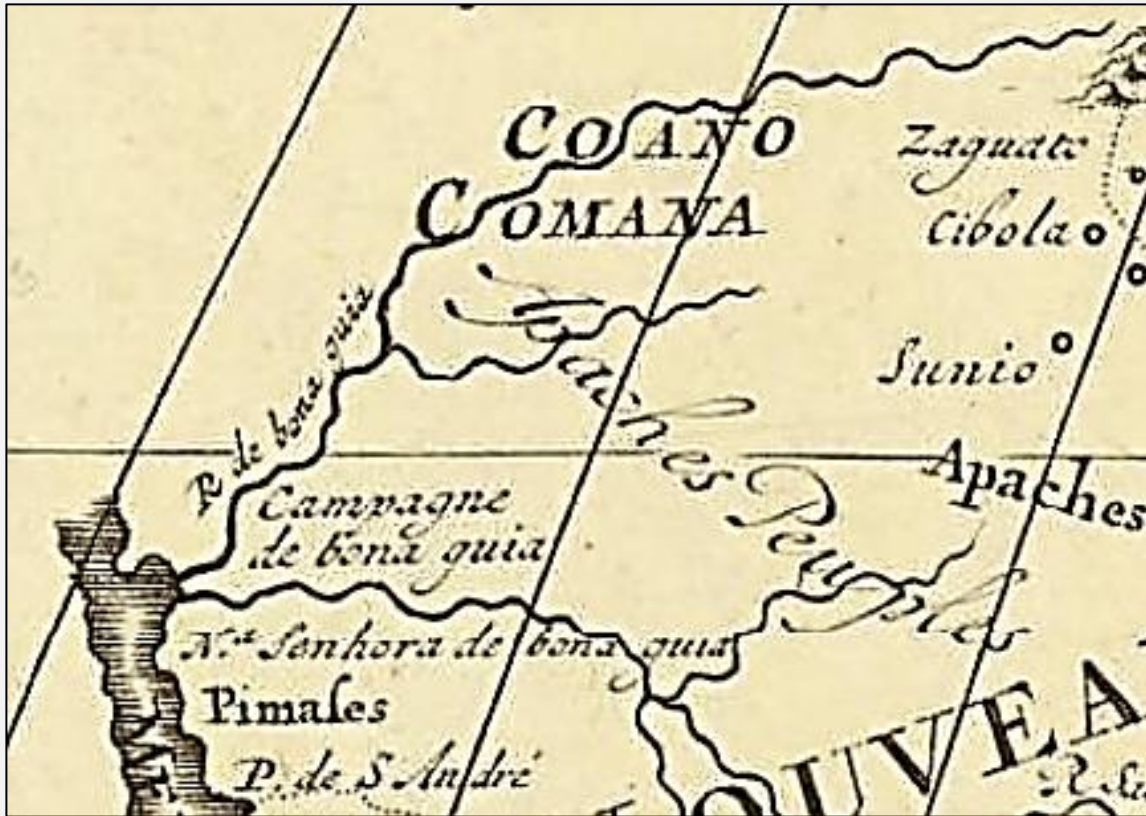
# THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

## 1. Insular California



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 1. Insular California



◀ ▲ Fig. 1.4 Mr. C. [Monsieur C.] [Châtelain, Henri Abraham] 1739 **Nouvelle Carte de l’Amerique Septentrionale dressee sur les Plus Nouvelles Observations de Messieurs de l’Academie des Sciences et des Meilleurs Geographes avec des Tables tres Instructives et Curieuses de la Division de Tous les Etats et les Differents Souverains qui en sont Possesseurs.** In: *Atlas historique, ou nouvelle introduction à l’histoire, à la chronologie et à la géographie ancienne et moderne : représentée dans de nouvelles cartes, où l’on remarque l’établissement des états et empires du monde, leur durée, leur chute, et leur differens gouvernemens : la chronologie des consuls romains, des Papes, de empereurs, des rois et des princes, &c. qui ont été depuis le commencement du monde, jusqu’à présent : et la généalogie des maisons souveraines de l’Europe : par Mr. C.\*\*\* avec des dissertations sur l’histoire de chaque état par Mr. Gueudeville. Dernière edition, corrigée et augmentée. Tome I.* Amsterdam: Chez l’Honoré & Châtelain. (Spamer 25.1957)

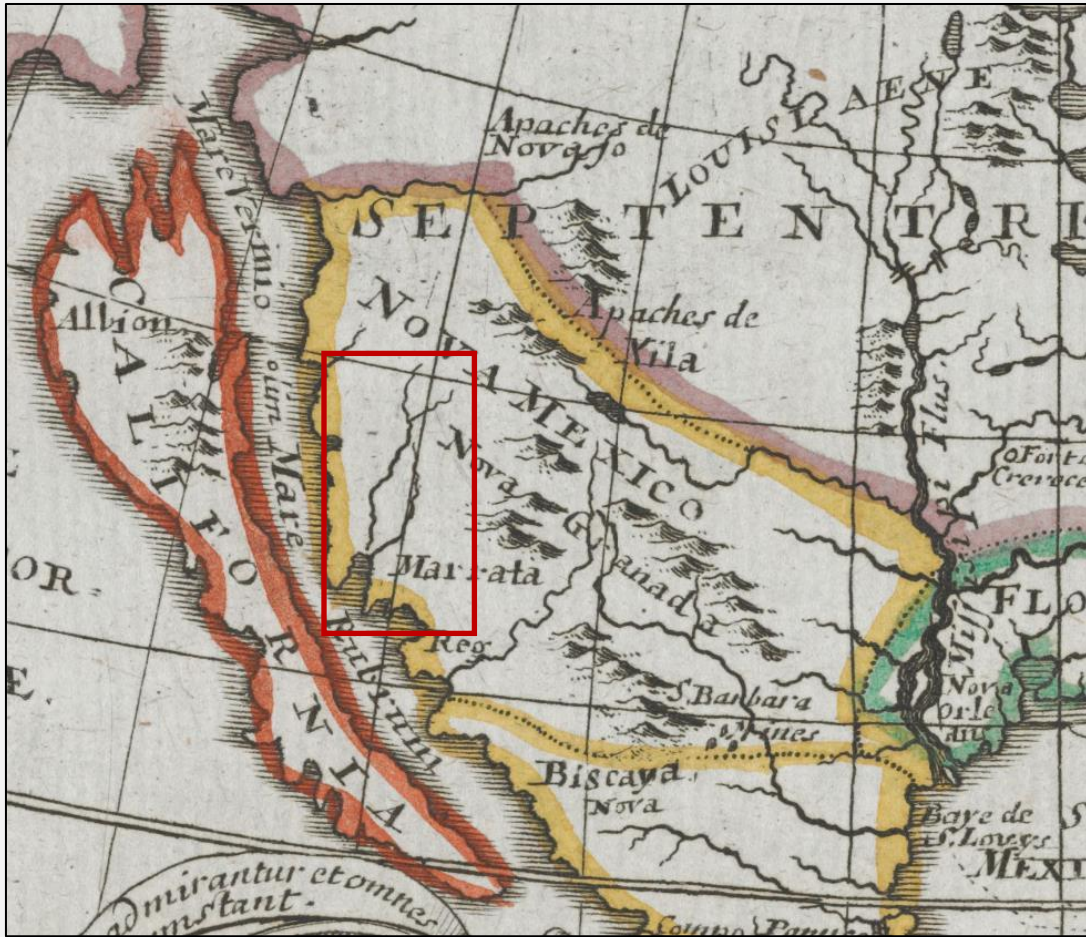
Although the full map shows California is separated from New Mexico by the *Mer de Calliornie* [sic] ou *Mer Vermeille* (Sea of California or Vermilion Sea), the head of the gulf (or strait) is not defined, thus the identity of California as a peninsula or island is undetermined.

*R. de bona guia* is the Colorado River, which arrives in the gulf/strait on a long course from an area north of “Cibola” (which of course is supposed to be the Seven Cities of great Spanish interest). A separate stream (assuredly the Gila River, though it is not labeled) arrives independently in the same embayment which receives the Colorado. The style of two rivers arriving independently in a bay on the east side of the waterway suggests, without committing to the idea, that California is an island.



# THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

## 1. Insular California



▲ ► Fig. 1.5 Killian [1757?] General Charte von dem Mitternächte America und sonderlich denen darin befindliche Französ. Colonien, mit dem Wappen und Zeichen der Orientalischen ü. Occidentalischen Französische Handels Compagnie. (McLaughlin 236, Spamer 25.1824)

Although the rivers flowing to the *Mare Vermio olim Mare Rubrum* (Vermilion Sea or Red Sea) are not labeled, at least the noticeable south-southwest-flowing waterway with two headwater forks, reaching a prominent embayment, may be identified as the Colorado River. The river parallel to it may be a misrepresented Gila River, although other contemporary maps include a variety of spurious rivers while omitting others.

(Note that it seems as though the Rio Grande is portrayed twice, each with headwater near the word “Granada” on this map: one in the form where it flows southwestwardly to the Californian strait, then again where it is corrected to flow southeastwardly to the Gulf of Mexico, a conflation that does appear in other contemporary maps. Note as well that the Mississippi River is depicted entering the *northwestern* corner of the Gulf of Mexico; and further, it has a tributary that bears a large lake north of the conflated headwaters just mentioned, which could also be interpreted as yet another rejiggering of the Rio Grande.)

THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

1. Insular California







## **2. Peninsular California Displaying Variant Heads of the Gulf** **(Examples 1581–1851)**

In depicting the Gulf of California, early cartographers produced a variety of styles at the gulf's head, where the Colorado River reaches the sea. The style also was affected by the number of rivers that were supposed to arrive there.

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## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



▲ ► Fig. 2.1 Thevet 1581 *Quarte Partie du Monde*. [Caption: *Le Nouveau Monde Discoverit et Illvstre de Nostre Temps*.] ("A Paris, chez Guillaume Chaudiere, Ruè S. Iaques, à l'enseigne du Temps & de l'Homme Sauvage. 1581.") *In: La cosmographie vniverselle d'Andre Thevet Cosmographe dv Roy. Tome Second.* Paris: Chez Gillaume Chaudiere, [7] leaves, leaves 469-1025, [17] leaves, maps. [Leaves, rather than pages, are enumerated.] (Spamer 25.1051, Wheat I:18)

(Chorographical and special bibliographical notes are on the next page.)

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf

◀ **Fig. 2.1 Thevet 1581** Chorographical and special bibliographical notes.

The detailed engraving of labels is so fine that they are illegible except upon examining an original map or a very high-density scan of it. In the area of interest here, there are no specific place names of political geography (such as California), although the coastal area to the northwest has a label, *Quiuer* (Quivira), and to the far northwest a prominently displayed *La Royaume d'Anian* (Kingdom of Anian) is alongside the imagined *Destoit d'Anian* (Strait of Anian, supposed to be part of the long-sought Northwest Passage).

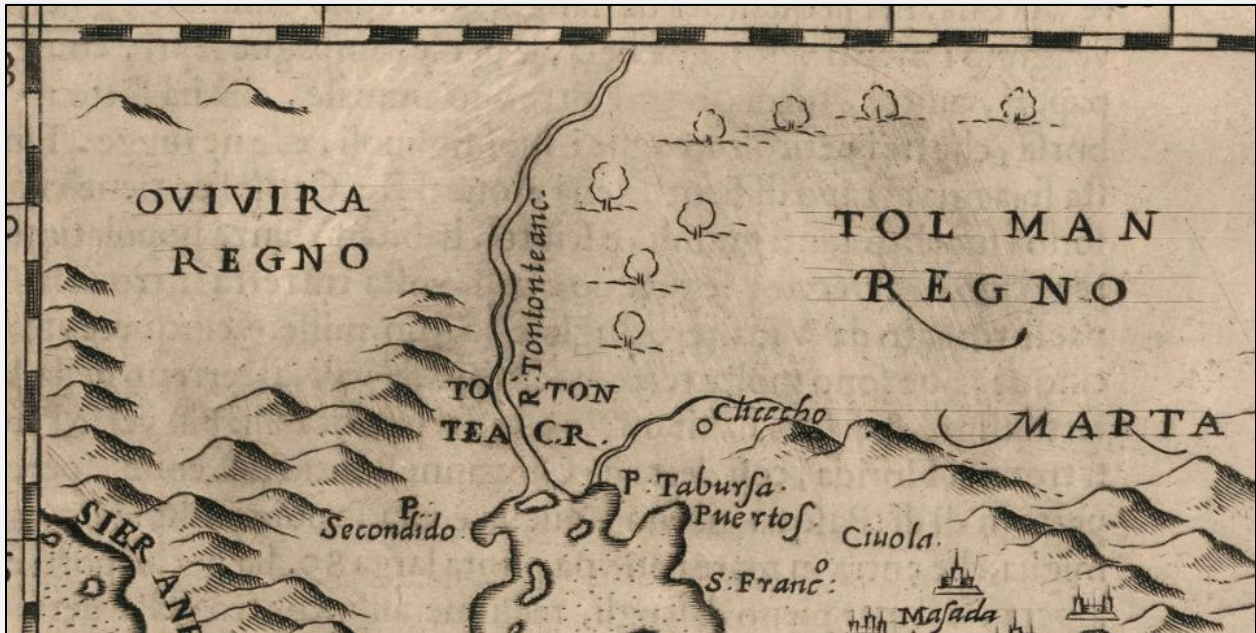
Two tributaries are depicted at the head of *la mer Rouge* (Red Sea), the western one of which has twin headwaters as well. A third tributary, very prominent, comes westward to the eastern shore of the gulf near its head, after draining areas of the east and west such as which would be expected with a misaligned Rio Grande of the Gulf of Mexico (it also passes by *Ceuola* [Cibola]). Of additional interest is the graphical cluttering in all open spaces by small symbols of trees, even in the Southwest.

#### Bibliographical Notes

The volume has generally been cited as Thevet (1575, Volume 2). Woodbury Lowery's catalog of maps in the Library of Congress — *The Lowery Collection: a descriptive list of maps of the Spanish possessions within the present limits of the United States, 1502-1820* (ed., notes by Philip Lee Phillips) (U.S. Government Printing Office, Washington, 1912), p. 79, item 61 — cites the placement of the map as “v. 2, preceding book 21, p. 903”; Wheat (1957, Volume 1, p. 189) cites the placement as “Vol. 2, following p. 936”. In fact, the volume by Thevet has the title-page: *La cosmographie universelle d'Andre Thevet Cosmographe dv Roy. Tome Second*, with the date 1575. However, this volume, using the title-page thus, contains only “Tome Troisieme” (leaves 469 recto to 936[1] verso) and “Tome Qvatrieme” (leaves 903[2] recto to 1025 verso), so noted at the beginnings of those parts (leaves 469 recto and 903[2] recto, respectively). The volume contains leaves enumerated 469-1025 (*but leaves 903-936 have their enumeration duplicated in error* [not noted by other cartobibliographers]), plus an unenumerated 7 and 17 leaves preceding and following the text leaves, respectively. In this volume, Thevet's “Livre XX”, which is a part of “Tome Troisieme”, comprises leaves 877 recto to 936 verso. “Livre XXI”, which is a part of “Tome Qvatrieme”, comprises leaves 903[2] recto to 936[2] verso, and 937 recto to 953 verso (*903-936 therein being the replicated enumeration*). The **map** cited here is associated with “Tome Qvatrieme”, the text of which begins with the caption, “Cosmographie vniverselle de Andre Thevet Cosmographe dv Roy. Tome Qvatrieme. Description de la qvatrieme partie dv monde, illvstree de nostre temps.” The map is between Livre XX and Livre XXI, and thus is between leaves 936 verso and 903[2] recto. All of the maps in this volume carry the date “1581.” Most citations seen for Thevet's Volume 2 have the date 1575 and the imprint, “Chez Pierre l'Huilier”; the discrepancy, as observed here, is not resolved, but it seems that this work was produced over a period of time at a firm that changed hands, as both are cited as in “rue S. Iaques”, where several ateliers were located. One WorldCat record offers a note for the Guillaume Chaudier imprint: “Differs from other edition of 1575 in printer, spacing of last lines of preface, and does not have a portrait.” The 1581 date for the map in question is adopted.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



▲ **Fig. 2.2 Rosaccio, Giuseppe 1599 Nveva Hispania tabvla nova.** *In: Geografia di Clavdio Tolomeo Alessandrino, tradotta di Greco nell'Idioma Volgare Italiano da Girolamo Rvscelli, et hora nuouamente ampliata da Gioseffo Rosaccio . . . Et vna breue descrizione di rutta la terra, distinta in quattro libri . . . . In Venetia, MDXCIX. Appresso gli Heredi di Melchior Seffa. [Map faces p. 130 in "Descrittione della Geografia Vniversale, Libro Quarto", facing the chapter, "Della Nvova Spagna, Tavola Della America".] (Spamer 25.580)*

A broad, foreshortened gulf, *Mar Vermeio* (Vermilion Sea), separates the peninsula of *Calmifor* (sic) from *Marta* (not shown in this figure). *R. Tontonteanic* is the Colorado River, which reaches the head of the gulf from the north-northwest, having arced from a source to the northeast off the top of the map. At the mouth of that river (at the Colorado delta) the area is labeled *Totonteanic R.* (Totonteanic Regnum, or kingdom). A second, lesser river (presumably the Gila) reaches the northeast corner of the gulf from the north, having following an arcing course from the east.

Compare also the map in Fig. 2.3, from the same volume.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



▲ **Fig. 2.3 Rosaccio, Giuseppe 1599 America.** *In: Geografia di Clavdio Tolomeo Alessandrino, tradotta di Greco nell'Idioma Volgare Italiano da Girolamo Rvscelli, et hora nuouamente ampliata da Gioseffo Rosaccio . . . Et vna breue descrizione di rutta la terra, distinta in quattro libri . . . In Venetia, MDXCIX. Appresso gli Heredi di Melchior Seffa. [Map, p. 126, in "Descrittione della Geografia Vniuersale, Libro Quarto".] (Spamer 25.2038)*

At the head of the *Mar Vermeio* (Vermilion Sea), where appears the town-place label, *Totonteac*, two rivers (not labeled) from a mountainous region converge, one from the northwest, a larger one from the northeast, following from there a short course south to the gulf. There is no way to discern which of these is the Colorado, in that a variety of waterways are creatively displayed on contemporary maps.

Compare also the map in Fig. 2.2, from the same volume.







## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



▲ Fig. 2.5 Mariette, Pierre 1646 Carte de l'Amerique Corrigeé, et augmentee, dessus toutes les autres cy deuant. Faictes L[']annee 1646. In: *Theatre géographique de France*. Paris: Chez Pierre Mariette. (Spamer 25.2072)

The head of *La Mer Vermeille* (Vermilion Sea) receives four rivers (from west to east): an unlabeled stream from the west-northwest that forks before entering the northwest side of the gulf; a principal stream (not labeled) with three headwater areas and a place name, *Axa* (where a tributary to this river from the northeast is labeled *Totontec fl.*); a relatively short stream (not labeled) that comes from the northeast in area labeled *Ceuola* (Cibola); and a river (labeled *R. Coromara*) along which is a place name, *Cevola* (and a tributary of this river comes from an unlabeled lake to the north beside which are several city symbols and the label *Sept*, which would indicate the Seven Cities of Cibola). The area at the head of the gulf, between the second and third rivers, is labeled *B. de Buena guia*, and the area between the third and fourth rivers is labeled *Abacus ou Granada*.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



▲ Fig. 2.6 Bellin (M.) [Bellin (Monsieur)] [Bellin, Jacques Nicolas] 1755 Carte de l'Amerique Septentrionale Depuis le 28 Degré de Latitude jusqu'au 72. par M. Bellin Ingenieur de la Marine et du Dépôt des Plans, Censeur Royal, de l'Academie de Marine, et de la Société Royale de Londres. M.DCC.LV. Avec une Description Géographique de cette Partie de l'Amérique Nota qu'on na point marqué de Limites. [No imprint.] (Spamer 25.1176; Wheat I:134)

R. [rio or rivière] *Colorado ou les Martirs* (river of the martyrs) arrives decidedly from the northeast at head of the Gulf of California (not labeled on the full map) after having received R. *des Apostres* (river of the apostles, Gila River) from the east. Downstream from that confluence the river bifurcates before rejoining at the gulf; in between is labeled *I. de la Presentation* [most maps that use the label use the Spanish *Presentación*]. North of the river a vast area is blank, with the label, *On peut placer ici les provinces de Quivira et Tegouaio dont on n'a acunes connoissances certaines* (transl. 'We can place here the provinces of Quivira and Tegouaio of which we have no certain knowledge'.)]



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



▲ Fig. 2.7 Bonne (M.) [Bonne (Monsieur)] [Bonne, Charles-Marie Rigobert] 1793 Carte Générale de l'Amérique Septentrionale. Par M. Bonne, Ingén'. Hydrographe de la Marine. A' Venise Par P. Santini 1790. In: Grenet (M. l'Abbé) Atlas protatif a l'usage des colleges, pour servir a l'intelligence des auteurs classiques : dédié a l'Accademie de Padoüe. [Maps contained therein dated 1788-1793.] (Spamer 25.2052)

Colorado R. is a simple south-trending stream that, at the confluence of the Gila River (not labeled) coming from the east, turns southwest into a lake-like extension at the northwestern extremity of Mer Vermeille (Vermilion Sea). That embayment or lake could be interpreted as a cartographically filled-in depiction of a divided river course that appears on some maps as the *Isla de Presentación* (and similar names).



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



▲ Fig. 2.8 Wilkinson, R. [Wilkinson, Robert] 1804 North America, Published the 12<sup>th</sup> of August 1804. By R. Wilkinson, N<sup>o</sup> 58, Cornhill, London. (Spamer 25.2003)

*Colorado, or North R.* is depicted simply as a single stream on a north-south course to the head of the gulf from area with the label *Teguayo*. Paralleling it on the east, on the other side of a mountain range, is *Azul, or Blue R.*, which turns to the southwest after its confluence with *Hila R.* (Gila River); it is not clear by the labeling which of the two streams continues by that name southwestward to the Colorado, joining it north of the gulf. South of that confluence with the Colorado, the stream bifurcates, and the two streams continue in parallel and head in the gulf independently. The “island” so formed has appeared on other maps with the name *Isla de Presentación* (and similar names). Conflicting channels appear in the island, which could be engraver’s errors.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



▲ Fig. 2.9 Kipferling, K. J. 1806 *America Nach dem neuesten geographischen und politischen Zustande zum Gebrauche der österreichischen Schulen entworfen* Wien, Im Verlage des Kunst u. Industrie Compoirs. 1806. (Spamer 25.2087)

In *Neu Navarra* (New Navarra) the *Busen Mar Vermejo das rothe oder purpur Meer* (Breast of the Vermilion Sea, the red or purple sea) adds a long, very peculiarly shaped embayment to the west-northwest, which receives an erratically drawn river (not labeled) that approaches the embayment's head from the east before turning to the southeast to meet the gulf; it apparently is meant to be the Gila River. The Colorado River is absent; the entire region north of this stream is blank; most peculiar for a map of this date.

This map also appears as Fig. 3.2 herein.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



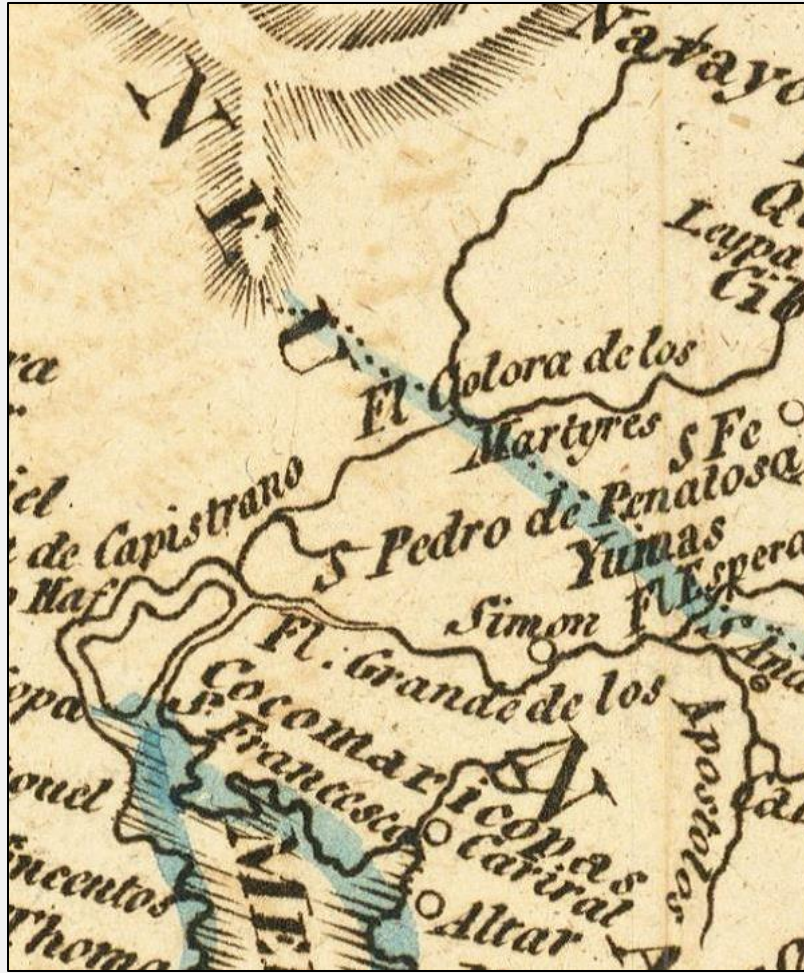
▲ Fig. 2.10 Arrowsmith, A. [Arrowsmith, Aaron] 1808 *Map of the World on a Globular Projection, Exhibiting Particularly the Nautical Researches of Cap<sup>n</sup> James Cook, F.R.S. with all the Recent Discoveries to the present Time, carefully Drawn by A. Arrowsmith. Hydrographer to H.R.H. the Prince of Wales. The Plan Work Engraved by T. Foot.—The Writing by Wigzell & Mozeen.* [Additional notes on the copy examined: (“January 1<sup>st</sup> 1794—Additions to 1799. D<sup>o</sup> \_\_\_ to 1808.”) (“London. Published as the Act directs, Jan<sup>y</sup> 1<sup>st</sup> 1794, by A. Arrowsmith, N<sup>o</sup> 10 Soho Square.”)] (Spamer 25.1755)

The head of the gulf twists from northwest to north-northeast, where it receives two channels from the north-northeast, which form a very extended island (*Isla de Presentación* and similar names, when labeled). At the head of this island *R Hila* (Gila River) arrives from the east. There is no indication of the Colorado River; in fact, the entire region north of the Gila is effectively blank except for three place names, *Axas*, *Bagopas*, and *Quivira* (the latter two of which appear in this detail).

This map also appears herein as Fig. 3.3.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



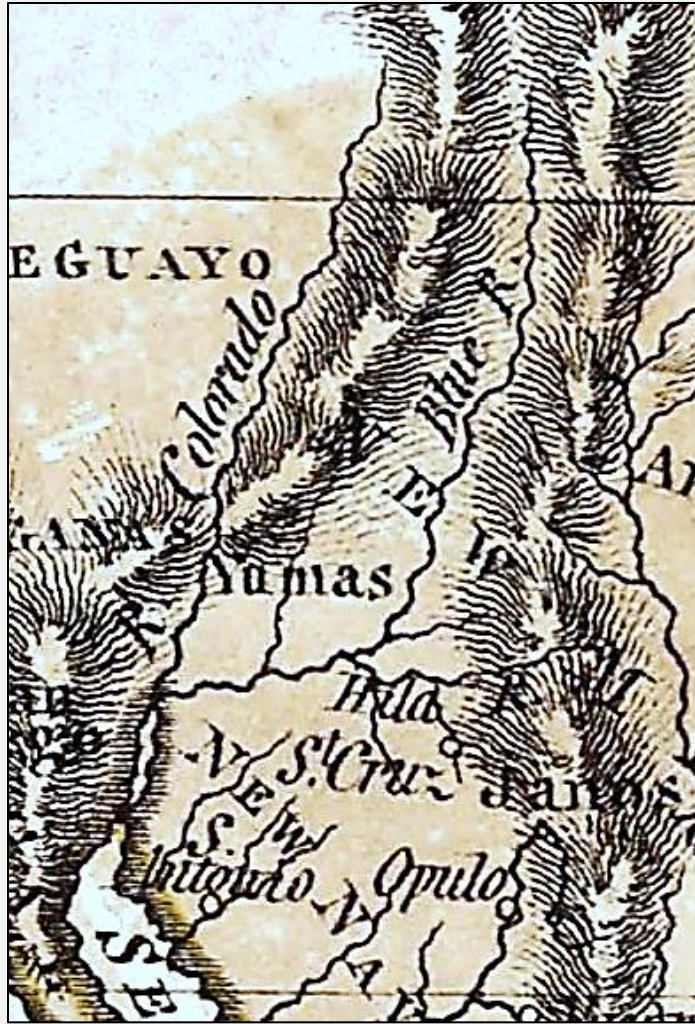
▲ Fig. 2.11 Pluth, Franz 1818 Charte von Nord-America. Prag 1818. In: Linder, F. L., *Neueste Länder- und Völkerkunde, ein geographisches Lesebuch für alle Stände*. Prague. (Spamer 25.1017)

At the head of *Meer B. von Californien* (Breast of the Californian Sea) is an oversized island between the gulf and the confluence of *Fl[usse] Colora de los Martyres* (sic) (Colorado River of the Martyrs) and *Fl[usse] Grande de los Apostolos* (Grand River of the Apostles, or Gila River). This island, in various forms, also appears on some other maps labeled as *Isla de Presentación* and similar names. The manner in which the river is drawn with double lines, depicting broad channels where it enters the gulf, and the same fashion in which the lower Gila is drawn, makes it seem that the shorter, single-lined Colorado is a tributary to the Gila.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



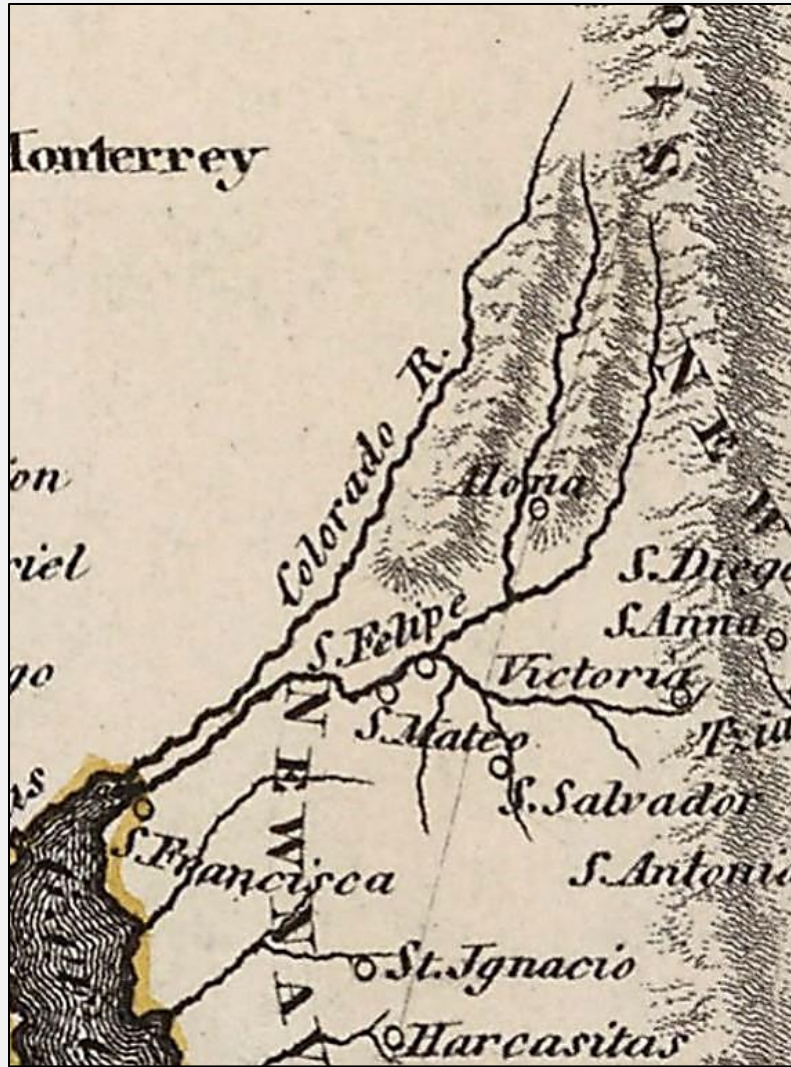
▲ Fig. 2.12 Lizars, W., and Lizars, D. [Lizars, William Home, and Lizars, Daniel] 1818 **Chart of the World on Mercators Projection** Published by T. Brown and W. & D. Lizars Edin<sup>g</sup>. In: *New Edinburgh general atlas : or a complete collection of maps of the empires, kingdoms and states throughout the world. The maps drawn and engraved by W. & D. Lizars, Edinburgh.* Edinburgh: T. Brown and W. & D. Lizars. (Spamer 25.2076)

R. Colorado is shown very generally, on a straight south-southwesterly course hugging at first the western side of a mountain range that is a part of *Rocky Mountains* (label not shown in this detail), crossing through a gap in that range, before arriving at a very peculiarly narrowed, northeast-trending head of *Sea of Cortes*. Also independently arriving there is *Hila R.* (Gila River), coming from the east with two tributaries, one unlabeled coming from the eastern side of the mountain range aforementioned, the other being *Blue R.* also coming from the same valley. (The peculiar narrowing at the head of the gulf may also be a misinterpretation, not colored in, of the *Isla de Presentación* that appears on some other maps.)

Compare also Fig. 2.13 from the same volume. ►

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



▲ Fig. 2.13 Lizars, W., and Lizars, D. [Lizars, William Home, and Lizars, Daniel] 1818 America. In: *New Edinburgh general atlas : or a complete collection of maps of the empires, kingdoms and states throughout the world. The maps drawn and engraved by W. & D. Lizars, Edinburgh.* Edinburgh: T. Brown and W. & D. Lizars. (Spamer 25.2076)

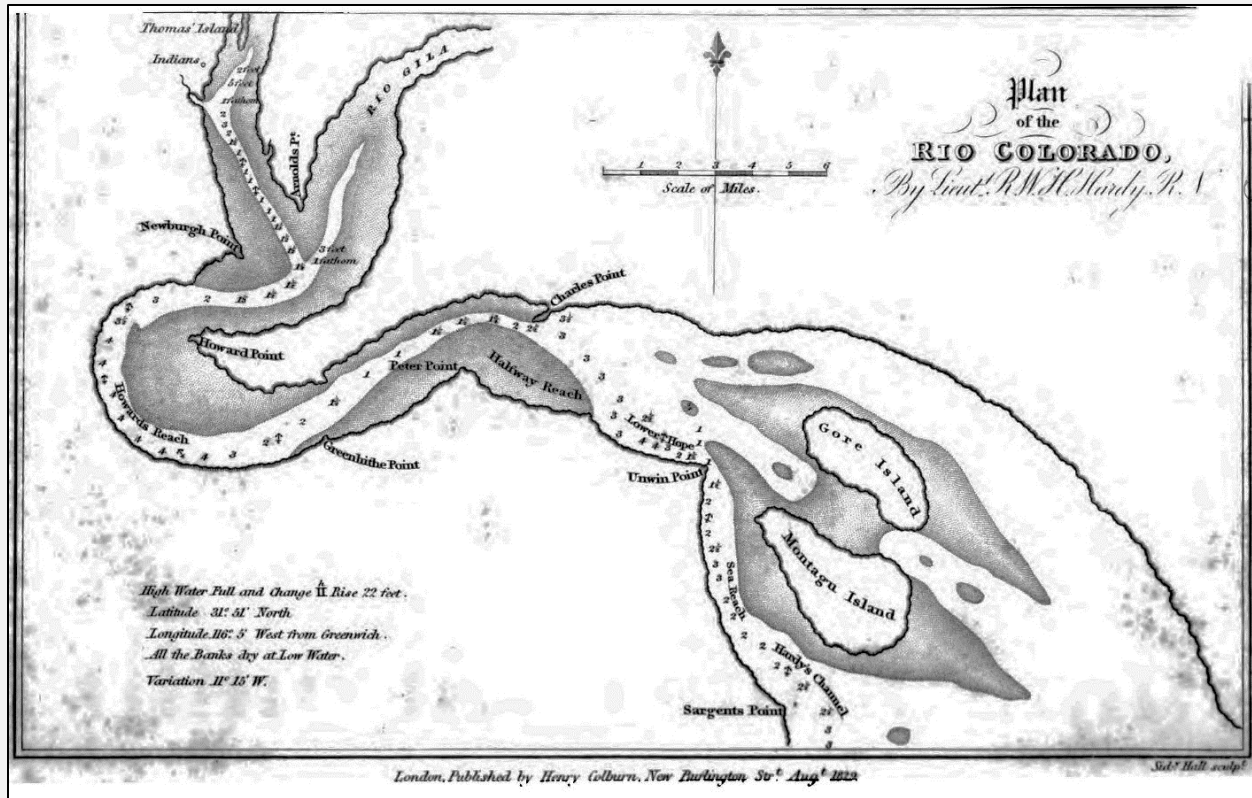
*Colorado R.* is shown very generally, on a south-southwest to southwest course hugging at first the western side of a mountain range that is a part of *Stony Mountains* (label not fully shown in this detail) before arriving at the head of *G. of California* (the head of which is twisted to the northeast). Also independently arriving there is another river (not labeled) that parallels the lower Colorado, coming from either side of a second mountain range (parallel to the one aforementioned), which by its arrangement of tributaries can be identified as the Gila River.

◀ Compare also Fig. 2.12 from the same volume.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



▲ Fig. 2.14 Hardy, R. W. H. [Hardy, Robert William Hale] 1829 Plan of the Rio Colorado, By Lieut. R. W. H. Hardy, R.N. ("London, Published by Henry Colburn, New Burlington Str<sup>t</sup> Aug<sup>t</sup> 1829") ("Sid<sup>y</sup>. Hall sculp<sup>t</sup>")  
*In*: R. W. H. Hardy, *Travels in the Interior of Mexico, in 1825, 1826, 1827, & 1828* (Henry Colburn and Richard Bentley, London, 1829), facing p. 320. (Spamer 634)

This was at the time the most substantive map of the Colorado River delta region. Despite the on-site survey of depth soundings, it plots a severely foreshortened and hence imaginative course between the Gulf of California and the confluence of the Gila River. But the supposed Colorado–Gila confluence is actually the confluence of what was later named the Rio Hardy, the mouth of which is far closer to the head of the gulf than that of the Gila. What is labeled as *Rio Gila* on this map is actually the course of the Colorado. Still, it is an oversimplified depiction. Compare this map to the one drawn three decades later by F. W. von Egloffstein that was published in the 1861 report of the exploration of the lower Colorado River by U.S. Army Corps of Topographical Engineers Lt. J. C. Ives (*see Fig. 6.2a herein*).

This was not a Royal Navy product. At the time, Hardy was a civilian venturer in the employ of the General Pearl and Coral Company of London, but the prospects he investigated in the gulf were not economically viable.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



▲ Fig. 2.15 Houzé, A. [Houzé, Antoine Philippe] 1844 *Amérique Septentrionale, en 1840*. Dressée sous la Direction de A. Houzé. In: *Atlas universel historique et géographique composé de cent une cartes, donnant les différentes divisions et modifications territoriales des diverses nations aux principales époques de leur histoire. Avec une notice sur tous les faits importants, et l'indication des lieux où ils se sont passés; desinté à faciliter la lecture et l'intelligence de tous les ouvrages historiques, et rédigé d'après les meilleures sources par A. Houzé.* Paris: Chez P. Duménil, Éditeur. (Spamer 25.2031)

*R. Colorado* follows an essentially straight southwesterly course between headwaters and a “knobby” head of *Mer Vermeille* (Vermilion Sea), arriving in the eastern of three embayments. *R. Gilo* (sic, Gila River) follows a westward course, arriving independently at the head of the gulf but in the same embayment. Paralleling the Colorado to its west is the imaginary *R. Amarillo*, which turns south then eastward to arrive independently in the western embayment of the head of the gulf. (On some contemporary maps this additional river is identified as *Río Martires* and similar names for the river of the martyrs.)



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



▲ Fig. 2.16 Ewald, L. [Ewald, Ludwig] (ed.) 1851 México und Texas in Maasstabe von 1:72000000 d.n.G. Darmstadt. Druck und Verlag von Baukeller's Präganstalt. Jonghaus & Venator. (Spamer 25.1151)

*Rio Colorado* follows a mostly straight southwestward course all the way to the head of the gulf. It receives the *Gila* some distance above its mouth, below which the river bifurcates a couple of times before entering the northeastern head of the gulf, which itself twists peculiarly to the west at its head. The twin river channels are reminiscent of the supposed island that appears in the river's lower reach, which is on some maps labeled as *Isla de Presentación* and similar names. *R. Virgin*, with its upper course labeled *S<sup>t</sup> Clara*, flows to the Colorado on an improbably long south-southeastward course, with its confluence with the Colorado shown not far south(!) of the confluence of *Jaquesila* (the Little Colorado River, at far upper right of this detail, the label for which is not shown here).

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 2. Peninsular California Displaying Variant Heads of the Gulf



▲ Fig. 2.17 Stucchi, Achille 1856 *America Settentrionale e Meridionale nuovamente corretta ed accresciuta* 1856 F. Bordiga inc. Milanopresso Achille Stucchi Piazza di S. Gio. in Era N° 412. (Spamer 25.2002)

A single river (the Gila River, not labeled) that passes by *Città di una Indiana Casa grande* (An Indian town, Casa Grande) follows a westward course from a single, linear mountain chain before turning to the south-southwest to reach the unusually pointed head of *Marc [sic] Vermiglio* (Mare Vermiglio, Vermilion Sea). The region to its north is blank, the Colorado River being absent.

This map also appears herein as Fig. 3.4.



### **3. Colorado River Absent**

**(Examples 1804–1856)**

Some maps have inexplicably omitted the Colorado River although its existence was well known, even while other rivers are depicted on the map. Its absence seems to be more attributable to the cartographer's carelessness, inattention, or hurry to complete a job than it is an implication of geographical accuracy.

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## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 3. Colorado River Absent



▲ Fig. 3.1. Arrowsmith and Lewis [Arrowsmith, Aaron, and Lewis, Samuel] 1804 Louisiana. ("drawn by S. Lewis"). *In: A new and elegant general atlas, comprising all the new discoveries, to the present time; containing sixty-five [sic] maps, drawn by Arrowsmith and Lewis.* Philadelphia: John Conrad and Co.; Baltimore: M. and J. Conrad and Co.; Washington City: Rapin, Conrad and Co.; Petersburg: Somervell and Conrad; and Norfolk: Bonsal, Conrad and Co., 1 volume with 63 maps. (Spamer 25.673, Wheat II:259)

*New Albion* and *New Navarre* are labeled at the head of the *Gulf of California*, where **no river** enters it, even though two short rivers are shown on the Pacific coast.

The mountain spine labeled both as *M<sup>n</sup>. de la Roche* (*Montagnes de la Roche*, or Rocky Mountains, not shown in this detail) and *Stoney M<sup>nt</sup>*. (the French *montagne*) passes directly through the region where the Grand Canyon is situated.

3. Colorado River Absent



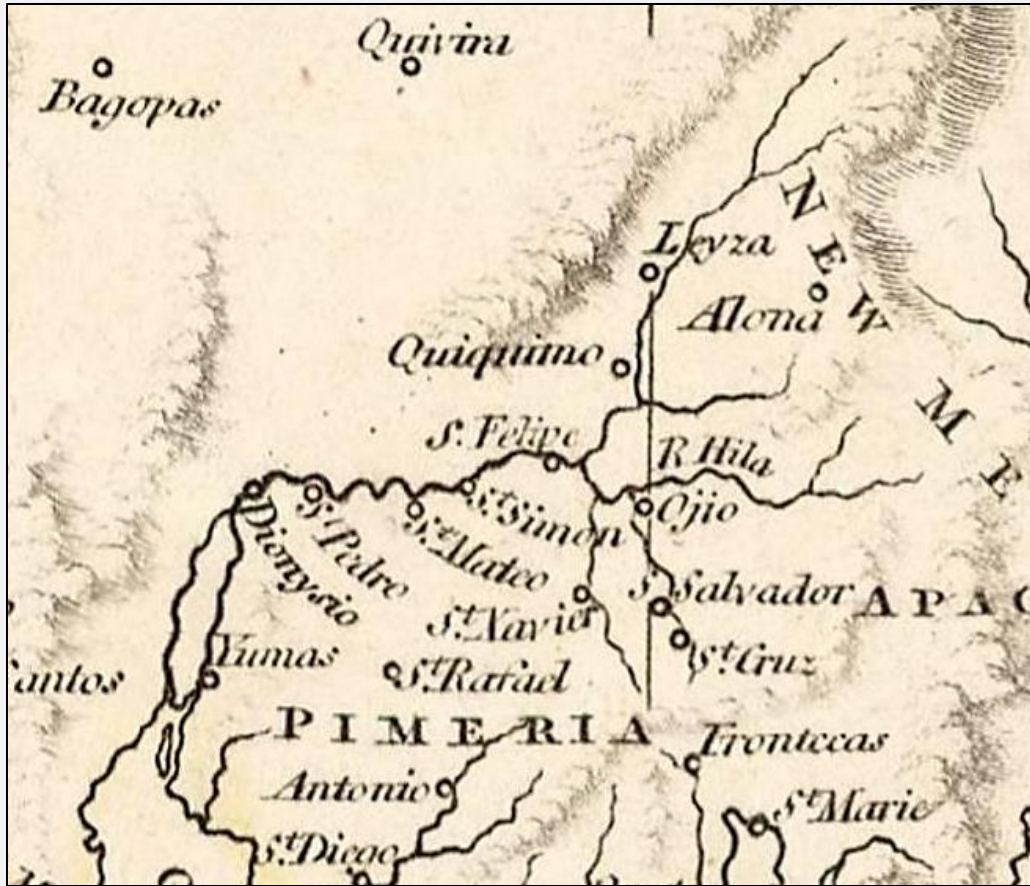
▲ Fig. 3.2 Kipferling, K. J. 1806 *America Nach dem neuesten geographischen und politischen Zustande zum Gebrauche der öesterreichischen Schulen entworfen* Wien, Im Verlage des Kunst u. Industrie Compoirs. 1806. (Spamer 25.2087)

In *Neu Navarra* (New Navarra) the *Busen Mar Vermejo das rothe oder purpur Meer* (Breast of the Vermilion Sea, the red or purple sea) adds a long, very peculiarly shaped embayment to the west-northwest, which receives an erratically drawn river (not labeled) that approaches the embayment's head from the east before turning to the southeast to meet the gulf; it apparently is meant to be the Gila River. The Colorado River is absent; the entire region north of this stream is blank; most peculiar for a map of this date.

This map also appears as Fig. 2.9 herein.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 3. Colorado River Absent



▲ Fig. 3.3 Arrowsmith, A. [Arrowsmith, Aaron] 1808 Map of the World on a Globular Projection, Exhibiting Particularly the Nautical Researches of Cap<sup>n</sup> James Cook, F.R.S. with all the Recent Discoveries to the present Time, carefully Drawn by A. Arrowsmith. Hydrographer to H.R.H. the Prince of Wales. The Plan Work Engraved by T. Foot.—The Writing by Wigzell & Mozeen. [Additional notes on the copy examined: ("January 1<sup>st</sup>. 1794—Additions to 1799. D<sup>o</sup> \_\_\_ to 1808.") ("London. Published as the Act directs, Jan<sup>y</sup> 1<sup>st</sup>. 1794, by A. Arrowsmith, N<sup>o</sup> 10 Soho Square.")] (Spamer 25.1755)

The head of the gulf twists from northwest to north-northeast, where it receives two channels from the north-northeast, which form a very extended island (*Isla de Presentación* and similar names, when labeled). At the head of this island *R Hila* (Gila River) arrives from the east. There is no indication of the Colorado River; in fact, the entire region north of the Gila is effectively blank except for three place names, *Axas*, *Bagopas*, and *Quivira* (the latter two of which appear in this detail).

This map also appears herein as Fig. 2.10.



3. Colorado River Absent



▲ Fig. 3.4 Stucchi, Achille 1856 *America Settentrionale e Meridionale nuovamente corretta ed accresciuta* 1856 F. Bordiga inc. Milanopresso Achille Stucchi Piazza di S. Gio. in *Era* N° 412. (Spamer 25.2002)

A single river (the Gila River, not labeled) that passes by *Città di una Indiana Casa grande* (An Indian town, Casa Grande) follows a westward course from a single, linear mountain chain before turning to the south-southwest to reach the unusually pointed head of *Marc [sic] Vermiglio* (Mare Vermiglio, Vermilion Sea). The region to its north is blank, the Colorado River being absent.

This map also appears herein as Fig. 2.17.





## **4. Linear Colorado River**

**(Examples 1802–1864)**

When once the regional geography of the North American Southwest began to be better understood, the unknown lands from which the Colorado River issued mandated some inventive interpretations of its course. The simplest presentation, to accommodate the knowledge that the river was there, was to express it in linear form, which also called for some creative presentations of other rivers.

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## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 4. Linear Colorado River

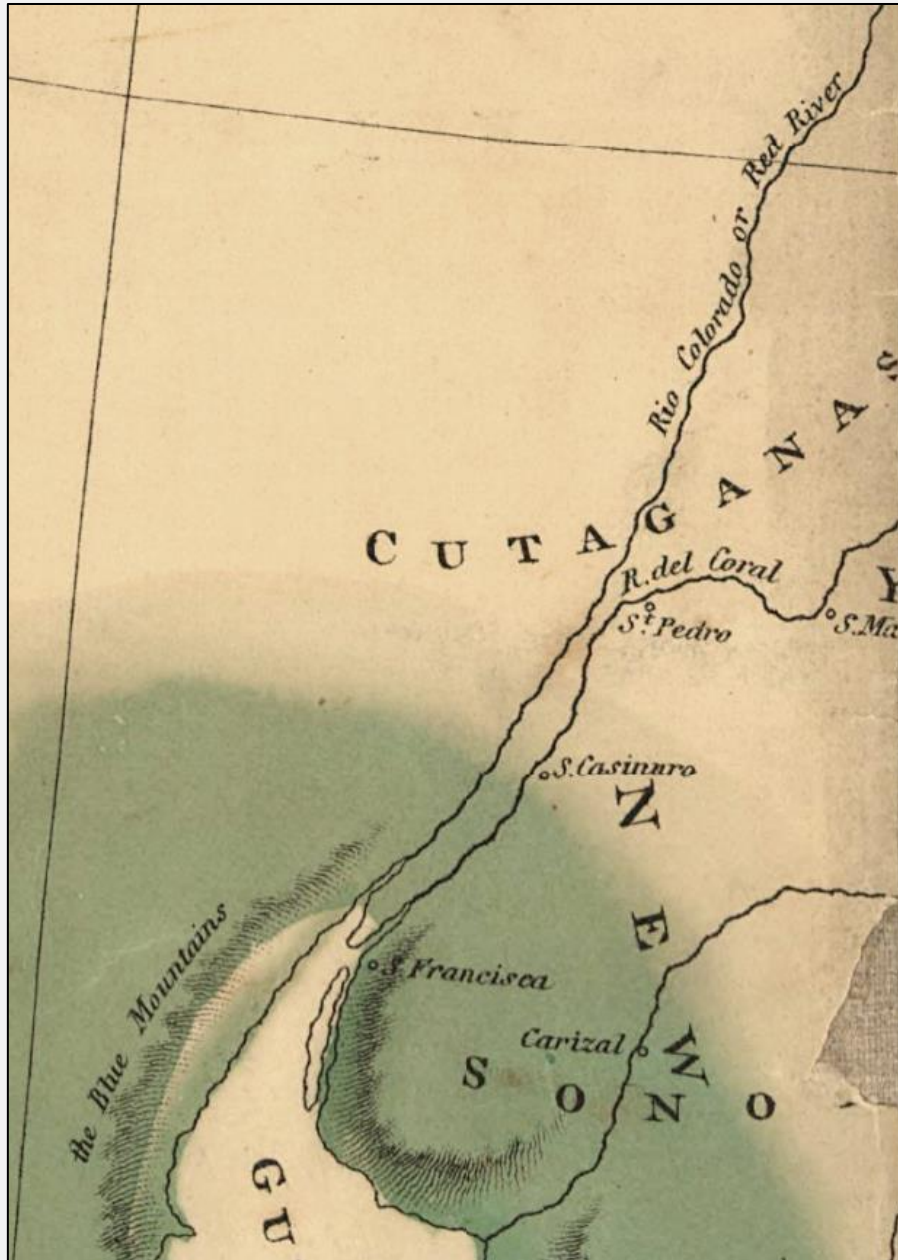


▲ ► Fig. 4.1 Arrowsmith, A. [Arrowsmith, Aaron] 1802 A Map Exhibiting all the New Discoveries, in the Interior Parts of North America, Inscribed by Permission To the Honorable Governor and Company of Adventurers of England Trading into Hudsons Bay, In testimony of their liberal Communications To their most Obedient and very Humble Servant, A. Arrowsmith. N. 24 Rathbone Place, January 1<sup>st</sup> 1795 —Additions to 1802. (Spamer 25.1192) [Note: The 1895 ed. of this map (Wheat I:231) does not display the southwestern or southern part of North America, hence it is not pertinent to this survey.]

*Rio Colorado or Red River* and *R. del Coral* (Gila River; one of the upper tributaries of the “Coral” is labeled *Rio Hillo*) are depicted as separate streams, with the Colorado coming from the northeast and the Coral coming from the east. Once near each other, both continue on parallel courses southwestward to the head of the gulf. In this fashion, the courses resemble those maps that portray an island around which one river runs to the gulf, that island often with a label naming it *Isla de Presentación* and similar names.

THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

4. Linear Colorado River













## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 4. Linear Colorado River



◀ ▲ Fig. 4.4 Pike, Z. M. [Pike, Zebulon Montgomery] 1810 A Map of the Internal Provinces of New Spain. The Outlines are from the Sketches of but corrected and improved by Captain Zebulon M. Pike, who was conducted through that Country, in the Year 1807, by Order of the Commandant General of those Provinces. *In:* Pike, Z. M., *An account of expeditions to the sources of the Mississippi, and through the western parts of Louisiana, to the sources of the Arkansaw, Kans, La Platte, and Pierre Jaun, rivers : performed by order of the government of the United States during the years 1805, 1806, and 1807. And a tour through the interior parts of New Spain, when conducted through these provinces, by order of the Captain-General, in the year 1807.* Philadelphia: C. and A. Conrad, and Co.; Petersburg (New York): Somervell and Conrad; Norfolk (Virginia): Bonsal, Conrad, and Co; and Baltimore (Maryland): Fielding Lucas, Jr. (John Binns, Printer.) (Spamer 25.560, Wheat II:299)

This map was taken largely from Humboldt, without credit, reproduced from a copy of Humboldt's own 1804 manuscript map; the copy made in Washington, D.C., also in 1804. It shows *Rio Colorado* generally, and at the confluence of *Rio Colorado* and *Rio Jasquevilla* (sic, misspelling Humboldt's *Jaquesila*, Little Colorado River) is the label *Puerto de Bacorelli* (sic, misspelling Humboldt's *Puerto de Bucarelli*, Puerto de Bucareli). On this map, the *Puerto* is, unusually, labeled alongside the Colorado River itself; thus, despite the various errors on Pike's map, it is unwittingly more correctly positioned than on the maps by Humboldt and others.

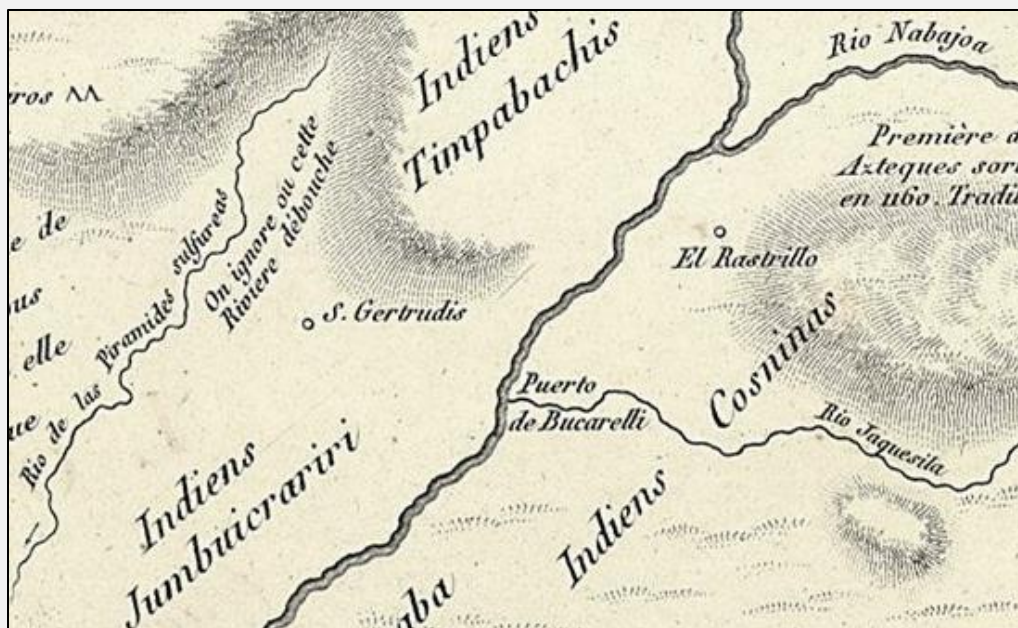
See also the Appendix in the present volume.







## 4. Linear Colorado River



◀ ▲ Fig. 4.5 Humboldt, Alexander von 1811 Carte Générale du Royaume de la Nouvelle Espagne depuis la Parallele de 16° jusqu'au Parellele de 38° (Latitude Nord) Dressée Sur des Observations Astronomiques et sur l'ensemble des Matériaux qui existoient à Mexico, au commencement l'anée 1804.

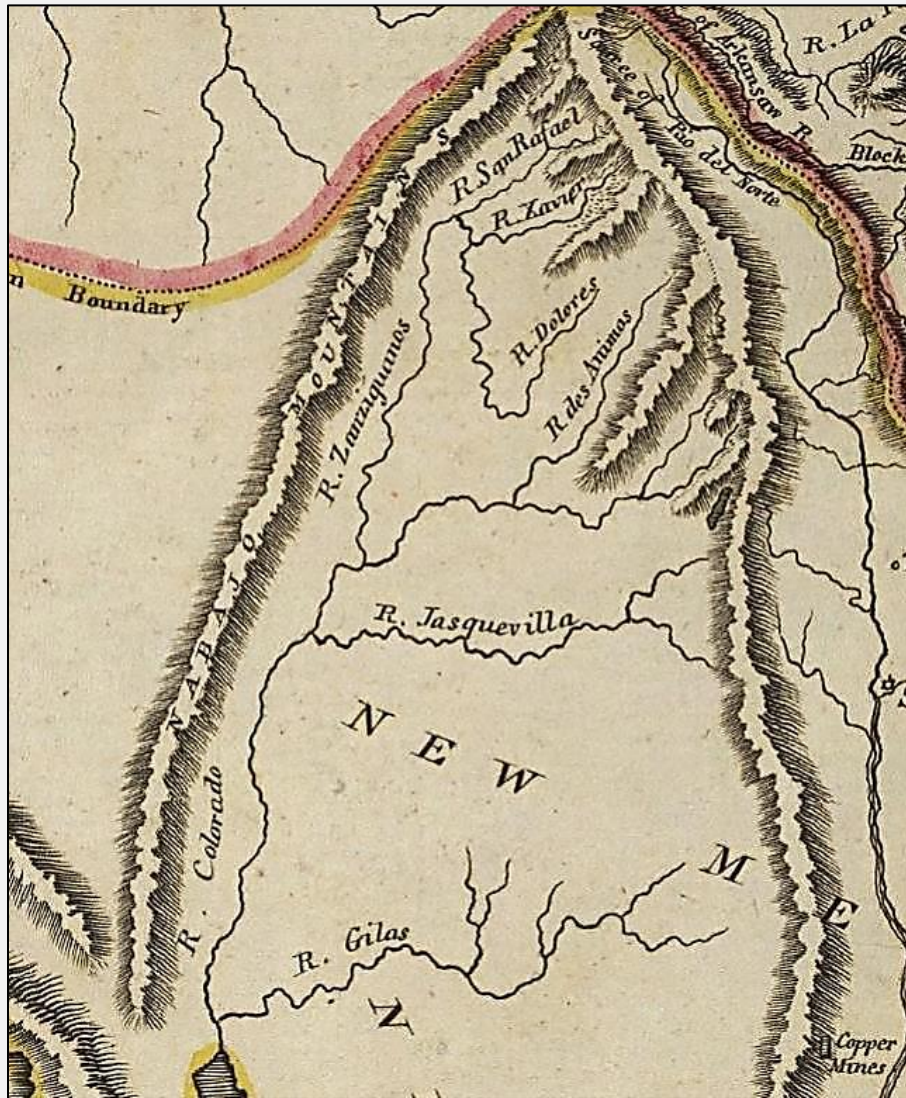
Par Alexandre de Humboldt. *In: Atlas géographique et physique du Royaume de la Nouvelle-Espagne, fondé sur des observations astronomiques, des mesures trigonométriques et des nivellemens barométriques.* Paris: Chez F. Schoell, folio. [One map on two double-folio plates, which depict northern and southern halves]. Illustrated here is the northwest quadrant. This folio atlas complemented the *Political Essay on New Spain* that had been published in sections during 1808-1811.] (Spamer 25.547, Wheat I:272)

The atlas reproduces Humboldt's production of 1808.\* *Rio Colorado* is depicted following a generally uniform southwesterly course from the confluence of *Rio Zaguananas* (Green River) and *Rio Nabajoa* (San Juan River) to the head of *Mer de Cortez* (Sea of Cortez). On the northern half of this sheet (specifically, the northwestern quadrant of the complete map), the confluence of *Rio Colorado* and *Rio Jaquesila* (Little Colorado River) is marked *Puerto de Bucarelli* (*sic*, Puerto de Bucareli). It is this map that is occasionally mis-cited as the first to portray this name for the Grand Canyon (see instead Manuel Villavicencio, 1781, in the Appendix to the present volume). Also on this map is the first appearance of a disjointed river to the west of the Rio Colorado, paralleling it between the confluences of the Nabajoa and Jaquesila, which is labeled *Rio de las Piramides Sulfureas* (see [historical note](#) on the “river of the sulfurous pyramids” in the Introduction herein), as well as another disjointed river, *R. de los Martires* (River of the Martyrs) west of and paralleling the lower Colorado, somewhat separated by mountains.

See also the Appendix in the present volume.

\* The 1808 map, the same as that of 1811, is not illustrated in the present volume. That edition of the *Atlas* is even more scarce than the 1811 imprint, but a digitized copy of it may be seen at the University Complutense Madrid, [http://dioscorides.ucm.es/proyecto\\_digitalizacion/index.php?5324332994](http://dioscorides.ucm.es/proyecto_digitalizacion/index.php?5324332994) (accessed 3 May 2023), although it is at a resolution not satisfactory for very detailed study.

4. Linear Colorado River



▲ **Fig. 4.6 Carey, Matthew 1814 Missouri Territory formerly Louisiana.** *In: Carey's general atlas, improved and enlarged: being a collection of maps of the world and quarters, their principal empires, kingdoms, &c. containing [58 maps listed]. Philadelphia: M. Carey. (T. S. Manning, Printer.) (Spamer 25.2013)*

*R. Colorado* and its upstream extension, *R. Zanziguanos* (sic, Green River) run parallel to and on the east side of the linear, imaginary *Nabajo Mountains*. *R. Jasquevilla*, though nomenclaturally it pertains to the Little Colorado River, might actually depict the San Juan River on this map, if the unlabeled river to its north can be construed to be the Grand River; and if so, the Little Colorado is absent. *R. Gilas* (sic, Gila River) is correctly a tributary to the Colorado just north of the gulf.

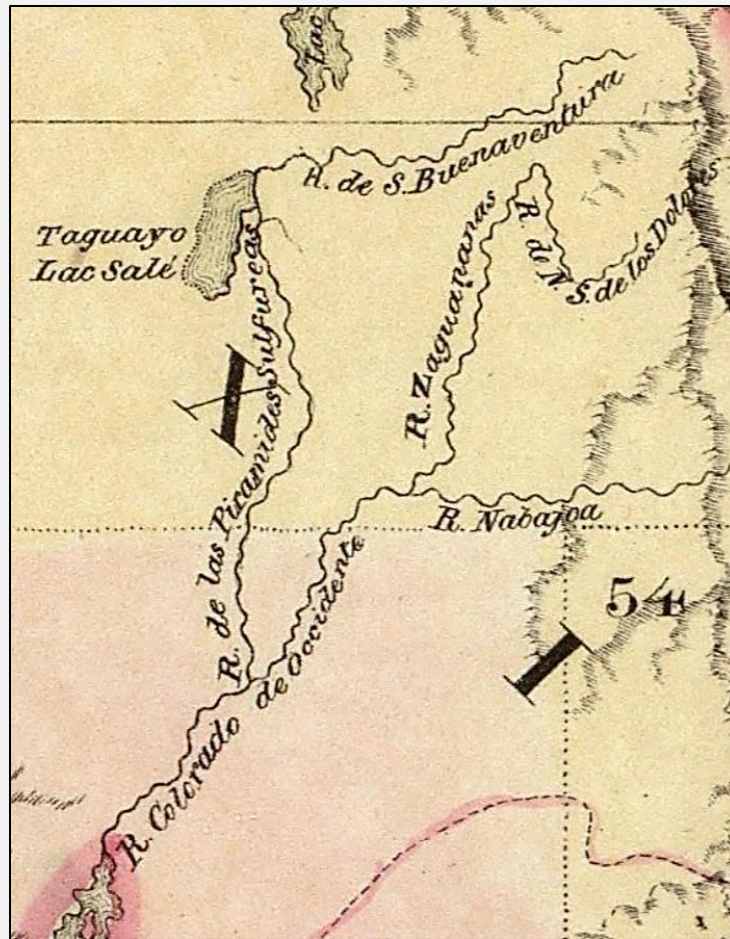






## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 4. Linear Colorado River



▲ **Fig. 4.8 Vandermaelen, Ph. [Vandermaelen, Philippe] 1827 Amér. Sep. Partie de la vieille Californie.** *In: Atlas universel de géographie physique, politique, statistique et minéralogique, sur l'échelle de 1/1641836 ou d'une ligne par 1900 toises, dressé par Ph. Vandermaelen . . . . Quatrième partie. Amér. sept. Bruxelles: Ph. Vandermaelen. (Spamer 25.584, Wheat II:378)*

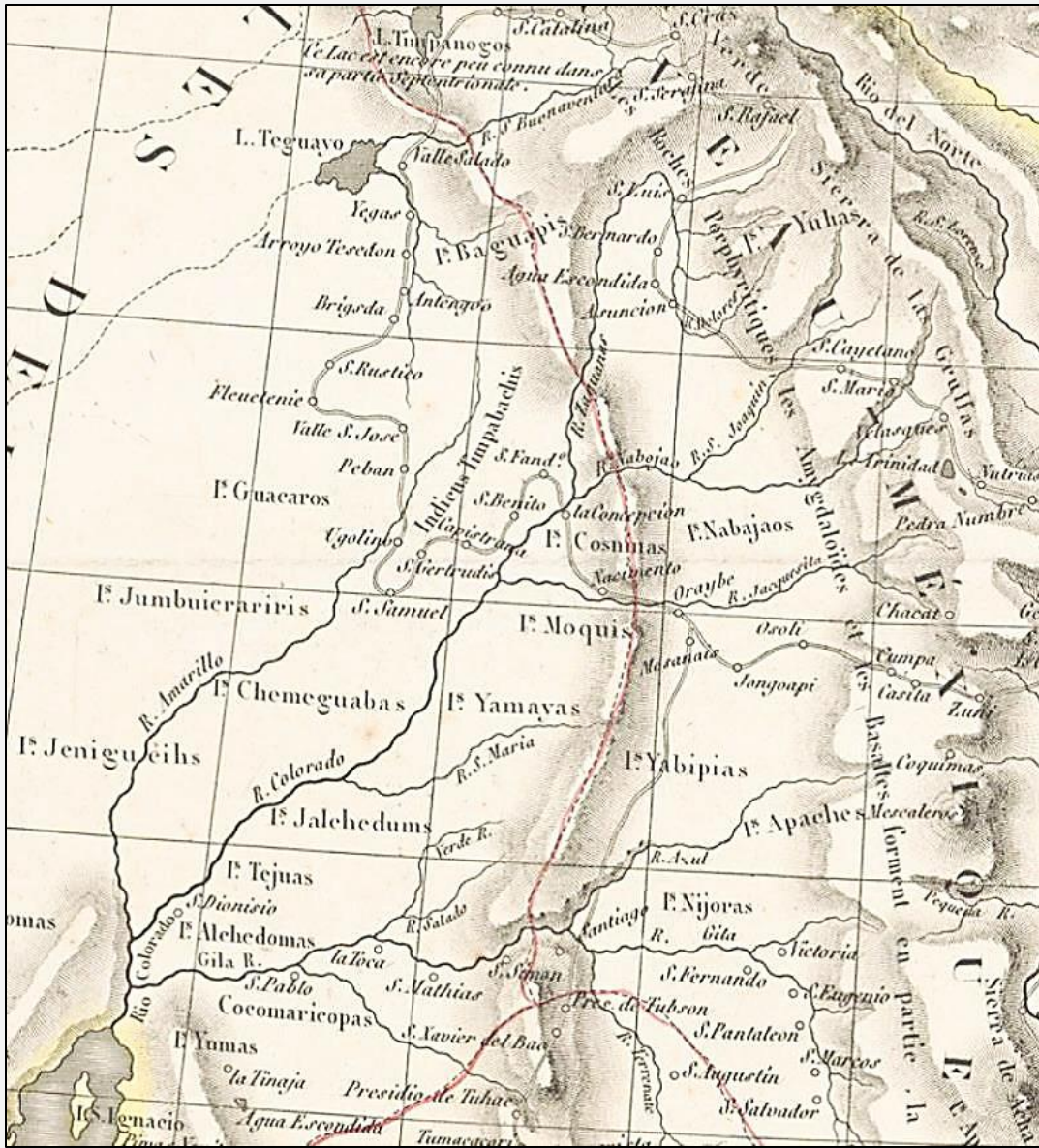
*Rio Colorado de Occidente* (Colorado River of the West) and its upstream extension, *R. Zaguayanans* (Green River) follow a southwesterly course to the head of the gulf.

Of note is the depiction of the imagined *R. de las Piramides Sulfureas* as a tributary to the Colorado, miraculously linked at its upstream end to the likewise imagined (and well studied by cartographical scholars) *R. de S. Buena Ventura*, which with the “pyramids” river both somehow merge with *Taguayo Lac Salé* (Taguayo Salt Lake). Quite improbably, the “pyramids” river forms the eastern shore of the lake. (Regarding the “River of the Sulfurous Pyramids”, see the [historical note](#) in the Introduction herein.)

Note as well that the Colorado–Zaguayanans system is continued without interruption from *R. de N. S. de los Dolores*, and that the only tributary to the Colorado, other than the supposed “pyramids” river, is *R. Nabajoa* (San Juan River).

THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

4. Linear Colorado River



▲ Fig. 4.9 Dufour, A. H. [Dufour, Adolphe Hippolyte] 1835 République Fédérative des Etats-Unis Méxicains, par A. H. Dufour Paris 1835 Chez Basset Rue S<sup>t</sup> Jacques N<sup>o</sup> 64. (Spamer 25.1270)

Rio Colorado and its upstream extension *R. Zaguana* (sic, Green River) follow a generally southwesterly course across this region before turning south to the gulf. The imaginary *R. Amarillo* (i.e., the supposed “River of the Martyres”) is shown paralleling the Colorado, turning southward to join it a short distance north of the confluence of the *Gila R.*

(The serpentine gray line interrupted by labeled dots, through the northern part of the map, represents a portion of the route and campsites of the Dominguez-Escalante expedition of 1776 that circumambulated a good part of the Colorado Plateau.)



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 4. Linear Colorado River



▲ Fig. 4.10 Gilliam, Albert M. 1846 Map of Oregon[,] Upper and Lower California, with part of British-America, the United States and Mexico *In: Travels over the table lands and cordilleras of Mexico during the years 1843 and 44 : including a description of California, the principal cities and mining districts of that Republic and the biographies of Iturbide and Santa Anna.* Philadelphia: John W. Moore. (Spamer 25.833, Wheat III:510)

*R. Colorado* passes southwestwardly from unlabeled headwaters to “Gulf of California” with peculiarly mislabeled tributaries from the east (thus), *Nabalio R.* (i.e., Nabajao R. [or similar], San Juan River) and *Juquesla R.* (i.e., Jaquesila R. [or similar], Little Colorado River). The Virgin River (not labeled) might be poorly delineated with its confluence not far southwest of the “Juquesla” confluence, and which heads apparently in two lakes. The Gila River, with confluence just north of the gulf, is labeled *R. Cita*.



4. Linear Colorado River



▲ Fig. 4.11 Colton, J. H. [Colton, Joseph Hutchins] 1849 Map of the United States[,] the British provinces[,] Mexico &c. Showing the routes of the U.S. Mail[,] steam packets to California, and a plan of the gold region. New York: J. H. Colton. (Spamer 25.622, Wheat III:591)

The *Rio Colorado of the West* is only generally sketched, following a fancifully meandering course first southwest then south-southwest to the head of the gulf. The *Rio Virgin* is likewise creatively shown, as a tributary to the Colorado from the north, with its confluence much too far south. “Rio Gila” joins the Colorado just north of the gulf. The only other major tributaries to the Colorado as shown in this detail are the San Juan and Little Colorado Rivers (not labeled).





## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 4. Linear Colorado River



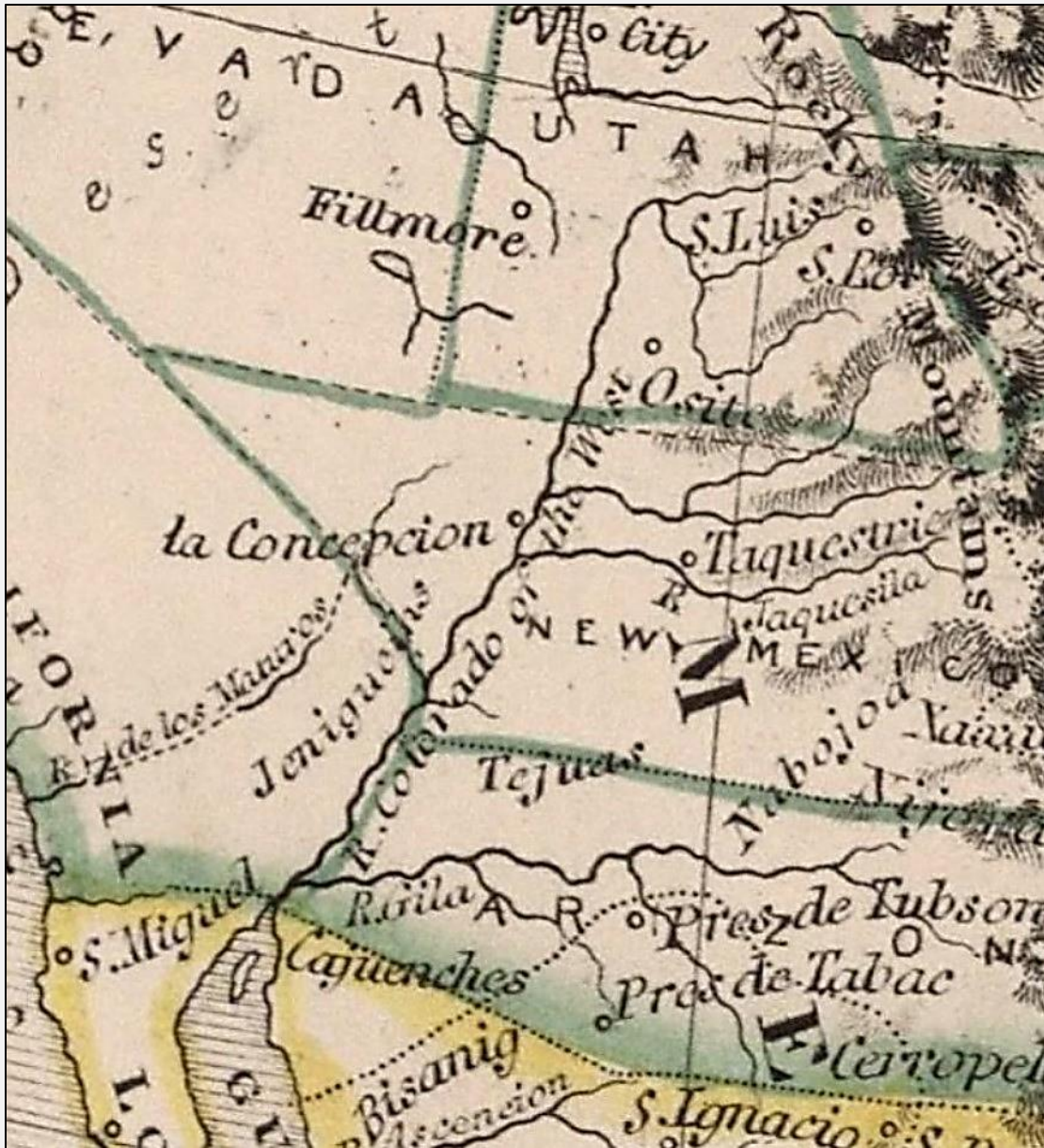
▲ Fig. 4.13 Housse, E. 1850 Carte de la Haute Californie ou Nouvelle Californie Dressée par E. Housse. Paris. 1850. [Map caption: "Supplément de l'Écho du Sacramento Journal mensuel des intérêts des associés de la Compagnie des Mines d'or de la Californie."] (Spamer 25.1084, Wheat III:676)

*Rio Colorado* is depicted on a jittery course to the southwest, turning to the south-southwest to reach the head of the gulf. The only tributaries shown in the Grand Canyon region are *Rio de los Navajoas* (San Juan River) and an equally erratic, unlabeled tributary from the north that is the Virgin River, the confluence of which incidentally is positioned at a suggestively correct "Great Bend" in the Colorado where the main stream turns southward toward the gulf. The Little Colorado River is absent. "Rio Gila" meets the Colorado directly at the head of the gulf.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 4. Linear Colorado River



▲ **Fig. 4.14 Wyld, James 1864 North America.** *In: An atlas of the world, comprehending separate maps of its various countries. Constructed and drawn from the latest astronomical and geographical observations. By James Wyld, Geographer to Her Majesty, and H. <sup>late</sup> R.H. Prince Albert. London: Published by James Wyld, Successor to Mr. Faden. (Spamer 25.2028)*

*R. Colorado of the West* follows an effectively straight southwesterly course to the head of the gulf; an unusually late depiction of this style.

## **5. Modified Linear Colorado River**

**(Examples 1839–1884)**

In contrast to the effectively linear depictions of the Colorado River (Style 4 above), some later maps adjusted this linearity with a course turn to the west through what is the Grand Canyon area, before turning to the south. The style nonetheless continued to portray the ambiguous nature of the Colorado's course, although some of that ambiguity is due to the reuse of older plates or by ateliers continuing to copy from older maps for the sake of convenience.

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## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 5. Modified Linear Colorado River



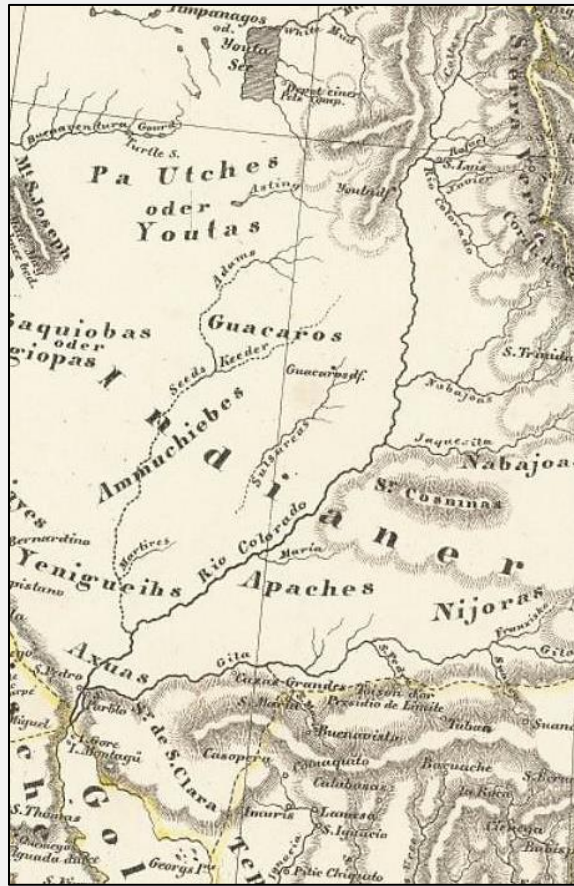
◀ ▲ Fig. 5.1 Burr, David H. 1839 Map of the United States of North America with parts of the Adjacent Countries. By David H. Burr, Late Topographer to the Post Office, Geographer to the House of Representatives of the U. S. *In: The American atlas; exhibiting the post offices, post roads, rail roads, canals, and the physical and political divisions of the United States of North America; constructed from the government surveys and other official materials. Under the direction of the Post Master General, by David H. Burr. Geographer to the House of Representatives of the U. S.* [London]: John Arrowsmith, 13 maps. ("Entered according to the Act of Congress, July 10<sup>th</sup> 1839, by David H. Burr, in the Clerks Office of the District Court of the District of Columbia.") [Burr had had a falling out with his American employers and turned to Arrowsmith to produce this thin atlas.] (Spamer 25.589, Wheat II:441)

The southwestern portion of the continent, a part of Mexico at that time, portrays the *Rio Colorado of the West* entering the head of the Gulf of California, just downstream from the confluence of the *Rio Gila or San Francisco*. In the region occupied by what is the Grand Canyon the Colorado follows an imaginary southwesterly course between the confluence of *Rio Nabajoa* (San Juan River) and the confluence of *Adams River* (Virgin River).

Of particular note is the singular label, "Marble" (*see detail above*), in the area between the Colorado River and the Virgin, with no further explanation. This map adds the travel routes of Jedediah Smith in the Southwest, about which Wheat (1958, Volume II, p. 167) supposes that "there can be no doubt that he [Burr] had an original Smith map before him while he worked on the portrayal of the Western country, for here are Smith's travels developed in considerable detail." One of these routes can be seen in the detail *above*, a faint meandering line along the Virgin and lower Colorado.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 5. Modified Linear Colorado River



▲ ► Fig. 5.2 Fleming, C. [Flemming, Carl] 1845 Mexico, Mittel America, Texas. "Lithographie, Druck u. Verlag von C. Fleming in Glogau." (Spamer 25.1023)

*Rio Colorado* is depicted on a broad arc from the Sierra Verde mountain range, first southerly then southwesterly to the head of the gulf. Between the confluence of *Gila* and the gulf, the Colorado bifurcates in the form that on other maps has been labeled as *Isla de Presentación* (and similar names). All in all, this is a very peculiar assemblage of misinterpretation and misinformation.

North of the confluence of the *Gila* is a river depicted by a dotted line labeled *Seeds Keeder* (a confusion with *Seedskeeter*, a name given to part of the Green River, which if meant to be that river it is seriously misplaced). Into it in turn flows the *Adams* (a name that had also been applied to the Virgin River, with a conjectural middle reach marked by a dotted line), likewise misplaced. Parallel to the Colorado and "Seeds Keeder" is another river, drawn partly definitively and partly with a dotted line, labeled *Sulsureas* (perhaps misreading from another map the "f" as the contemporary long "s", *f*). This last river refers to the so-called "river of the sulfurous pyramids," which also seems to be misplaced. (Regarding the "River of the Sulfurous Pyramids", see the [historical note](#) in the Introduction herein.) Farther south, a supposed *Martires* is a tributary to the "Seeds Keeder." (*Maria* is the Bill Williams River.)

THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

5. Modified Linear Colorado River





THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

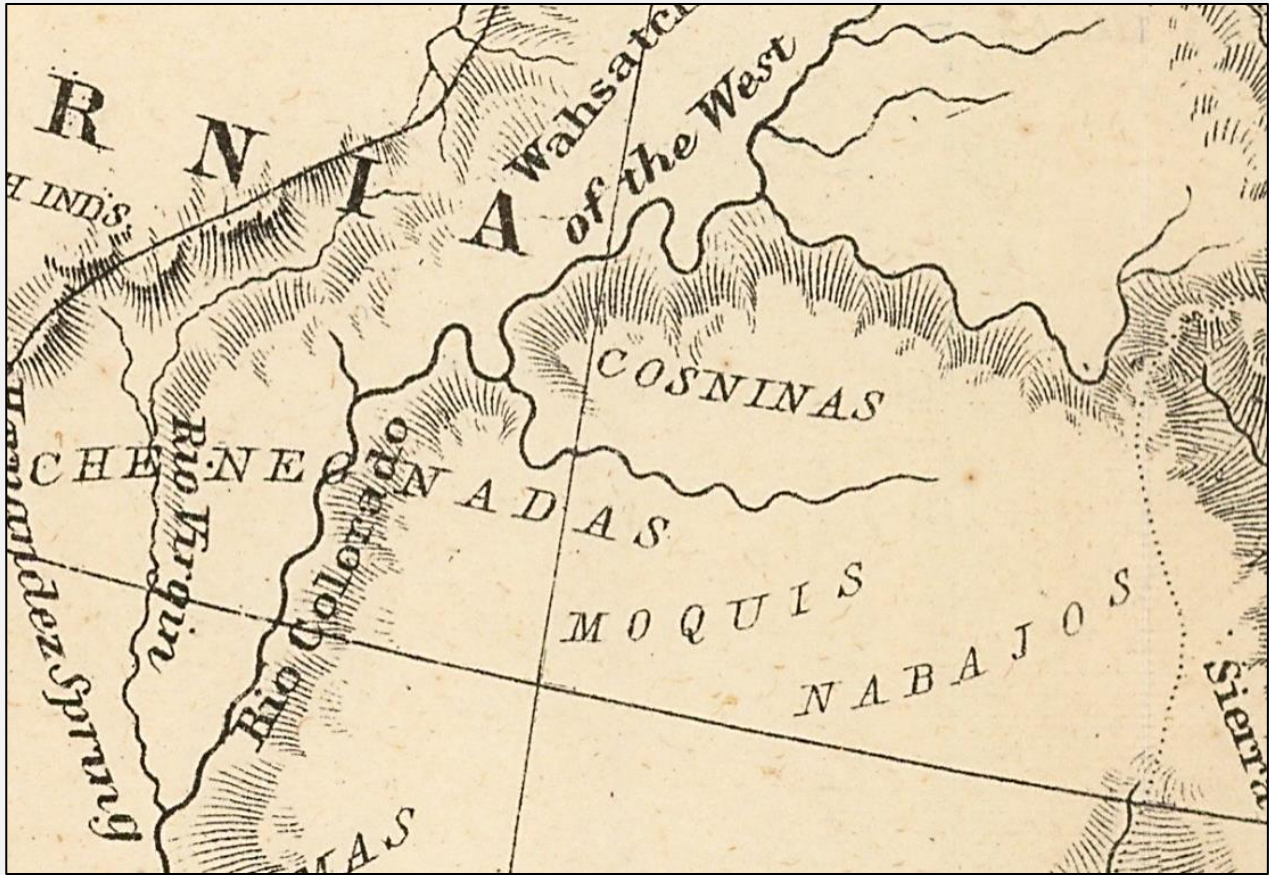
5. Modified Linear Colorado River





## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 5. Modified Linear Colorado River

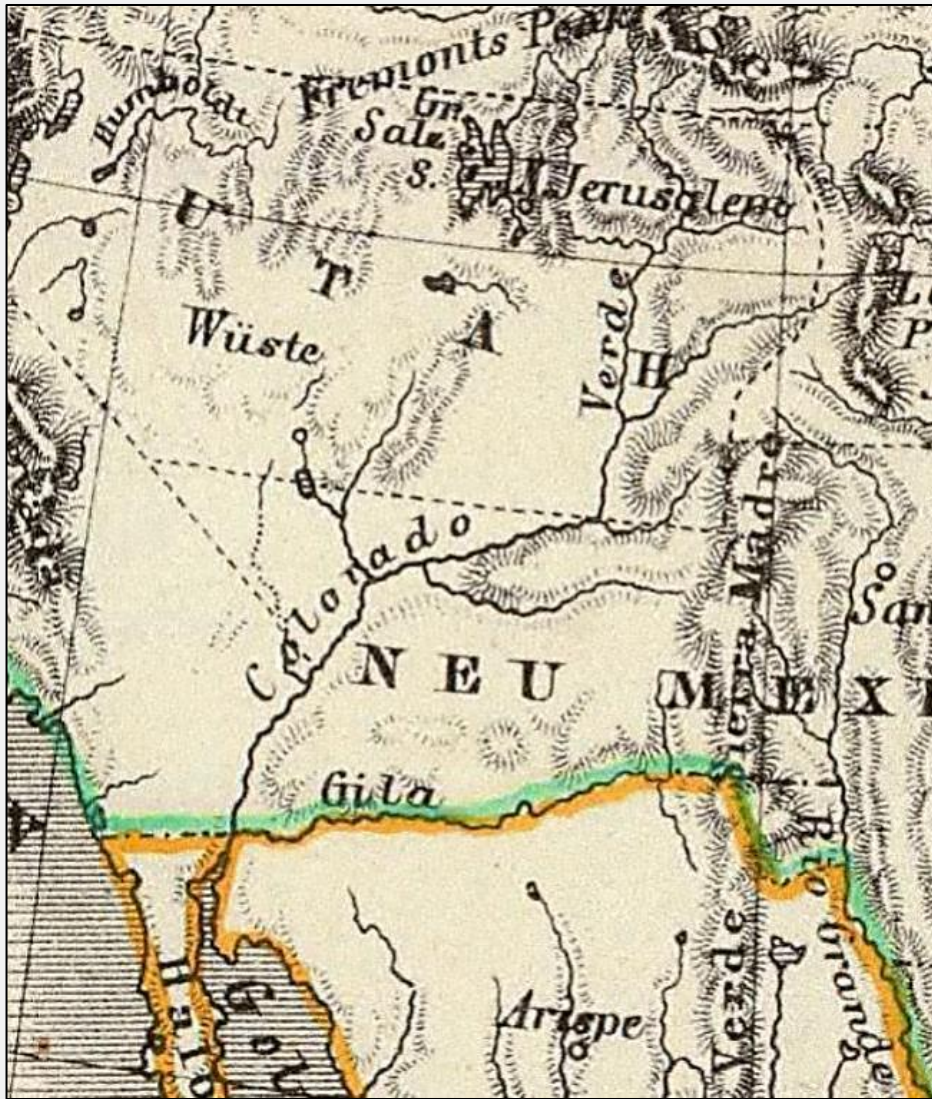


◀ ▲ Fig. 5.3 Colton, J. H. 1849 Map of the United States[,] Mexico &c. Showing the various Land and Water Routes from the Atlantic Cities to California. Compiled by J. H. Colton for "Last Leaves of American History." New York, G. P. Putnam. 1849. Printed at Ackerman's rooms, 120 Fulton St. N.Y. *In*: Willard, Emma, *Last leaves of American history: comprising histories of the Mexican war and California*. New-York: George P. Putnam; and London: Putnam's American Agency. (Spamer 25.2098, Wheat III:594)

*Rio Colorado of the West* follows a meandering but effectively linear southwesterly course from the confluence of *Green R.* and *Grand R.*, receiving three tributaries (none labeled) from the east, the largest of which must be the San Juan River. It proceeds to a point that seems to be the confluence of the Little Colorado River (not labeled) and the confluence of a very short tributary (not labeled, at about where the Virgin River *should be*); in between would be the Grand Canyon. Thence the Colorado turns south-southwest directly to the head of the *G. of California*, receiving en route *Rio Virgin* with its confluence far too south) and *Rio Gila* shortly before the head of the gulf. Along the Colorado's course from the San Juan to the supposed confluence of the Virgin, the river hugs a tableland on its eastern bank, while it flows across yet another tableland that drops to the course of the Virgin.

This map was also reused for various publications over the next several years, retaining its main title but modifying the names of publications for which they were intended.

5. Modified Linear Colorado River



▲ **Fig. 5.4 Lange, Henry 1854 Nord America.** *In: Atlas von Nord-Amerika. Nach den neuesten Materialien, mit besonderer Rücksicht auf physikalische Verhältnisse und genauer Angabe der County-Eintheilung, der Eisenbahnen, Canäle, Postrassen und Dampschiffahrt, in 18 Blättern mit erläuterndem Texte herausgegeben von Henry Lange. Braunschweig: Verlag von George Westermann, Blatt I. (Spamer 25.2017)*

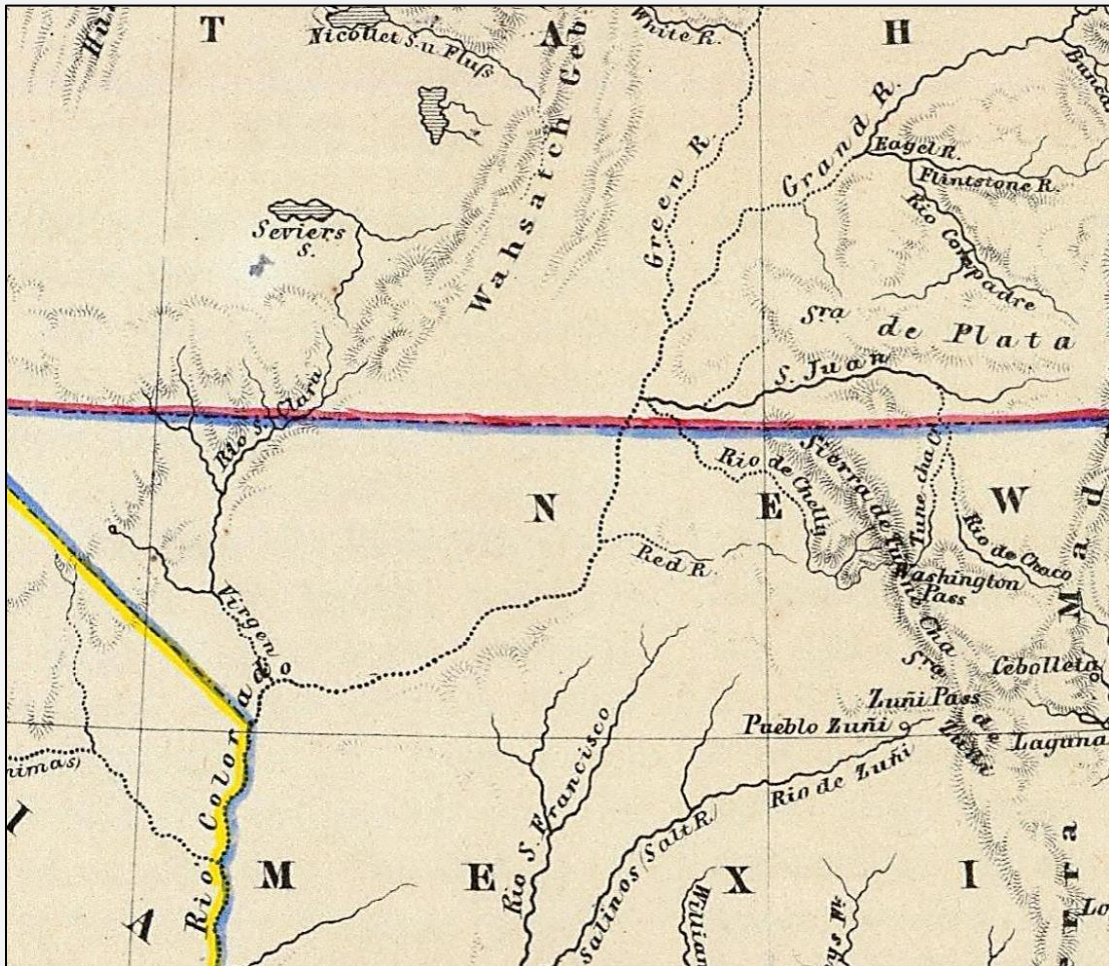
The river *Colorado* is delineated on a course to the gulf from the confluence of *Verde* (Green River) and an unlabeled tributary. Its course from that confluence is southwesterly to the confluence of what must be the Virgin River, then southwesterly, eventually turning to the south to arrive at the gulf. The prominent tributary from the east that meets the Colorado where would be the central Grand Canyon is the Little Colorado River, which as such suggestively follows the Egloffstein model (which had not yet been portrayed; see Style 6 herein). A faint, dotted tributary south of the virgin is probably the mythically rendered Mohave River or the river of the martyrs.

Compare also the map in Fig. 5.5, from the same volume. ►



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 5. Modified Linear Colorado River



▲ Fig. 5.5 Lange, Henry 1854 Oregon, Californien, Utah, Neu Mexico, etc. In: Atlas von Nord-Amerika. Nach den neuesten Materialien, mit besonderer Rücksicht auf physikalische Verhältnisse und genauer Angabe der County-Eintheilung, der Eisenbahnen, Canäle, Postrassen und Dampschiffahrt, in 18 Blättern mit erläuterndem Texte herausgegeben von Henry Lange. Braunschweig: Verlag von George Westermann, Blatt XIII. (Spamer 25.2017)

*Rio Colorado* is delineated from the confluence of *Green R.* and *Grand R.* to the gulf; in the areas shown above all of these courses are shown conjecturally by dotted lines. The Colorado's course is south-southwest to the confluence of *Red R.* (Little Colorado River), which is shown as a meager, dotted-lined tributary from the east with its upper extent shown more definitively by a solid line. (Interestingly, *Rio de Zuñi*, actually a tributary to the Little Colorado, is misplaced some distance to the south as a tributary headwater of *Salinos (Salt R.)*.) Through what is the Grand Canyon region, the Colorado's course arcs from south-southwest to west to meet the river *Virgen*; the upper reach of which is labeled *Rio S. Clara*. From the *Virgen* confluence the Colorado turns to the south.

On this map (compare Fig. 5.4, from the same volume), the dotted-line tributary to the lower Colorado is now a tributary to the *Mohave R. (de las Animas)* (in mixed Spanish and Latin, river of the souls; the label is partly seen here).

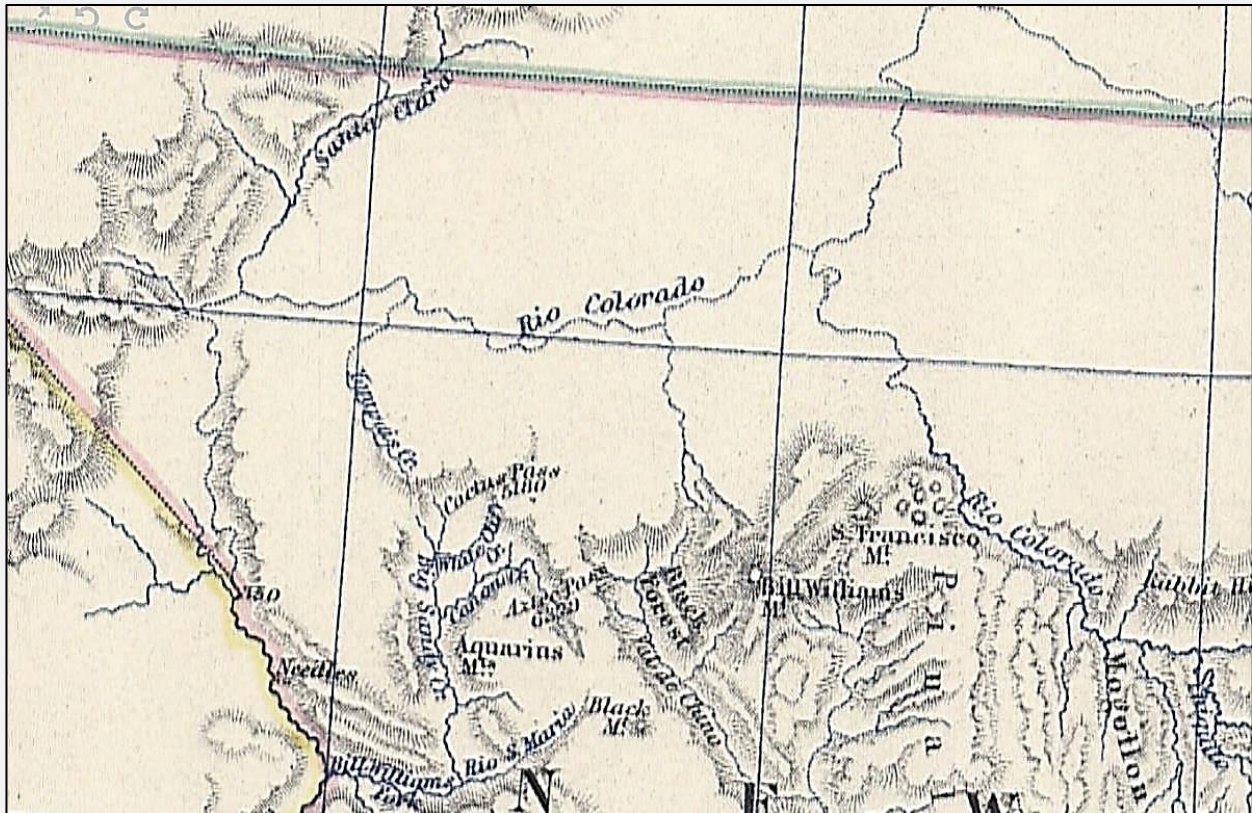






## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 5. Modified Linear Colorado River



◀ ▲ Fig. 5.6 Johnston, Alexander Keith [Johnston, Keith] 1858 United States of North America (Western States) by Keith Johnston, F.R.S.E. ("William Blackwood & Sons, Edinburgh & London.") ("W. & A. K. Johnston, Edinburgh.") (Caption: "Keith Johnston's General Atlas", "44".) (Spamer 25.1372)

*Rio Colorado* is depicted conjecturally by a dotted line from the confluence of *Green River* and *Grand River* (the lower courses of which also are depicted by dotted lines). From there the Colorado's course is southwest to the confluence of *Rio San Juan*, then south-southwest to the confluence of *Rio Colorado Chiquito* (Little Colorado River), then southwest and directly west through the Grand Canyon (not labeled). In this area it receives an unlabeled tributary (Cataract Creek) and *Yampais Cr.* At the confluence of *Santa Clara* (Virgin River), the Colorado turns generally southward, continuing to be delineated by a dotted line until it reaches the boundary angle that today is southernmost Nevada; there it is shown by a solid line to the gulf. The lower courses of tributaries *Rio San Juan*, *Rio Colorado Chiquito*, *Yampais Cr.*, and *Santa Clara* are all shown by dotted lines, although their upper courses are drawn with solid lines.

Despite the Colorado's course through the Grand Canyon region being only figuratively shown, its tributaries are ironically in more accurate relationships than would be delineated by the map derived from the 1858 field exploration by F. W. von Egloffstein (see Style 6 herein), which in turn became the standard model for some time.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 5. Modified Linear Colorado River

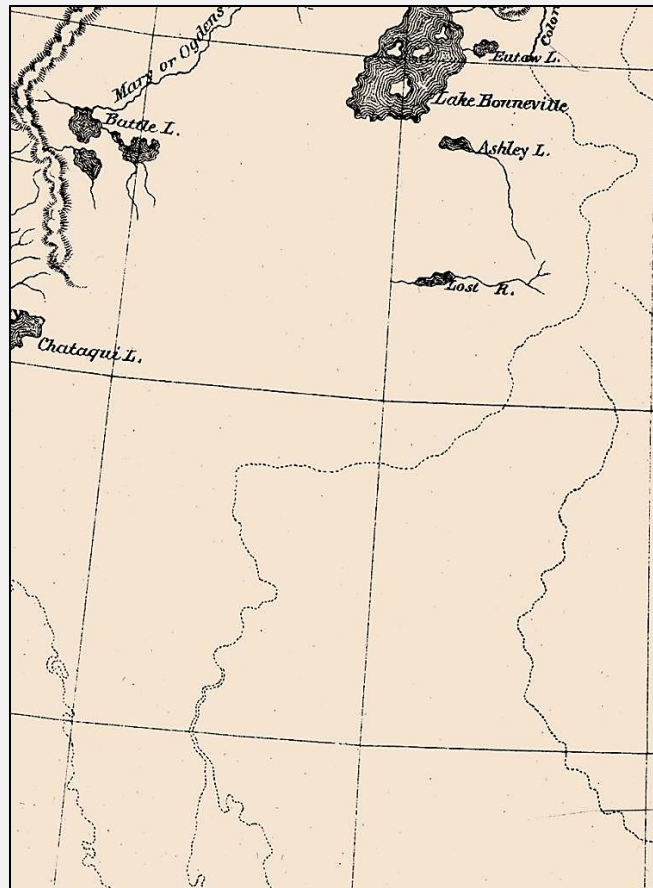


▲ Fig. 5.7 Marcy, Randolph 1859 Sketch of the Different Roads Embraced in the Itineraries. In: *The prairie traveler. A hand-book for overland expeditions. With maps, illustrations, and itineraries of the principal routes between the Mississippi and the Pacific.* New York: Harper and Brothers. (Spamer 25.882, Wheat IV:984)

It would seem that the *Rio Colorado* enters the greater Grand Canyon region from the east along the courses of the San Juan River and another. The labels for *Green R* and *Grand R* in Utah are transposed, and the two rivers converge to a point at the 38th parallel where they end, seemingly *not* to reach the Colorado—but the lack of connection is instead due to the delineator's poor lithographic technique (evident here). From that misconnected point the Colorado runs south for a distance and turns southwest to the confluence of *Colorado Chiquito* (Little Colorado River), which arrives in the Grand Canyon's eastern end rather than in the mid-canyon delineation expressed by Egloffstein at about this time (though not published until 1861; see Style 6 herein). The Colorado passes through the Grand Canyon region linearly to the confluence of the Virgin River (not labeled) before turning south to the gulf.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 5. Modified Linear Colorado River

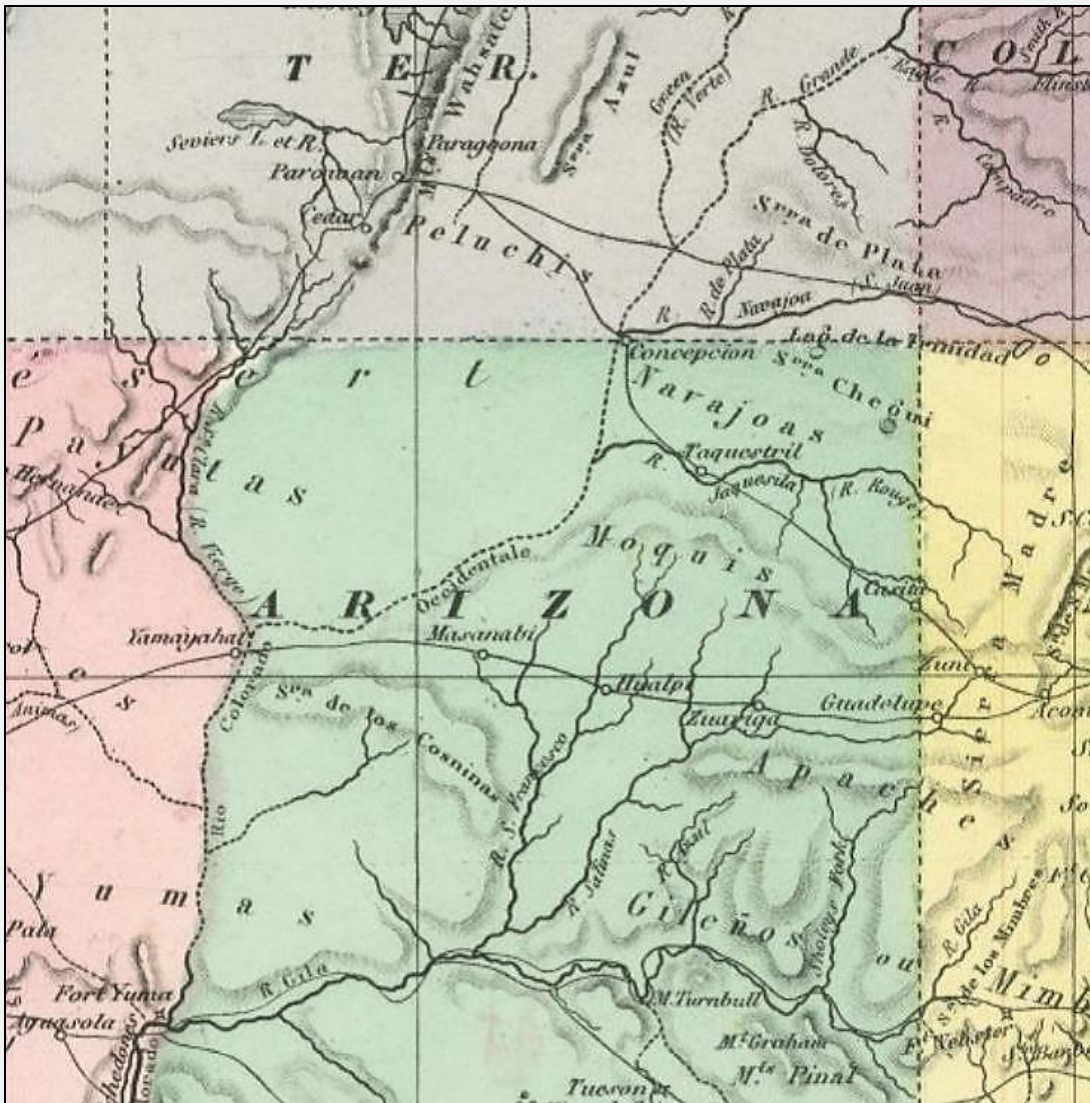


▲ **Fig. 5.8 U.S. War Department 1859 "Reduced Map of the Territory West of the Rocky Mountains By Capt. B. L. E. Bonneville U.S.A. 1837"** Lithographed by J. Bien, New York. *In:* U.S. War Department, "Topographical Maps, Profiles, and Sketches, To Illustrate the Various Reports of Surveys for Railroad Routes from the Mississippi River to the Pacific Ocean." Volume XI in *Reports of Explorations and Surveys, To Ascertain the Most Practicable and Economical Route For a Railroad From the Mississippi River to the Pacific Ocean. Made Under the Direction of the Secretary of War, in 1853-6. According to Acts of Congress of March 3, 1853, May 31, 1854 and August 5, 1854* (Beverly Tucker, Printer, Washington, 1859) (U.S. 33rd Congress, 2nd Session, Senate Executive Document 78 [1855]. Plate 4 (detail). (Spamer 25.2097)

About as unknown as it gets (short of blank). This map reproduced and filled in a part of an 1837 map by Capt. Benjamin Louis Eulalie de Bonneville, "Map of the Territory West of the Rocky Mountains" (Bonneville's map is itself extralimital to this survey). In the reach north of "Eutaw L." (only partly shown here) the Colorado is drawn definitively; it is a short reach coming directly from nearby mountainous headwaters and labeled *Colorado of the West*. The portion shown here was occupied by a title cartouche on Bonneville's map, thus the perceived need to fill in the area when it was removed. It embraces the region between the upper Gulf of California on the south and the present state of Utah on the north. While the lower Colorado River is fairly sketched, it becomes very generalized—guessed, in fact—in the reach through the canyon lands; and no tributaries are delineated. Note, too, the traditional, assumed proximity of the Colorado River's course to the headwater of the Rio Grande (seen here flowing toward the southeast). Any number of out-of-date sources could have been referred to by the War Department cartographers for this sketchy outline.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 5. Modified Linear Colorado River



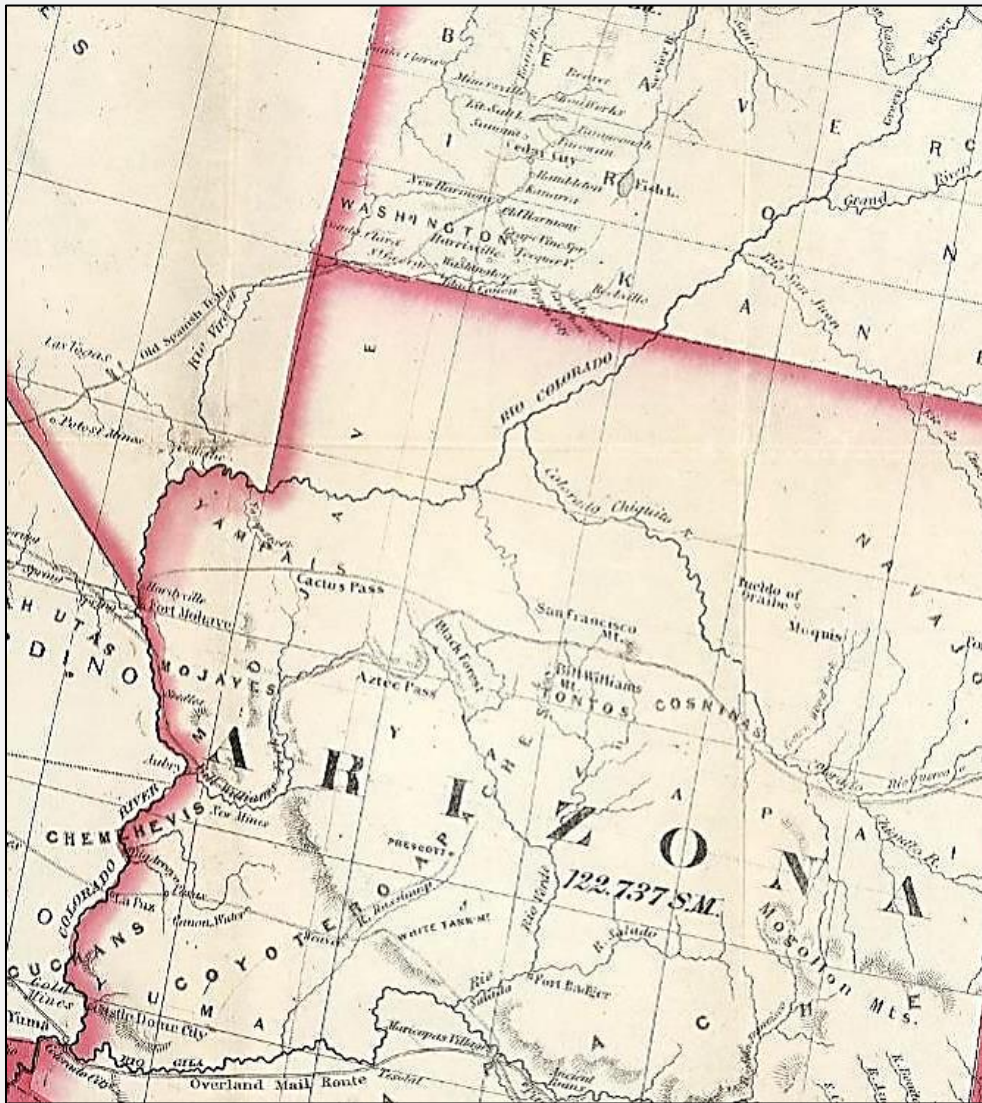
▲ Fig. 5.9 Dufour, A. H. [Dufour, Adolphe Hippolyte] 1863 Mexique[,] Antilles, États-Unis, dressés par A. H. Dufour[,] gravés par Ch. Dyonnet. Paris. Abel Pilon, Editeur, Rue de Fleurus, 33. (Spamer 25.1015) [This map was used in various atlases, as indicated in part by the notations, "Atlas Universel, Pl. 39." and "Géographie moderne Pl. 30." The same map has been seen with a publisher's attribution in the title panel, "Armand le Chevalier Rue Riobeheu, 61". Other variants or eds. can be identified.]

*Rio Colorado Occidentale* (Colorado River of the West) is depicted definitively only between a point north of the confluence of *R. Gila* and the gulf. North of there, the river is depicted by a dashed line—including its confluent headwater rivers, *Green (R. Verte)* and *R. Grande* (Grand River, not the Rio Grande of the Gulf of Mexico). From that confluence the Colorado's course is south-southwest until a point beyond the confluence of *R. Jaquesila (R. Rouge)* (Little Colorado River, with Red River as an alternate name) that is depicted definitively by a solid line. From there the Colorado turns southwest through what is the Grand Canyon region, then west to the confluence of *R. S<sup>a</sup> Clara (R. Vierge)* (Virgin River, depicted definitively except for the lower reach near the Colorado, where the Colorado is also shown by a dotted line).



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

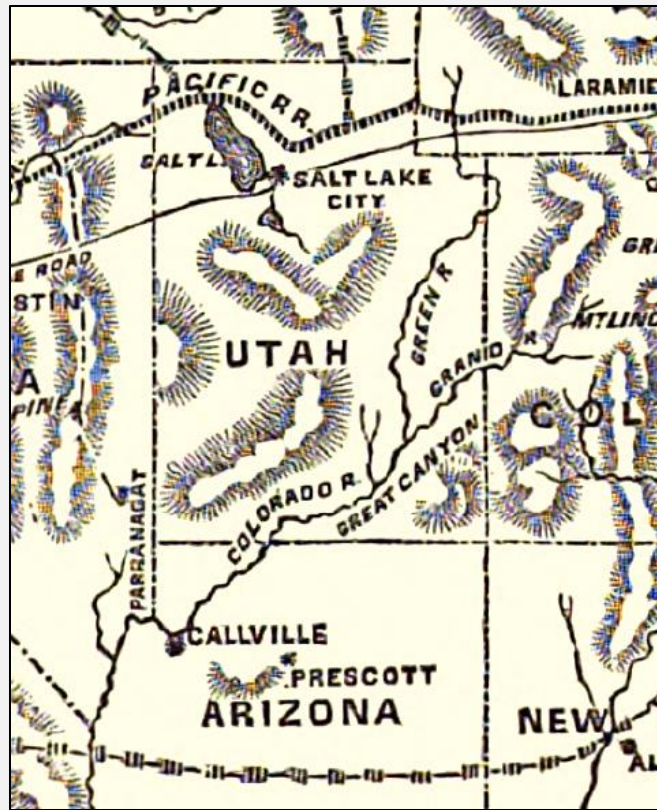
### 5. Modified Linear Colorado River



▲ Fig. 5.10 H. H. Lloyd and Co. 1866 **New Map of the U.S. Territories and Pacific States Published by H. H. Lloyd and Co. 21 John St. New York. 1866.** (Spamer 25.1136)

The Colorado River is labeled *Colorado River* in its lower reach and *Rio Colorado* in its upper reach. Its course is drawn somewhat fancifully southwest from the confluence of *Green River* and *Grand River* to the confluence of *Colorado Chiquito R.*, which arrives directly from the southeast as does an unlabeled tributary farther downstream (Cataract Creek), after which the Colorado turns directly west to the confluence of *Rio Virgen*, then southward to the gulf. Strikingly obvious is the carelessly jittery course lines that show that no real intention was had to display precise courses; and the faintly drawn trace of the Beale Wagon Road or the surveyed 35th parallel railroad road is so smooth as to beggar realism.

5. Modified Linear Colorado River



▲ **Fig. 5.11 Bowles, Samuel 1869 Map to Accompany "Our New West" by Samuel Bowles.** *In:* Bowles, Samuel, *Our new West. Records of travel between the Mississippi River and the Pacific Ocean.* Hartford, Connecticut: Hartford Publishing Co.; New York: J. D. Dennison; Chicago: J. A. Stoddard; and Augusta, Georgia: E. Nebhut, p. [xxii] (facing p. 23, start of Chapter I).] (Spamer 25.2096)

The full map (*not shown*) is a diagrammatic one, embracing most of the western U.S., west of the Great Lakes and the Mississippi River, except for the tier south of the latitude of Albuquerque and Los Angeles.

From the confluence of *Green R* and *Grand R*, the course of *Colorado R.* is south-westward, arcing to the west just north of the Utah-Arizona boundary, along which the label *Great Canyon* appears (the label is positioned entirely within *Utah*). Thereafter its course turns south-southwest to cross the boundary, then southwest directly to *Callville*, which is mispositioned in *Arizona*, approximately where would be the confluence of Diamond Creek (not shown). From there the Colorado turns northwest to the Nevada boundary, then follows a generally southward course to pass off the map. Only two tributaries to the Colorado are delineated (neither labeled); one, in Utah, from the north; the other is probably the Virgin River, the confluence of which is placed too far south, below the great bend, as depicted on some contemporary maps.

Also of note is the town of *Prescott*, positioned in the center of the territory of Arizona. The 35th parallel railroad route is shown very generally; its symbolic marking is defined as an "unfinished" railroad.



5. Modified Linear Colorado River



▲ Fig. 5.12 Furne, Jovet et Cie. 1882 **Amérique Septentrionale.** In: *Atlas universel de géographie moderne : physique, politique, historique, industriel, commercial et militaire : adopté par le Ministère de la Guerre pour l'École de Saint-Cyr.* Paris: Furne, Jovet et Cie, Éditeurs (Jovet et Cie, successeurs). (Spamer 25.1992)

*Colorado Occid!* (*Colorado Occidentale*, Colorado of the West) is depicted on a course from the confluence of *Colorado Vert* (Green River!) and *Grand Colorado* (Grand River!) south-southwesterly until it reaches the Grand Canyon area. From there it arcs to the west-northwest before turning south at the confluence of the Virgin River (not labeled).

This is an unusually late depiction of this style. It copies from, or simply reuses, an older map, as is suggested by the label, *Terr<sup>re</sup> d'Arizona* (*Territoire d'Arizona*, Arizona Territory—created from a part of New Mexico Territory in 1863) and the presence of *Arizona City* near the confluence of the Gila River (that river is also not labeled).



5. Modified Linear Colorado River



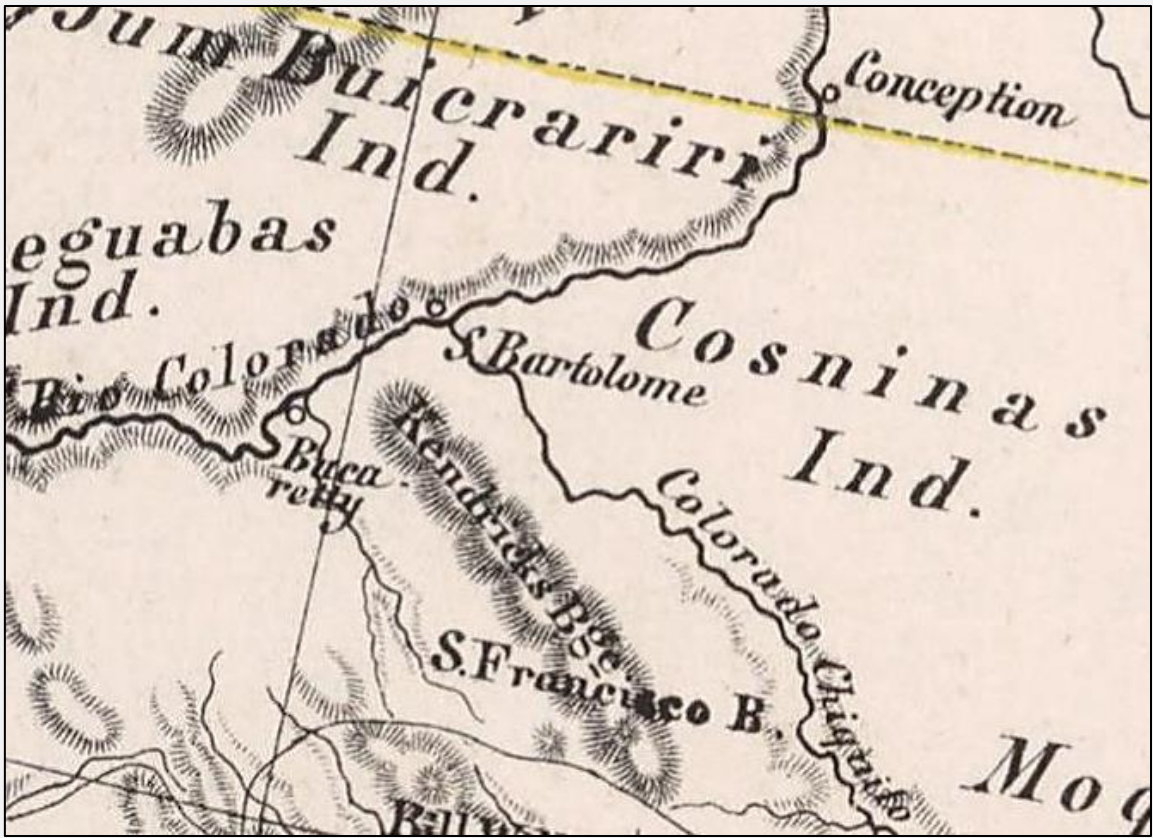
▲ ► Fig. 5.13 Sohr-Berghaus [Sohr, Karl, and Berghaus, Heinrich] 1884 Vereinigte Staaten von Nordamerika (4 sheets); see specifically, *Vereinigte Staaten, südwest. Blatt*. In: *Sohr-Berghaus Hand-Atlas über alle Theile der Erde. Neu bearbeitet von F. Handtke. 7. Auflage. Ausgabe in 100 Blättern*. Glogau: Verlag von Carl Flemming. (Spamer 25.2047)

The Colorado River is labeled *Rio Colorado del Occidente* (Colorado River of the West) on its lower course (not shown in this detail) and *Rio Colorado* on its upper course. From the confluence of *Green R.* (not shown in this detail) and *Grand R.* its course arcs from southwest to south, before turning southwest again to pass through what is the Grand Canyon region—an unusually late depiction of this style, suggesting simple reuse of the map. The only tributaries in this reach are the *Colorado Chiquito* (Little Colorado River) and an unlabeled tributary from the southeast that in this depiction heads near *Bill Williams B.* (*Bill Williams Burg* [Mountain]), which is *Cataract Creek*. A mountain range, *Kendricks Bg<sup>e</sup>* (*Kendrick's [Ge]birge*) with *S. Francisco B.* at its southern end, conflates *Kendrick's Peak* and the *San Francisco Peaks* generally. In an astonishing misplacement and corruption of the antiquated term of *Puerto de Bucareli*, the label *Bucaretty* appears as a *place name* at the *Cataract confluence*; and at the confluence of the *Little Colorado*, where *Puerto de Bucareli* should have been labeled (if at all), is the place-name *S. Bartolome*, a remnant from the many ecclesiastically named campsites mapped from the *Domínguez–Escalante expedition of 1776*. From there, the Colorado turns directly west to the confluence of the *Virgin River* (not labeled), then arcs south to southeast before turning (out of view here) southward to the gulf.

Given the dated appearance of this map, the thin, circuitous line crossing the lower part of this detail view is probably the route of the *Beale Wagon Road*.

THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

5. Modified Linear Colorado River







## **6. The Egloffstein Model and Variants**

**(Examples 1861–1885)**

In 1858, the Colorado River Exploring Expedition commanded by Army lieutenant Joseph C. Ives ascended the Colorado in a small, purpose-built steamboat from the gulf nearly to where today is Las Vegas Wash in the lower Lake Mead area. From Beale's Crossing, a land expedition set out, which reached the Grand Canyon at Diamond Creek (descending to the Colorado River on Peach Springs Wash) and again at Cataract Creek (where a descent to the river was aborted). The cartographer of the expedition, Friedrich Wilhelm von Egloffstein, produced the first reasonably accurate maps of the lower Colorado River and the Grand Canyon region. The maps were published in Ives' formal report, a U.S. congressional document, in 1861. The Grand Canyon map, however, is largely conjectural in the central and eastern parts of the canyon because it was impossible for the explorers to reach the Colorado River or the geographically important confluence of the Little Colorado River; nor did they visit the main part of the South Rim. Egloffstein's style became for years the standard model for the Colorado River's course in the Grand Canyon and the arrangement of its tributaries. Accordingly, various redrawings of these relationships appeared on maps, even stubbornly long after the more definitive exploration made by John Wesley Powell on the Colorado River in 1869, and again in 1871–1872, with careful topographical surveys of the greater Grand Canyon region. Powell's river expeditions produced no maps from the river course, but his years-long geological and geographical surveys in the region north of the Grand Canyon did finally generate accurate maps at least at small scales. The course of the Colorado was firmly established by Powell's surveys, as was also the geographical position of the Little Colorado confluence, facts that were not always conveyed on newer, commercially produced maps.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 6. The Egloffstein Model and Variants



▲ **Fig. 6.1** Egloffstein, F. W. von [Egloffstein, Friedrich Wilhelm von] 1861 Map No. 2. Rio Colorado of the West, Explored by 1<sup>st</sup> Lieut. Joseph C. Ives, Top! Eng<sup>rs</sup> under the direction of the Office of Explorations and Surveys, A. A. Humphreys, Capt. Top! Eng<sup>rs</sup> in charge, by order of Hon. John B. Floyd, Secretary of War. 1858. drawn by Fr<sup>hr</sup> F. W. v. Egloffstein. Topographer to the Expedition. Scale of 12 miles to one Inch or 1:760320. *In:* Ives, Joseph C., *Report upon the Colorado River of the West, explored in 1857 and 1858 by Lieutenant Joseph C. Ives, Corps of Topographical Engineers, under the direction of the Office of Explorations and Surveys, A. A. Humphreys, Captain Topographical Engineers, in charge. By order of the Secretary of War.* Washington, D.C.: U.S. Government Printing Office. (Volume: *U.S. 30th Congress, 1st Session, House Document 90, Serial 1058.*) (Spamer 25.944)

This map is well known for its highly conjectural depiction of the greater Grand Canyon region. It served as the authoritative, standard model for some time. *Big Cañon of the Colorado* is labeled prominently. *Colorado Plateau* is labeled on the south side of the Colorado. Notably, *Cataract Creek* is a tributary to *Little Colorado or Flax River*, which in turn reaches the *Colorado River* nearly at longitude 113° W. At the Little Colorado confluence the main Colorado is depicted arriving from the northeast, although that course is shown only a short distance before it fades into unmapped territory to the north. A short distance northeast of the confluence of *Diamond River* a prominent tributary (not labeled) arrives from the northwest; this is Parashant Canyon. Between the Colorado and the Parashant tributary the features of the plateau are labeled *North Side M<sup>ts</sup>*.

**Next three pages:** Details of the central and eastern Grand Canyon areas, and of the confluences area of the Little Colorado River, Cataract Creek, and Colorado River (on which note the labels for “Cataract Creek” and “Yampais Village”).

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 6. The Egloffstein Model and Variants



Detail of the central Grand Canyon area. The confluence of *Diamond River* (Diamond Creek) is shown at bottom center. Just upstream from there, the awkwardly drawn open space is the Parashant Canyon area (on the north side), as it might be interpreted in distant views from the south-side plateau. The noticeable thin lines on the south side are the routes traveled by the Ives expedition in 1858, which Egloffstein accompanied.

Some later cartographers have forced the Colorado River, in its course from Utah, into the Parashant Canyon position, even though Egloffstein displays the Colorado arriving from the northeast to reach the supposed confluence of the Little Colorado River. The Little Colorado is seen in this detail (*see also further details on the next two pages*) arriving from the southeast, turning to the southwest and receiving the tributary *Cataract Creek* from the southeast, before continuing west-southwest to its confluence with the main Colorado. Some later cartographers retained Egloffstein's course for the Colorado coming from Utah. They occasionally retained the Parashant Canyon tributary (but never labeled it separately), while other times they eliminated it altogether.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 6. The Egloffstein Model and Variants



Detail of the Diamond Creek-Parashant Canyon area. The noticeably bulbous space is the confluence area of Parashant Wash; its openness is exaggerated by the cartographer not having filled in the intricate canyon walls there while superimposing a landscape of faint, narrowly spaced tributaries. The generalities of the open space is a topographical interpretation likely influenced by long, horizontal sight lines from the plateau.

In addition to the dashed lines of the routes of the Ives expedition, note the solid line delineating a supposed *Ind[ian]. trail* between *Diamond River* and an undefined minor Colorado tributary independent of the nearby Cataract Creek (no doubt it was meant to join with the *Yampais Village*; see next page).



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

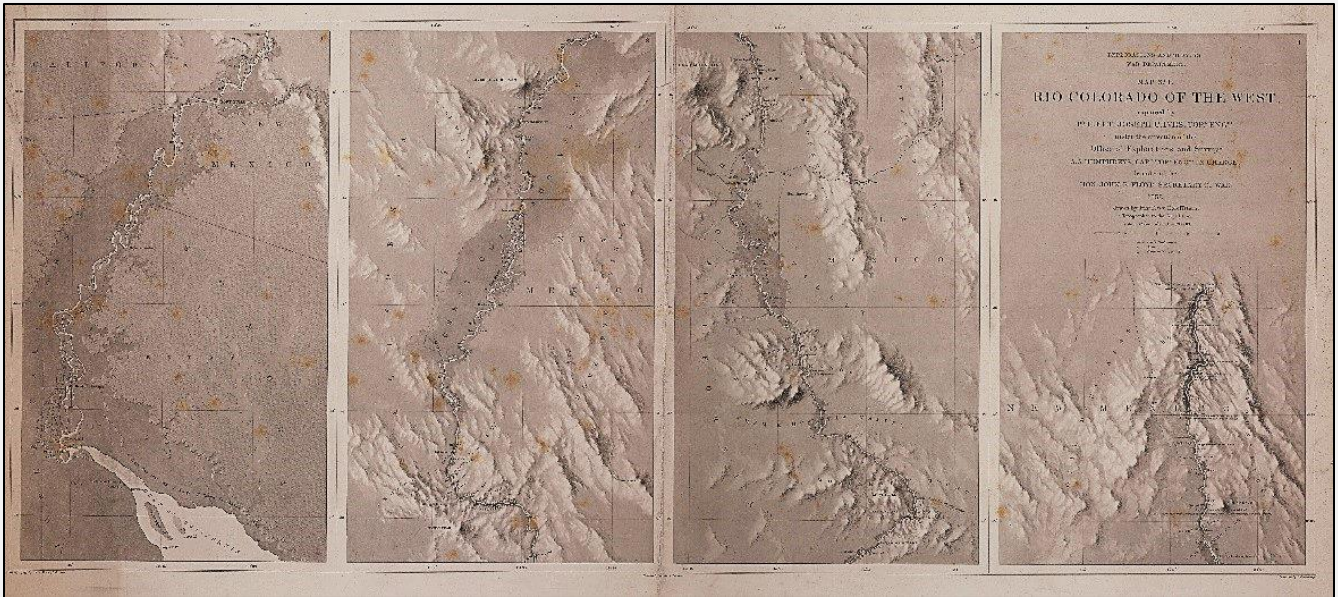
### 6. The Egloffstein Model and Variants



Detail of the confluences of the Little Colorado River, Cataract Creek, and Colorado River (on which here note the labels for *Cataract Creek* and *Yampais Village*, the latter being the village of the Havasupai tribe known today as Supai). The stream arriving from the northeast is the Colorado River; the one from the east is the Little Colorado River; and Cataract Creek (labeled) from the southeast. All of these interpretations by Egloffstein were the result only of distant views, not on detailed ground-based surveys except on the west side of Cataract Creek. What he interpreted as the Little Colorado River coming from the east and southeast was in fact the main Colorado; the stream from the northeast possibly mismapped as an extension of Kanab Creek. The Ives expedition never saw the easternmost part of the Grand Canyon, nor the actual Little Colorado confluence, the definitive location of which remained unknown until John Wesley Powell's first Colorado River expedition of 1869. The crenulated system of tributaries is conceptually stylized rather than precise.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 6. The Egloffstein Model and Variants



▲ ► Fig. 6.2 Egloffstein, F. W. von [Egloffstein, Friedrich Wilhelm von] 1861 Map No. 1. Rio Colorado of the West, Explored by 1<sup>st</sup> Lieut. Joseph C. Ives, Top<sup>l</sup> Eng<sup>rs</sup> under the direction of the Office of Explorations and Surveys, A. A. Humphreys, Capt. Top<sup>l</sup> Eng<sup>rs</sup> in charge, by order of Hon. John B. Floyd, Secretary of War. 1858. drawn by Fr<sup>hr</sup> F. W. v. Egloffstein. Topographer to the Expedition. Scale of 6 miles to one Inch or 1:380160. *In:* Ives, Joseph C., *Report upon the Colorado River of the West, explored in 1857 and 1858 by Lieutenant Joseph C. Ives, Corps of Topographical Engineers, under the direction of the Office of Explorations and Surveys, A. A. Humphreys, Captain Topographical Engineers, in charge. By order of the Secretary of War.* Washington, D.C.: U.S. Government Printing Office. (Volume: *U.S. 30th Congress, 1st Session, House Document 90, Serial 1058.*) (Spamer 25.493)

This map (four panels on one sheet) depicts the region bounding the Colorado River between its mouth in the Gulf of California (left panel) and the head of navigation, in the vicinity of where today is Hoover Dam. The course of the river is very well displayed, including the intricate channeling of the delta region (*see Fig. 6.2a*).

“Map No. 1” shows the river corridor along its north–south axis; “Map No. 2” (*Fig. 6.1*) shows the Grand Canyon region east–west; the division is at the so-called Great Bend of the Colorado, where the river’s course below the confluence of the Virgin River transitions from west to south.



THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

6. The Egloffstein Model and Variants

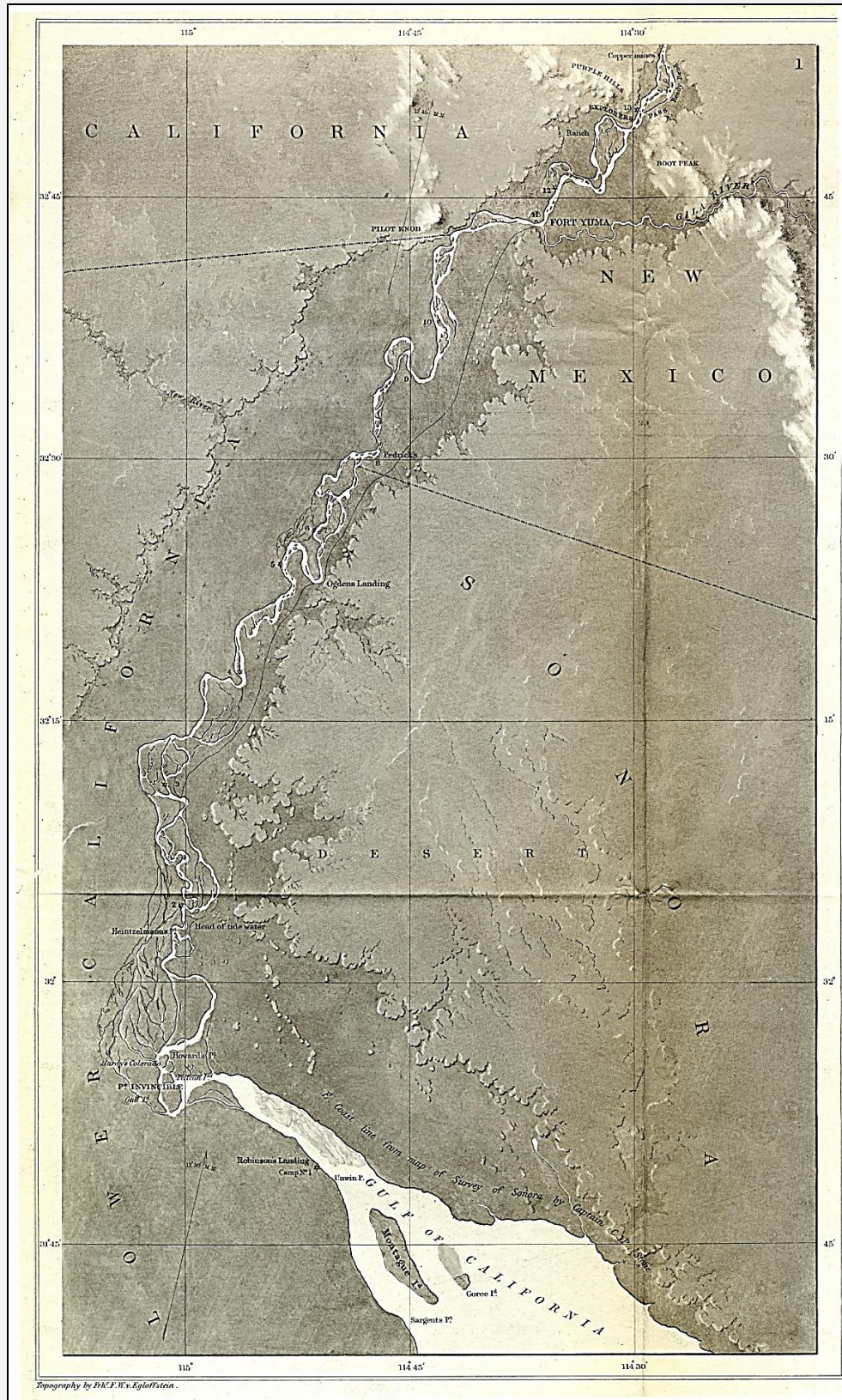
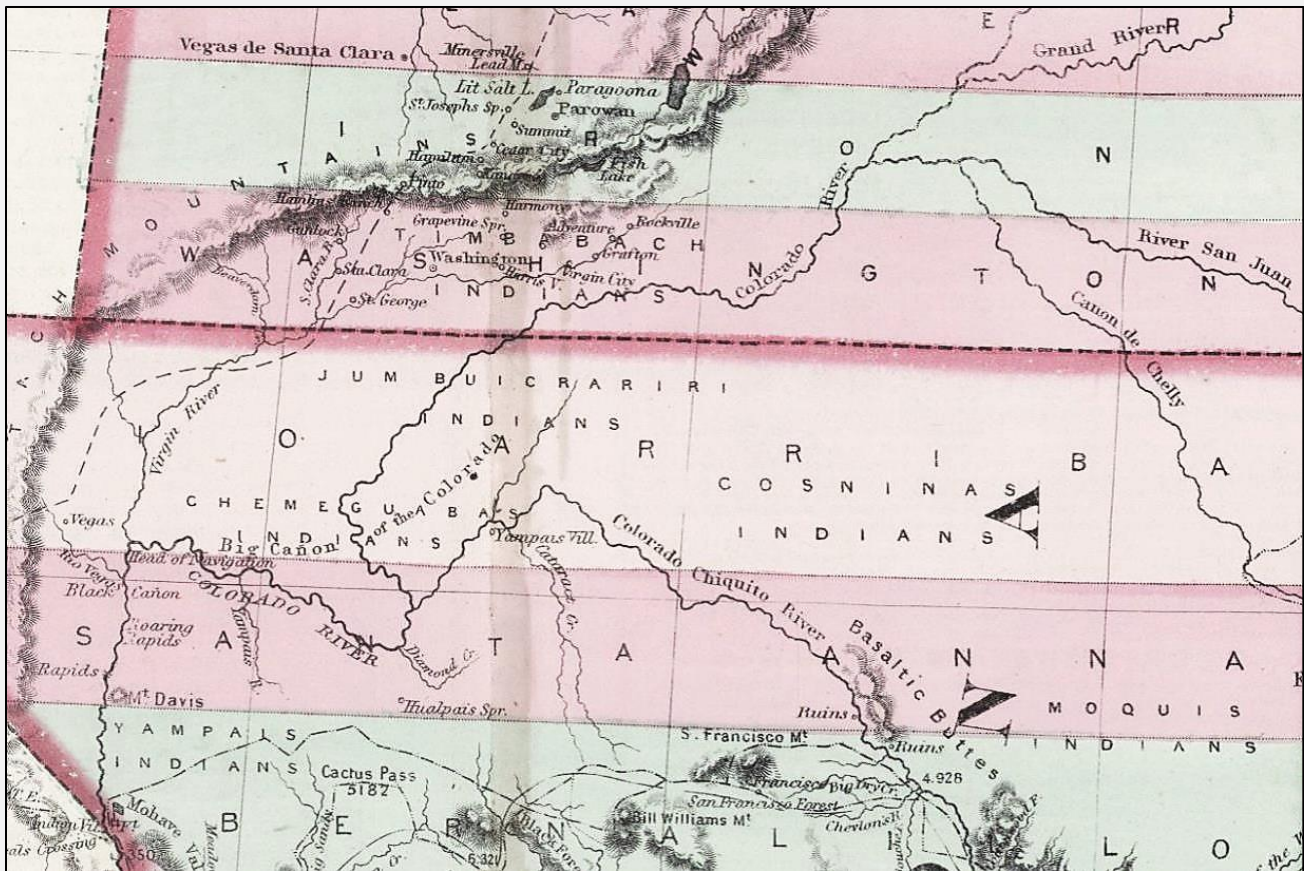


Fig. 6.2a. Panel 1 of Egloffstein's "Map No. 1."



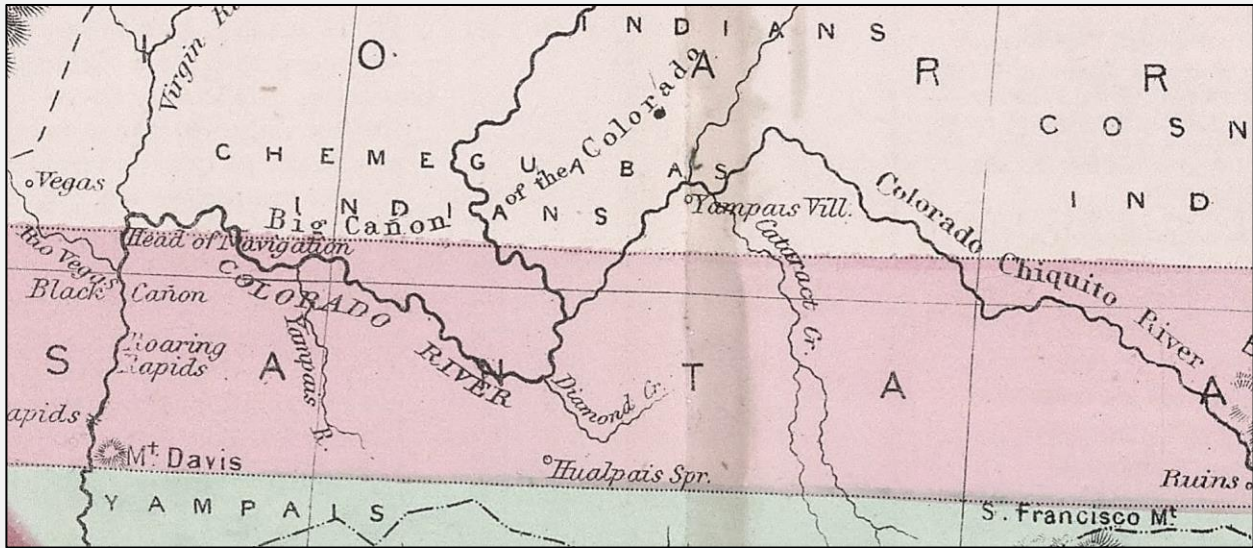
# THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

## 6. The Egloffstein Model and Variants



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 6. The Egloffstein Model and Variants



◀ ▲ **Fig. 6.3 Colton, J. H. [Colton, Joseph Hutchins] 1865 Colton's Map of California, Nevada, Utah, Colorado, Arizona & New Mexico. Published by J.H. Colton 172 William St. New York.** *In: Colton's general atlas, containing one hundred and eighty steel plate maps and plans, on one hundred and eight imperial folio sheets, drawn by G. Woolworth Colton. Letter-press descriptions, geographical, statistical, and historical, by Richard Swainson Fisher. New York: J. H. Colton Co., and London: Bacon and Co. (Spamer 25.1703)*

This is a remarkable confusion that, influenced by the Egloffstein map and in some measure “filling in” the unknowns of that map, do not even closely follow Egloffstein’s suggested courses, while boldly forcing the Colorado through Egloffstein’s Parashant Canyon route (refer to Fig. 6.1 and details).

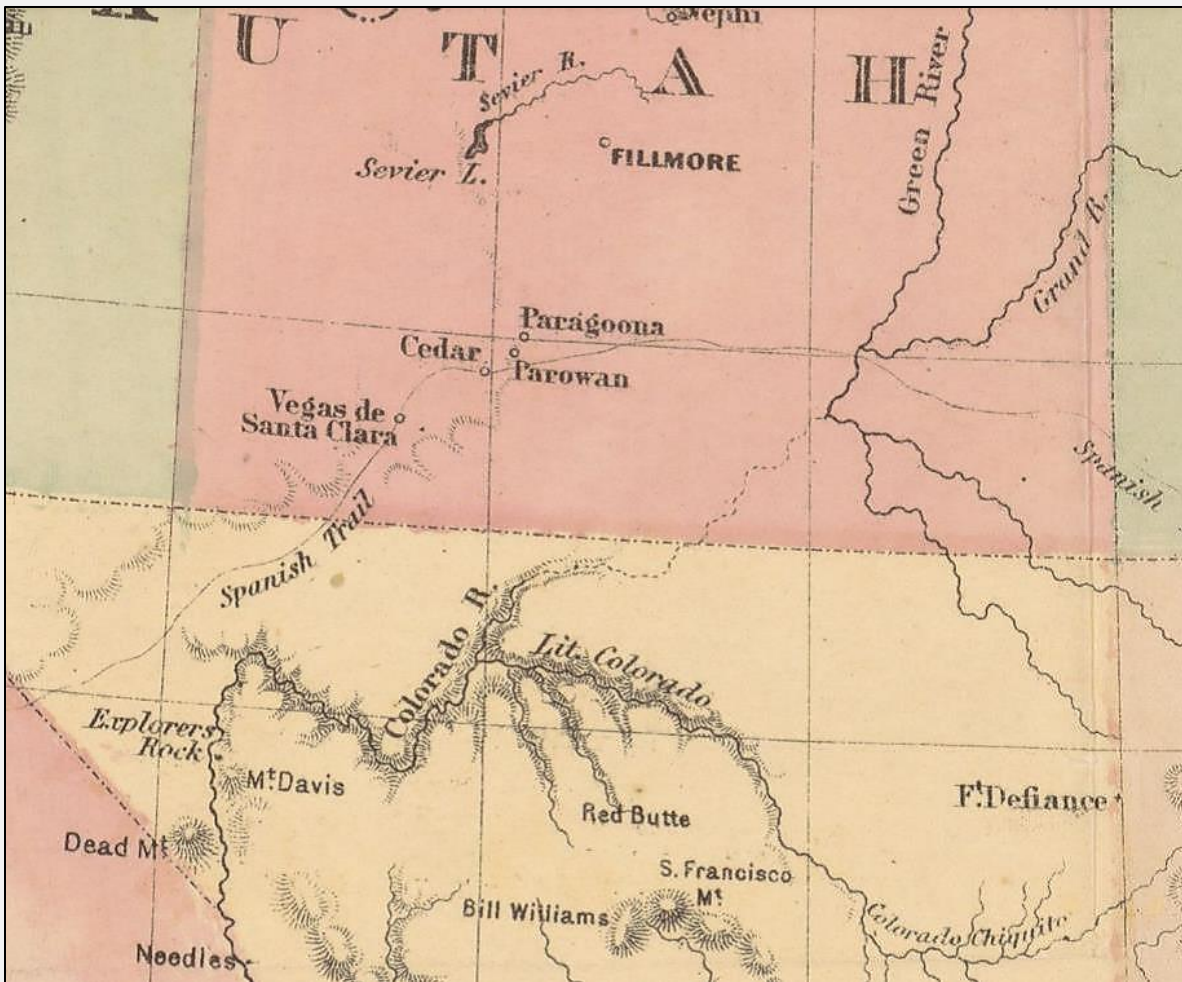
In its lower course the Colorado River is labeled *Rio Colorado*; from the confluence of *Grand River* and *Green River* through *Big Cañon of the Colorado* it is labeled *Colorado River*. Downstream from the Grand-Green confluence, the Colorado’s course is southwestward, but before reaching the Utah-Arizona boundary it turns due west, eventually turning southwestward again to cross the boundary due north of the mapped *Cataract Cr.* confluence. Then it turns southeastward (through the Parashant Canyon route) to a point north-northwest of the *Diamond Cr.* confluence, thence turns south-southwest to *Diamond Creek* and west-northwest to the confluence of *Virgin River* at *Head of Navigation* above the confluence of *Rio Vegas* (Las Vegas Wash) and the head of *Black Cañon*.

*Colorado Chiquito River* (Little Colorado River) follows a northwestward course before turning sharply to the southwest, receiving *Cataract Cr.* at *Yampais Vill.* where it turns briefly northwestward where it receives a tributary (not labeled) from the northeast (a Kanab Creek extension?). From that point it turns southwestward to its confluence with the Colorado, at the point aforementioned north-northwest of the *Diamond Creek* confluence.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 6. The Egloffstein Model and Variants

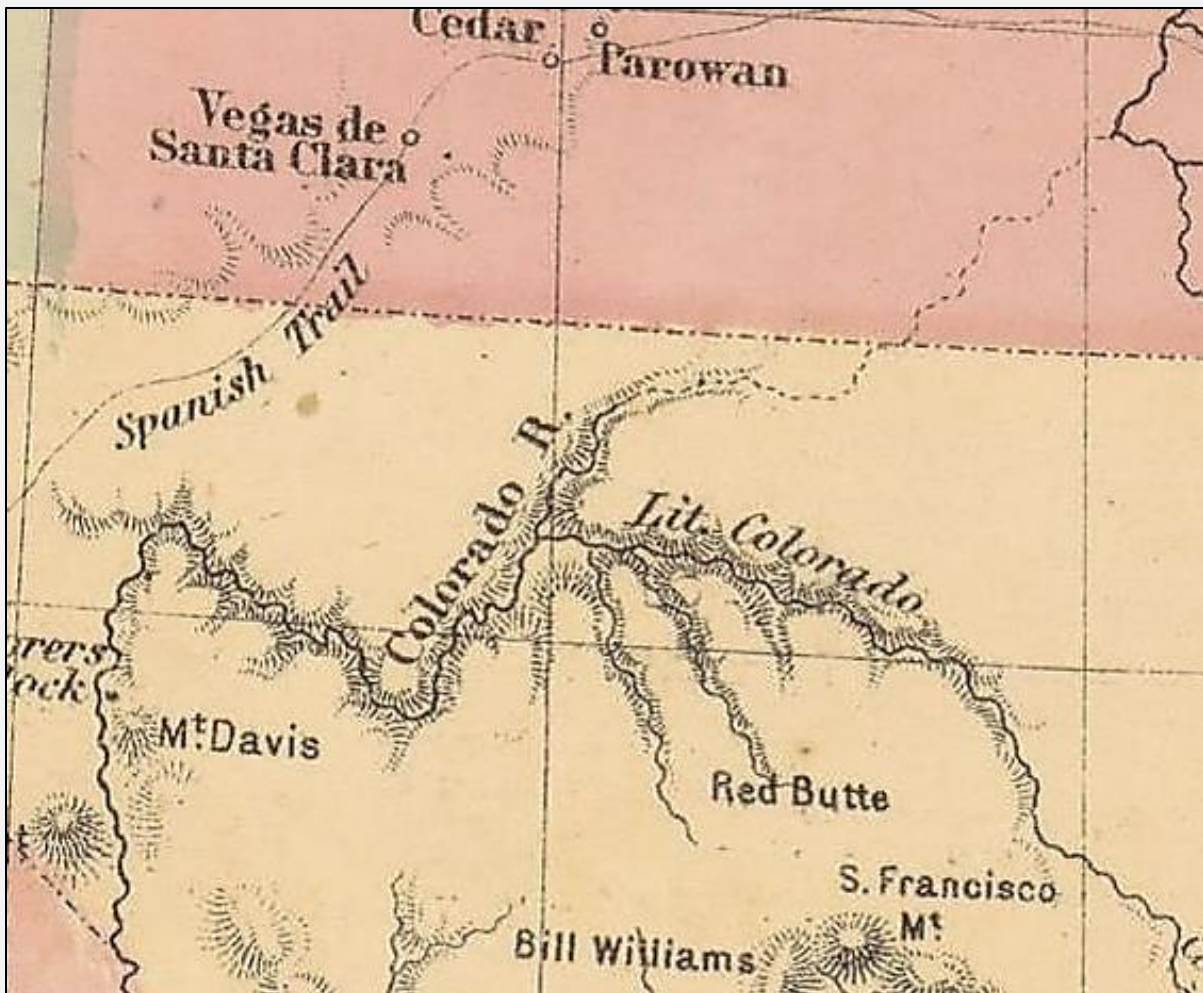


▲ ► Fig. 6.4 Goldthwait, J. H. [Goldthwait, Jonathan H.] 1865 Map of the Territories & Pacific States to accompany "Across the Continent" by Samuel Bowles. In: Bowles, Samuel, *Across the continent: A summer's journey to the Rocky Mountains, the Mormons, and the Pacific States, with Speaker Colfax.* By Samuel Bowles, Editor of *The Springfield (Mass.) Republican*. Springfield, Massachusetts: Samuel Bowles and Co.; New York: Hurd and Houghton. [Except for the map, this book is extralimital to this cartobibliography.] (Spamer 25.1251)

Below the confluence of *Green River* and *Grand R.*, the *Colorado R.* follows a southwestward course to the confluence of what probably is the *San Juan River*. Beyond this juncture the Colorado's course is delimited conjecturally by a dashed line, turning westward once the Utah–Arizona boundary is crossed. It then aligns on Egloffstein's supposed course that comes to the confluence of the *Lit. Colorado River* (also labeled *Colorado Chiquito*) in what is actually the central *Grand Canyon*. The Colorado, between a point north of the *Little Colorado* confluence and the great bend, as well as the lower course of the *Little Colorado* and unlabeled tributaries to it, is demarcated by hachures to indicate encanyoned reaches.

THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

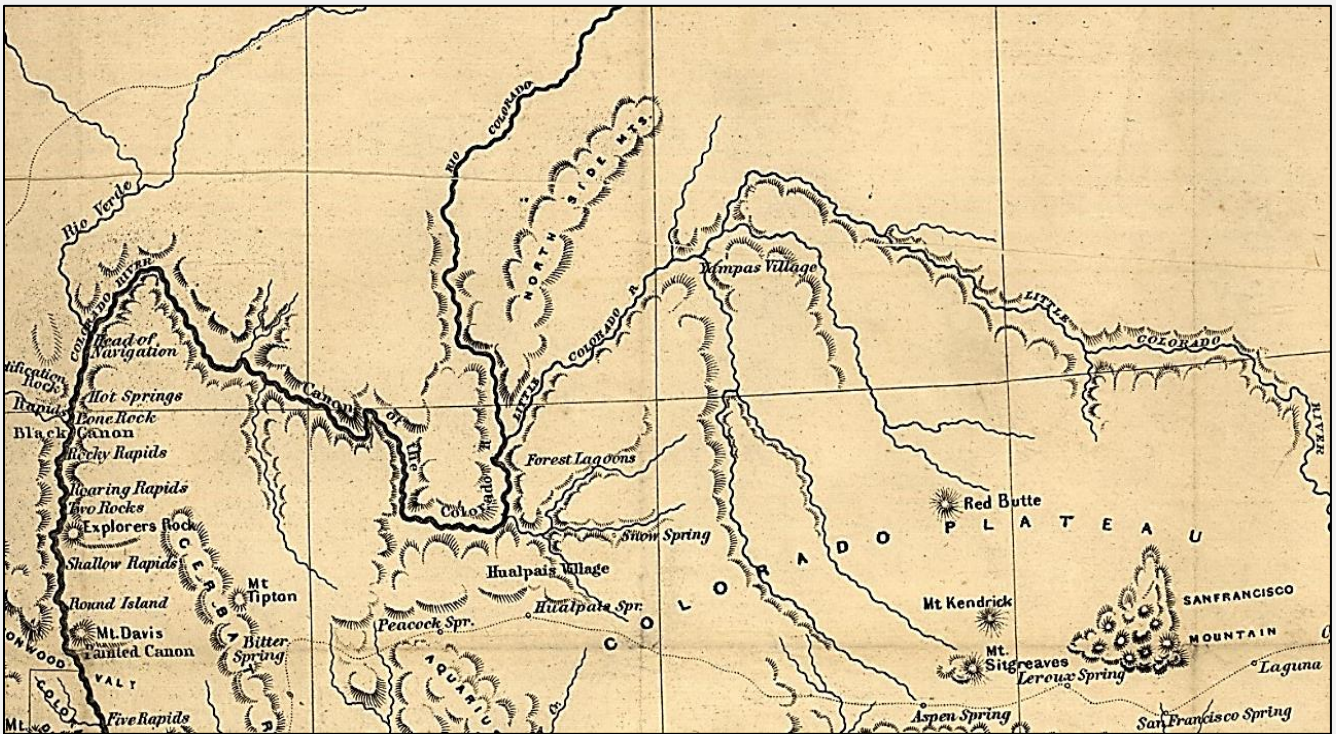
6. The Egloffstein Model and Variants





## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 6. The Egloffstein Model and Variants



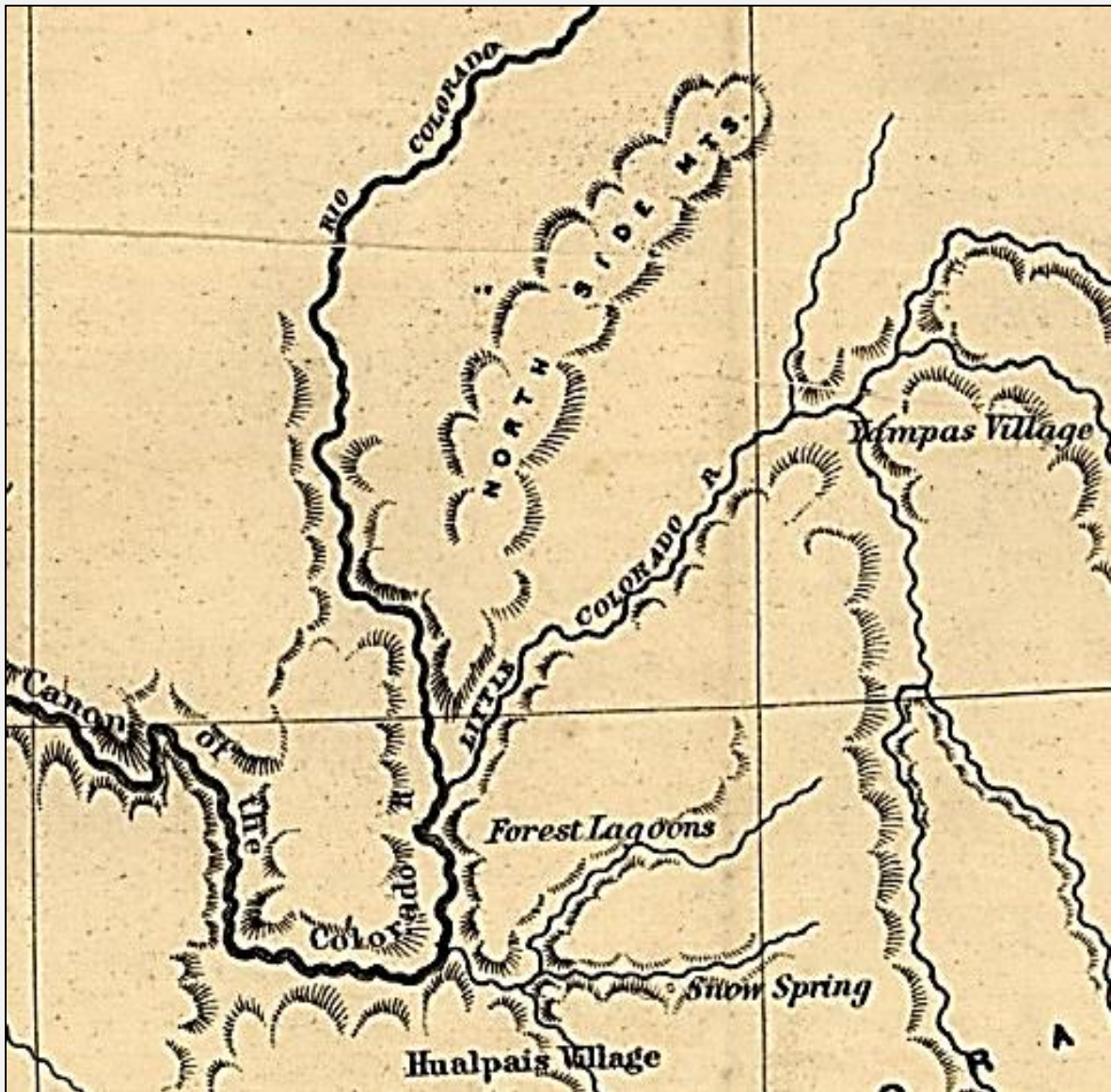
▲ ► Fig. 6.5 Hartley, William B. [1865?] Hartley's map of Arizona from official documents. Office 32 Pine St. N.Y. [No imprint.] (Spamer 25.50)

*Rio Colorado* comes into Arizona following the Parashant Canyon route, labeled *Canon of the Colorado R.* about where Egloffstein placed his banner label, passing to the west of the *North Side Mts.* to reach the confluence of *Little Colorado R.* Egloffstein's own interpreted Colorado River course, coming from the northeast to the confluence of the Little Colorado River near *Yampas Village* on the unlabeled Cataract Creek, is reduced to a meager tributary to the Little Colorado, which may be an interpretation of an extension of Kanab Creek. Farther downstream on the Colorado, still on a southerly course before turning westward, is the confluence of Diamond Creek (not labeled) and the notation *Hualpais Village* (Peach Springs).



THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

6. The Egloffstein Model and Variants



# THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

## 6. The Egloffstein Model and Variants



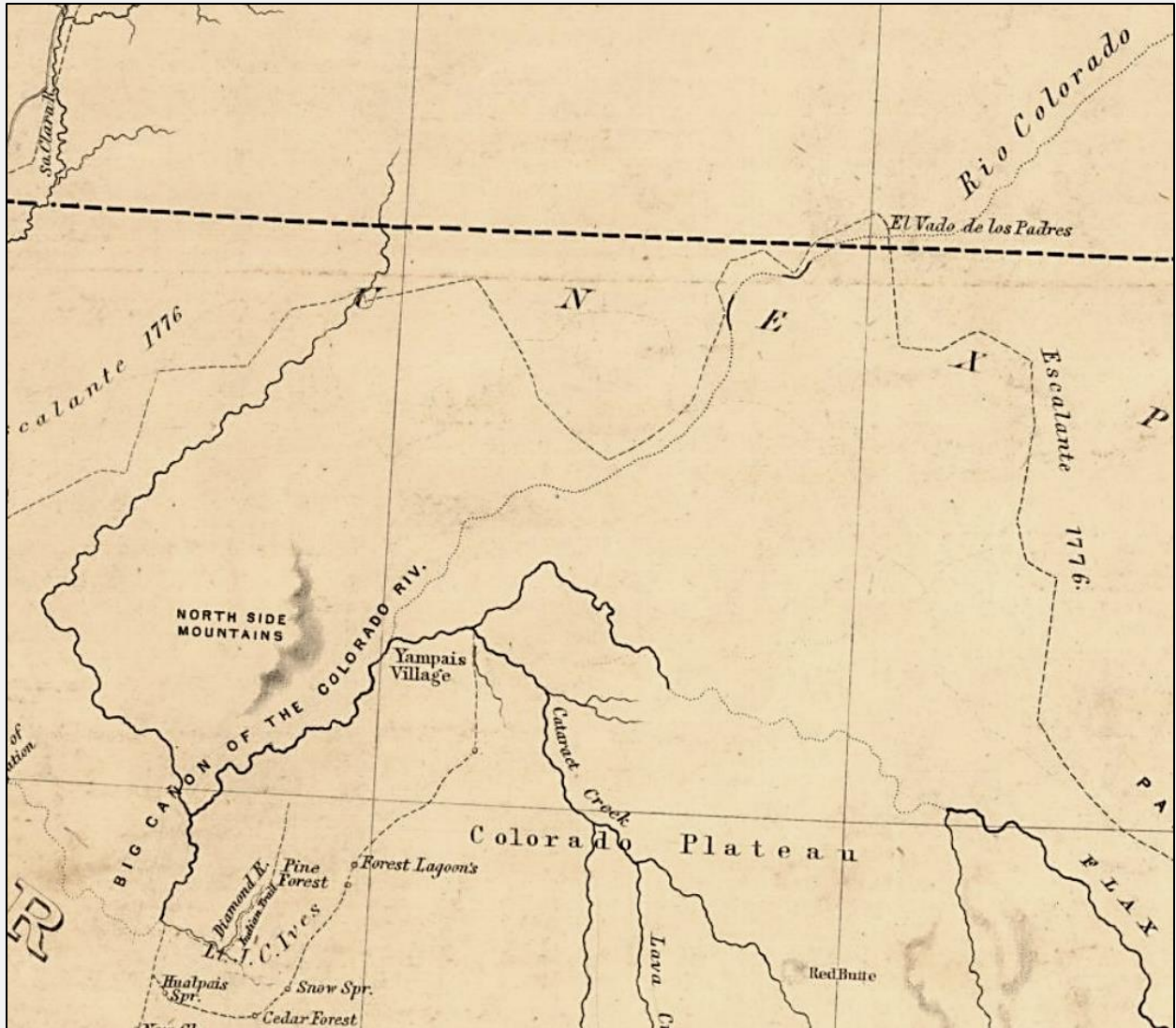
▲ ► Fig. 6.6 U.S. Army Corps of Engineers [Corps of Topographical Engineers] 1867 Old Territory and Military Department of New Mexico compiled in the Bureau of Topog. Eng<sup>rs</sup> of the War Dep<sup>t</sup> chiefly for military purposes under the authority of the Secretary of War 1859 Partially revised and corrected to 1867. (Spamer 25.97)

With some embellishment, the wholly conjectural course of *Rio Colorado* is south-west along a lightly dotted line from Utah to strike the confluence of *Flax River* (Little Colorado River) according to Egloffstein's conjectured confluence area. Egloffstein's Parashant Canyon tributary is inexplicably extended with implied certainty into Utah, its upper course paralleling the Colorado. From *Diamond R.* (Diamond Creek) the Colorado's course continues, there labeled *Colorado River*, mostly northwestward to the confluence of *Rio Virgen* (Virgin River) below which on its southerly course it becomes definitive in light of the data from the Ives expedition. *Big Cañon of the Colorado Riv.* is labeled just about where Egloffstein's prominent banner label is placed on his map.



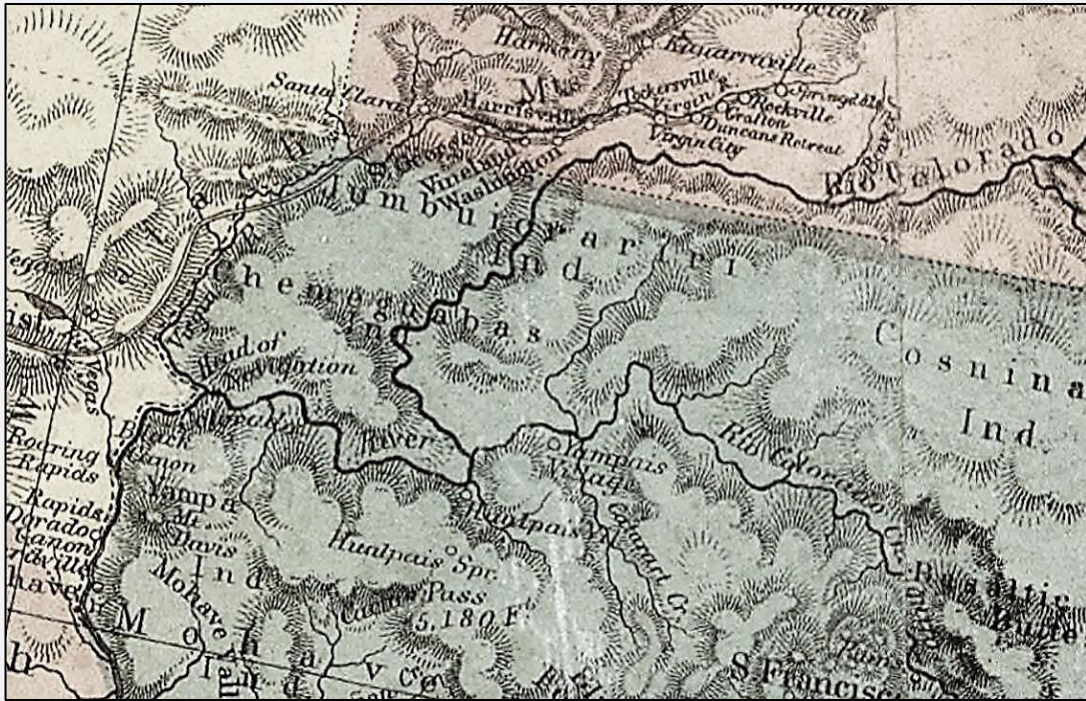
THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

6. The Egloffstein Model and Variants





6. The Egloffstein Model and Variants



▲ ► **Fig. 6.7 Lloyd, J. T. [Lloyd, James T.] 1868** Lloyd's Topographical Railway Map of North America, or the United States Continent in 1900 J.T. Lloyd, Publisher {New York 23 Cortland St. {London, 83 Fleet Street 1868. ("Entered according to Act of Congress in the Year 1865 by J. T. Lloyd, in the Clerks Office of the District Court of the U. S. for the Southern District of New York.") ("Scale of Map 83¼ Miles to an inch or 1:5,274,720 of Nature.") [Regarding the title, Phillips notes, "Giving 1900 as the possible date for the completion of certain railroads, etc." (Phillips, P. Lee, *A list of maps of America in the Library of Congress preceded by a list of works relating to cartography* [Washington: Government Printing Office], p. 610).] (Spamer 25.2009) [See also Fig. 6.12.]

*Rio Colorado* is delineated from the confluence of *Green Riv.* and *Grand R.* to the gulf. En route it receives *Rio San Juan* from the east and shortly later *Rio de Chelly* from the southeast before turning to run westwardly north of the Arizona-Utah boundary. It eventually turns southwest and southeast to reach the confluence of *Colorado Chiquito or Flax* (Little Colorado River) along the Parashant Canyon route. The Little Colorado, as with Egloffstein's interpretation, receives *Cataract Cr.* shortly before reaching the main Colorado.

The *Yampais Village* place marker is mispositioned at the Cataract–Little Colorado confluence. Opposite that point an unlabeled tributary from the northeast, which is on Egloffstein's projected course of the Colorado from Utah, may be a misinterpreted extension of Kanab Creek.

Just downstream from the supposed Colorado–Little Colorado confluence is the confluence of another tributary (not labeled, Diamond Creek) from the southeast, where *Hualpais Vil* (Peach Springs) is misplaced at that confluence (Diamond Creek's course is virtually occluded by the "Hualpais Vil" label). In the western Grand Canyon another tributary (not labeled) arrives from the south, which would be the "Yampais Creek" (or similar name) of other contemporary maps.





## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 6. The Egloffstein Model and Variants



▲ ► **Fig. 6.8 Freyhold, Edward 1868** Head Quarters Corps of Engineers. War Department. Territory of the United States from the Mississippi River to the Pacific Ocean: Originally prepared to accompany the Reports of the explorations for a Pacific Railroad Route; Made in accordance with the 10<sup>th</sup> and 11<sup>th</sup> sections of the Army Appropriation Act of March 3<sup>rd</sup> 1853; Compiled from authorized explorations and other reliable data by Lieut. G. K. Warren, Top'l. Eng'rs, In the Office of Pacific R.R. Surveys, War Dept. under the direction of Bvt. Maj. W. H. Emory, Topl. Eng'rs, in 1854. Capt. A. A. Humphreys, Top'l. Eng'rs. in 1854-1858. Recompiled and redrawn under the direction of the Chief of Corps of Engineers by Edward Freyhold 1865-66-67-68. ("Engraved & printed by Julius Bien, N.Y.") (Spamer 25.347, Wheat V:1185)

The course of *Rio Colorado* is depicted from the confluence of *Green River* and *Bunkara River* (Grand River); in the upper course the Colorado is labeled *Rio Colorado Grande*. From the *Supposed junction of the Rio Colorado & Flax Riv.* [Little Colorado River] to near *Wallapi Valley* (Hualapai Valley) the Colorado is depicted conjecturally by a dashed line, to the north of which, to *Rio Virgin*, is blank on this map. On the south side of the river in the Grand Canyon area are two tributaries that are shown heading toward the Colorado: *Lava Cr.* and *Parke Cr.*; on other maps these are shown as tributaries to one or the other, or a single tributary, that is *Cataract Creek*. The Little Colorado is depicted flowing northwestward to the Colorado. [It is this map that John Wesley Powell likely had available prior to his 1869 Colorado River expedition (*vide* Richard Quartaroli).]

Compare Freyhold, 1869 (Fig. 6.10).



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 6. The Egloffstein Model and Variants



#### ▲ Freyhold, Edward 1868 (*greater and enhanced detail*)

This image is digitally enhanced to accentuate the faintly suggested course of the Colorado River downstream from the *Supposed junction of the Rio Colorado & Flax Riv.* It clearly borrows from Egloffstein's map by including the routes followed by *Lt. Ives* and *Sitgreaves in 1851*, but it noticeably departs from the Egloffstein model by plotting the Little Colorado confluence at about where it should be and in eliminating Egloffstein's Parashant Canyon tributary. In fact, it omits everything north of the Grand Canyon's South Rim, including the river's course, despite some of Egloffstein's features (Parashant Canyon among them) really being more or less accurate.

From this it is additionally clear why this map was likely of special interest to Powell by its suggestion of a reasonable course for the Colorado through the Grand Canyon, based as it was on Egloffstein's observations in the Diamond Creek area and some more general understandings from other sources about the courses of the Colorado and Little Colorado as they approached the Grand Canyon. The map (see previous page) correctly portrays the Little Colorado's course, with, at either end of the Grand Canyon, the Paria River (not labeled) and the *Rio Virgin-Muddy River* contribution.

# THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

## 6. The Egloffstein Model and Variants





## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 6. The Egloffstein Model and Variants



◀ ▲ Fig. 6.9 Palmer, William J. [1868] Map of the Route of the Southern Continental R.R. with connections from Kansas City Mo., Ft. Smith Ark. and Shreveport La. Giving a general View of the Recent Surveys of the Kansas Pacific Railway Co., across the Continent Made in 1867 & 1868. under the direction of Gen. W<sup>m</sup>. J. Palmer. On the Routes of the 32<sup>nd</sup> and 35<sup>th</sup> Parallels. *In*: Report of surveys across the continent, in 1867-'68, on the thirty-fifth and thirty-second parallels, for a route extending the Kansas Pacific Railway to the Pacific Ocean at San Francisco and San Diego. By Gen. Wm. J. Palmer. December 1st, 1868. ("J. F. Gedney Lith, Washington. D.C.") [First state of this map. Even though the volume has been indicated to have been first available in 1869, it is clear that the map had already been produced by 1868.] (Spamer 25.600)

This is the first map to display the "Grand Canyon" name, specifically as *Grand Cañon of the Colorado River* (so labeled between the confluences of *Rio San Juan* and *Rio Virgen*). The Colorado River is labeled *Rio Colorado* on its lower course, and as *Colorado River* between the confluence of the Virgin River and the confluence of the *Green River* and *Grand River* upstream.

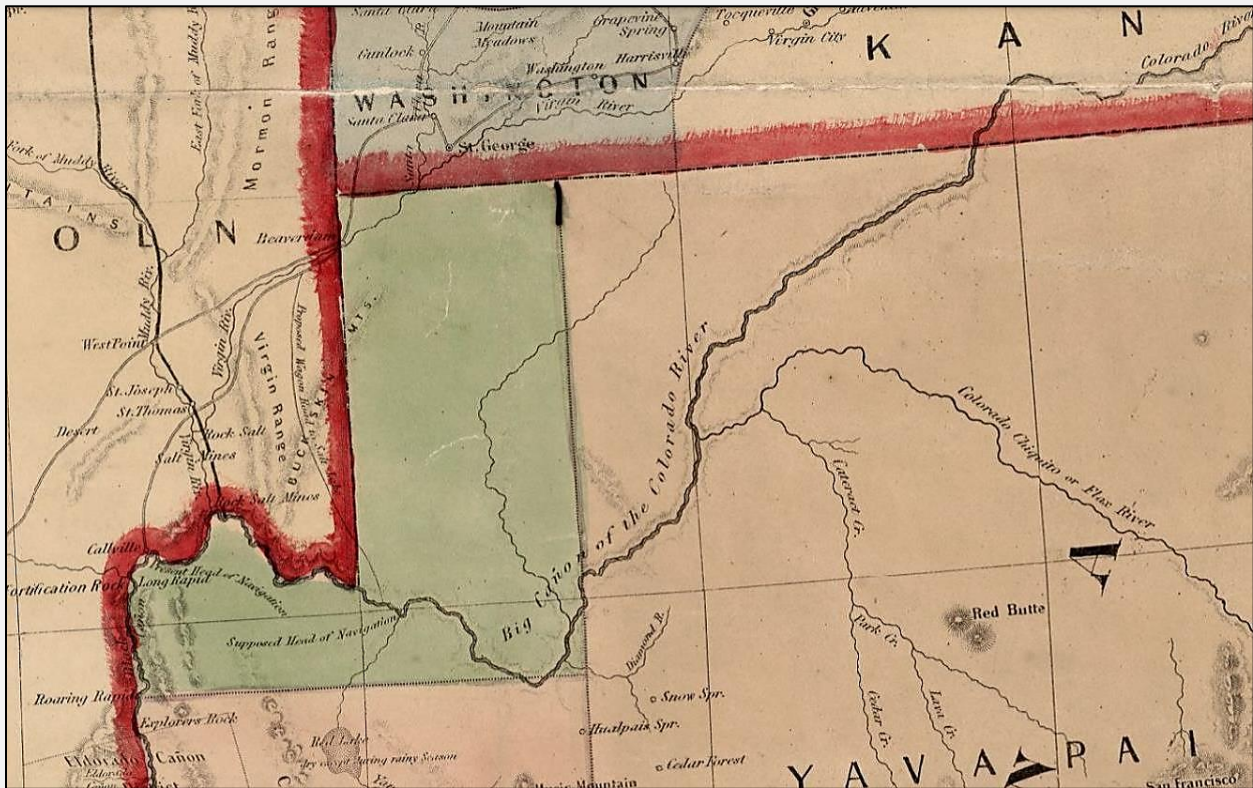
The course of the Colorado in the western Grand Canyon region is reasonably like that as now known, but between there and the Green-Grand confluence it runs mostly southwesterly, reflecting the influence of Egloffstein's map, and specifically Egloffstein's intended course of the Colorado from Utah to the Little Colorado River confluence, with *Cataract Cr.* a tributary to the Little Colorado. Downstream from there, in the western Grand Canyon, is a river (not labeled) with an arc-shaped course from southwest around to southeast before striking the Colorado, which is the Parashant Canyon interpretation from Egloffstein's map, though it heads in Utah.





## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 6. The Egloffstein Model and Variants



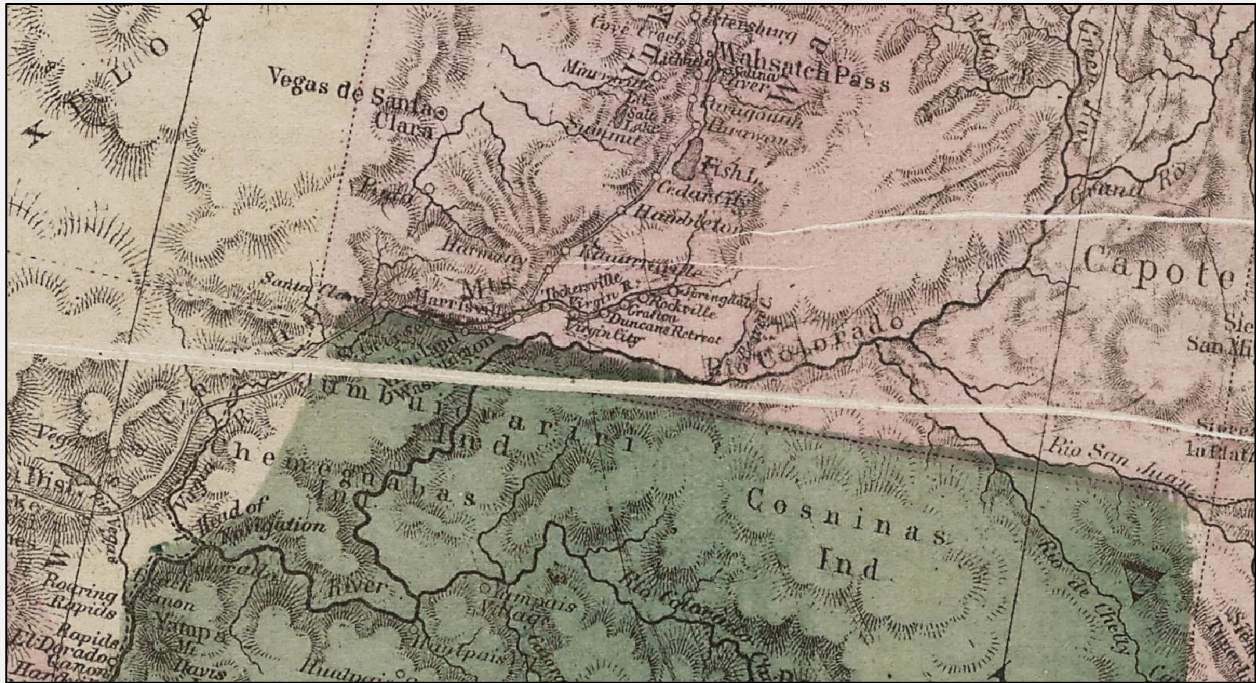
▲ Fig. 6.11 A. L. Bancroft and Co. 1871 Bancroft's, Map of California, Nevada, Utah and Arizona, Published By A. L. Bancroft, & Comp<sup>y</sup>. Booksellers & Stationers San Francisco Cal. 1871. ("Engraved & printed by Julius Bien, N.Y.") ("Note. In the compilation of this map the Authorities designated on the map of the Western Territories as well as others of more recent date have been used.") (Spamer 25.1249, Wheat V:1219)

*Colorado River* comes from off the map on the east (not shown in this detail). *Big Cañon of the Colorado River* is labeled between the confluences of *Colorado Chiquito or Flax River* and *Virgin River*. *Cataract Cr* is a tributary to the Little Colorado, with headwaters labeled as *Park Cr.*, *Lava Cr.*, and *Cedar Cr.* A tributary (not labeled) reaches the Colorado from the north in the mid-canyon area on the Parashant Canyon track, with headwater nearly at the Utah boundary. The Colorado follows the route implied by Egloffstein.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 6. The Egloffstein Model and Variants



▲ **Fig. 6.12** Lloyd, J. T. [Lloyd, James T.] 1871 **Lloyd's Topographical Map of America 1871** Projected by J.T. Lloyd E. Lloyd, Publisher {New York 30 Cortlandt St. {London, 83 Fleet Street. ("Entered according to Act of Congress in the Year: 186[illegible] by J. T. Lloyd, in the Clerks Office of the District Court of the U. S. for the Southern District of New York.") 4 sheets. (Spamer 25.1884)

This is a reprinting of Lloyd (1868; see *Fig. 6.7*), an example of retitling a map for other purposes.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 6. The Egloffstein Model and Variants



▲ Fig. 6.13 Powell, J. W. [Powell, John Wesley] 1878 Department of the Interior[,] U.S. Geographical and Geological Survey of the Rocky Mountain Region[,] J. W. Powell, in charge. Map of the United States exhibiting the grants of lands made by the general government to aid in the construction of railroads and wagon roads. 1878[.] For explanation see chapter on "Land Grants in aid of Internal Improvements"[.] (The base chart was engraved for the Statistical Atlas of the United States.) In: Powell, J. W., Report on the lands of the arid region of the United States, with a more detailed account of the lands of Utah. U.S. 45th Congress, 2nd Session, House Executive Document 73. (U.S. Geographical and Geological Survey of the Rocky Mountain Region.) (Spamer 25.1254, Wheat V:1290)

This reused map is a very peculiar choice for Powell, years after his own explorations on the Colorado River and mapping the adjacent parts of the Colorado Plateau. The Colorado River is not labeled in its lower course but appears as *Rio Colorado* or *Grand River* on its upper course (as shown here). Not only is the Grand Canyon not labeled, but the river course through the region is depicted on a more or less northeast–southwest course and is shown alternately with solid and conjecturally dotted lines. The Little Colorado River (not labeled) is shown as a tributary to the Colorado in the central Grand Canyon region, with Cataract Creek (also not labeled) a tributary to it, which follows Egloffstein’s interpretation. Cataract Creek and the lower part of the Little Colorado are shown with solid lines, although a portion of the lower part of the Little Colorado upstream from the confluence is depicted by a dotted line.

The shaded area delineates the land-grant area for the Atlantic & Pacific Railroad, with 40- and 50-mile boundaries approximately paralleling the route.





◀ **Fig. 6.14 Vallardi, Ant. 1885 America Settentrionale 1885 Stabto. dell' Editore Ant. Vallardi Via Sta. Margherita, 9. Milano G. B. Paravia e C. Torino-Roma-Milano-Firenze.** (Spamer 25.2089)

This astonishingly outdated, confused, rather imaginative Italian map is included with the Egloffstein variants only by reason of a vague correlation to that geographical style; but beyond that, it is peculiarly unique, a contributing source thus far not identified for this survey.

The course of *Rio Colorado* is shown from the confluence of *Green R.* and *Bear R.* to *Golfo di California o Mare Vermiglio o Mare di Cortez* (Gulf of California or Vermilion Sea or Sea of Cortez). From that confluence the Colorado's course arcs from south to southwest, then turns south again to cross the *Utah-Nuovo* Messico boundary, receiving no tributaries in this reach.

Some distance into what today is Arizona, the Colorado turns westward, at which point is the confluence of a tributary from the east. Just a short distance to the east along this tributary is the place-name *Oribe* (*i.e.* Oraibi, one of the Hopi pueblos), seemingly badly positioned at the confluence of *R. S. Gió*. (San Juan River, which comes from the east-northeast) and an unlabeled river from the southeast (surely the Little Colorado River). (Note that on this map there is also a *R. S. Gioachimo*, a headwater branch of a major tributary to *R. S. Gió*.; that major tributary is itself not labeled.) The reach of the Colorado tributary between *Oribe* and the Colorado is not separately labeled, thus ambiguous, although it seems reasonable that it is a continuation of the Little Colorado. The entire region northeast of the confluence at *Oribe* is labeled *Grande Deserto* (Great Desert).

In this case the geography in the immediate area is reminiscent of Egloffstein's, with perhaps the Parashant Canyon interpretation for the Colorado's course, though inexplicably the well-mapped western-Grand Canyon course of the Colorado to the great bend area is wholly ignored. From the Parashant confluence the Colorado instead arcs from west to southwest, continuing without much deviation from an arc to the south then to the south-southeast in order to reach the gulf.

The Virgin River does not appear on this map, but *Rio Gila* is a tributary to the Colorado about where it should be in relation to the gulf.





## **7. Parallel Green and Grand Rivers as Colorado Tributaries**

**(Examples 1851–1873)**

One of the more novel interpretations of the Colorado River system is that which delineates the Green and Grand Rivers mostly on parallel courses all the way to the Grand Canyon. Some variants employ the Egloffstein model to accommodate the confluence that initiates the Colorado River and the receipt of the Little Colorado River into the system.

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## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 7. Parallel Green and Grand Rivers as Colorado Tributaries



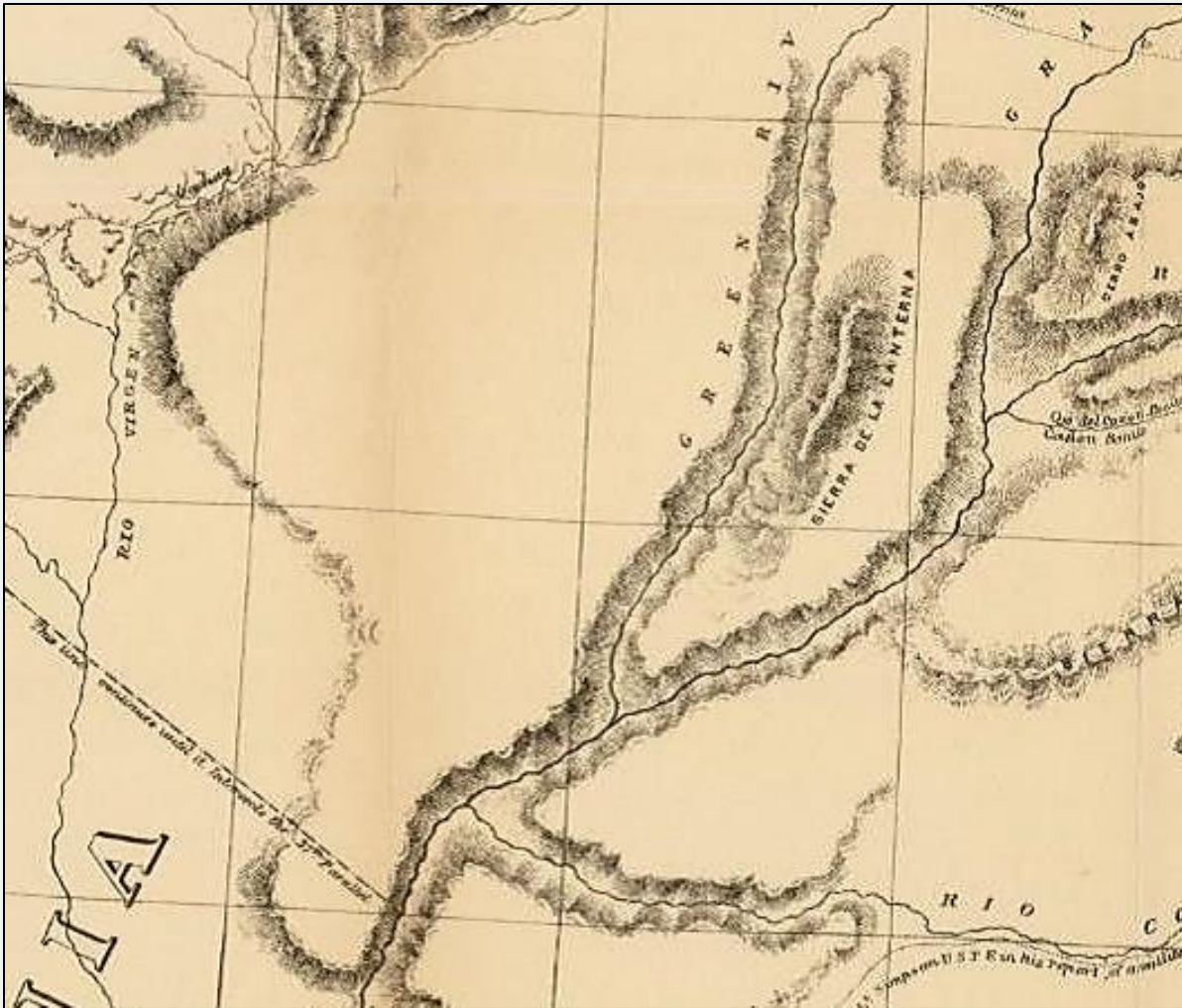
▲ ► **Fig. 7.1 Parke, John G. 1851 Map of the Territory of New Mexico compiled by Bvt. 2<sup>nd</sup> Lt. Jno. G. Parke, U.S.T.E. assisted by M<sup>r</sup>. Richard H. Kern. by order of Bvt. Col. Jno. Munroe. U.S.A. comdg. 9<sup>th</sup> Mil. Dept, drawn by R. H. Kern. Santa Fé, N.M. 1851. Constructed under general orders from Col. J. J. Abert, Chief of Topog<sup>r</sup>. Eng<sup>s</sup>. [U.S. Army, Topographical Engineers], New York: J. and D. Major. (Spamer 25.160, Wheat III:730)**

*Green River* and *Grand River* are shown in canyons on either side of the *Sierra de la Lanterna* (about which see next page), with their confluence approximately in the area where the central Grand Canyon is situated, below which the river, continuing in a canyon, is *Rio Colorado* and with which *Rio Colorado Chiquito* (Little Colorado River) is a tributary flowing east to west, with its confluence unexpectedly positioned just north of the boundary angle that later would form the point of southern Nevada. The Colorado continues to the confluence of *Rio Gila* before passing off the map to the west. *Rio Virgen* (Virgin River) is much too far west, with its Colorado confluence below the boundary angle.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

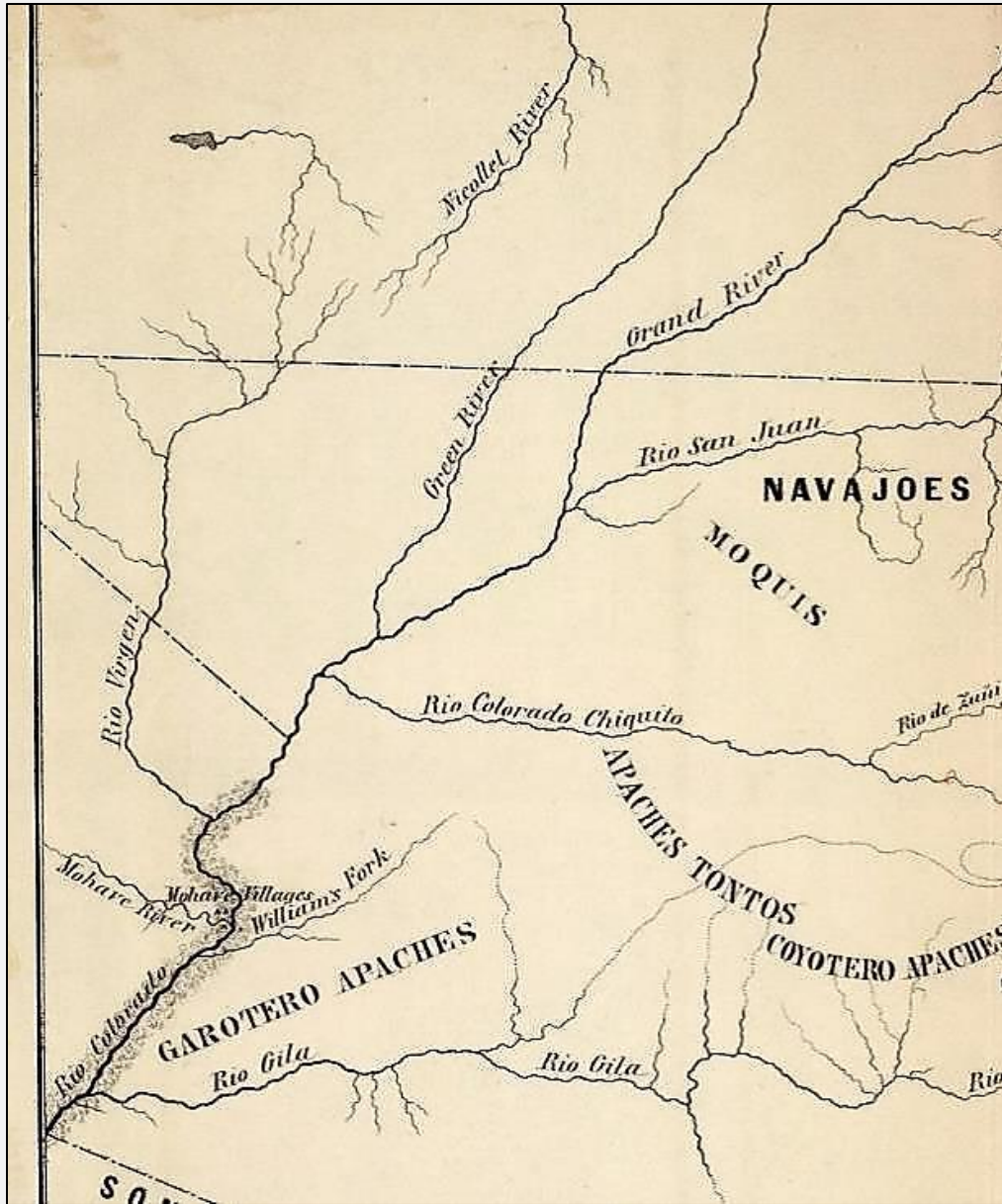
### 7. Parallel Green and Grand Rivers as Colorado Tributaries



▲ Detail of Fig. 7.1 showing the Green and Grand courses with *Sierra de la Lanterna* between them. The *Sierra* appears in an 1854 gazetteer with geographic coordinates that place it generally on the southern part of the Kaibab Plateau (see Thomas Baldwin and J. Thomas, *A New and Complete Gazetteer of the United States*, Lippincott, Grambo and Co., Philadelphia, p. 1076: “**Sierra de la Lanterna, a mountain range in the N. part of the Territory of New Mexico, lat. about 36° 20' N., long. 112° 15' W.**”) This geographical name is perhaps a misspelling of the Spanish *linterna* (lantern); its origin, however, is not determined here, although it also appears on a few maps through 1867 (for example, see Fig. 7.3).

THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

7. Parallel Green and Grand Rivers as Colorado Tributaries



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 7. Parallel Green and Grand Rivers as Colorado Tributaries

◀ **Fig. 7.2 U.S. Surveyor General's Office 1855 Bancroft's, Map of California, Nevada, Utah and Arizona, Published By A. L. Bancroft, & Comp<sup>y</sup>. Booksellers & Stationers San Francisco Cal. 1871.** ("Surveyor General's Office, Santa Fe September 30<sup>th</sup> 1855 W<sup>m</sup> Pelham Surveyor General of New Mexico".) ("Sen.Ex.Doc.No.1, 34<sup>th</sup> Cong: 1<sup>st</sup> Sess.") (Spamer 25.1705, Wheat IV:854)

This is a sketch map, in general nearly like the linear Colorado River model. *Rio Colorado* is depicted only to the New Mexico [Territory]–Sonora boundary.

*Green River* and *Grand River* follow essentially parallel courses from the northeast before reaching a confluence in what later is the so-called Nevada angle of northwestern Arizona (when the Arizona boundaries included that area now a part of Nevada).

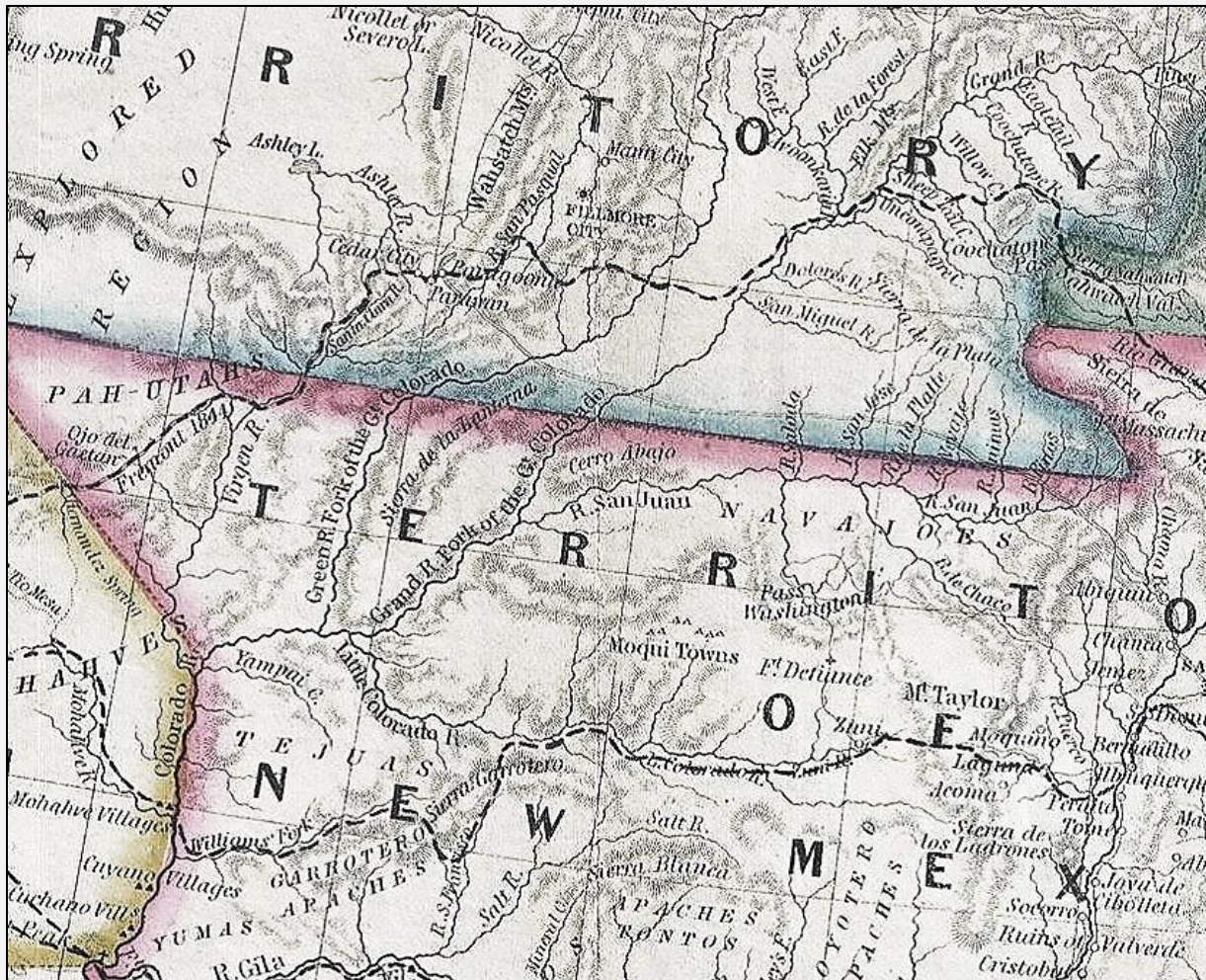
*Rio San Juan* is a tributary to the *Grand* in the northern part of today's Arizona, although it is unclear where the Colorado is supposed to begin, whether at the San Juan confluence or farther downstream at a Grand–Green confluence. Not far downstream from that confluence, but nonetheless in the far western part of the area, *Rio Colorado Chiquito* (Little Colorado River) is a tributary on a straight course from the east-southeast. *Rio Virgen* arrives from the north and northwest and too far south, not far upstream from *Mohave Villages*, which are mapped at the confluence of the supposed position of *Mohave River* from the west-northwest and *William's Fork* (Bill Williams River) from the northeast.

Between the Virgin and Bill Williams, the Colorado passes through a peculiar sigmoid turn of course, downstream from which the course seems to be too southwesterly.



# THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

## 7. Parallel Green and Grand Rivers as Colorado Tributaries



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 7. Parallel Green and Grand Rivers as Colorado Tributaries



◀ ▲ **Fig. 7.3 Desilver, Charles 1856 A New Map of the United States of America by J. H. Young. Philadelphia Published by Charles Desilver 253 Market St.** In: *Mitchell's new traveller's guide through the United States and Canadas, containing the principal cities and towns alphabetically arranged, together with rail road, steamboat, stage, and canal routes, with tables of places, and distances from place to place. Illustrated by an accurate map of the United States, showing the lines of finished rail roads, and their more important connections.* Philadelphia: Charles Desilver. (Spamer 25.1240, Wheat IV:889)

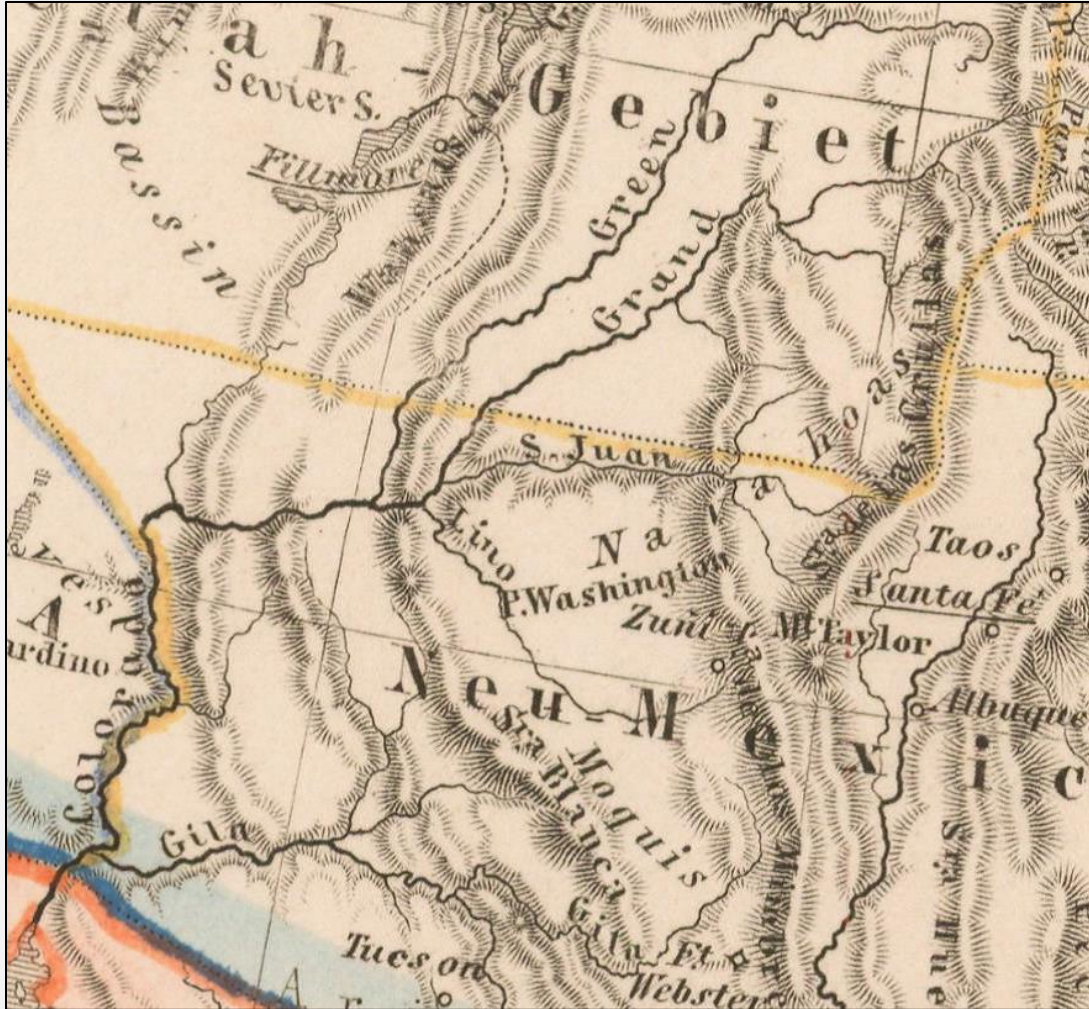
*Detail above is in grayscale and unsharped to better read the labeling.*

*Colorado R.* is depicted between the eastern part of where the Grand Canyon is situated the head of the Gulf of California (just off the map). In the eastern canyon area is the confluence of *Green R. Fork of the G! Colorado* and *Grand R. Fork of the G! Colorado*, with *Sierra de la Lanterna* (refer to Fig. 7.1) in between them. *Little Colorado R.* is shown as a tributary to the Grand, shortly above the confluence with the Green. *R. San Juan* is a tributary to the Grand within what today is Arizona. *Yampai C.*, a tributary shortly above the confluence of *Virgin R.*, is depicted in an unusual position.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 7. Parallel Green and Grand Rivers as Colorado Tributaries



▲ Fig. 7.4 Stieler, Adolph 1856 *Vereins-Staaten von Nord-Amerika und Mexico*. Gotha: Justus Perthes. ("Stieler's Schul-Atlas N<sup>o</sup> 29.") (Spamer 25.1701)

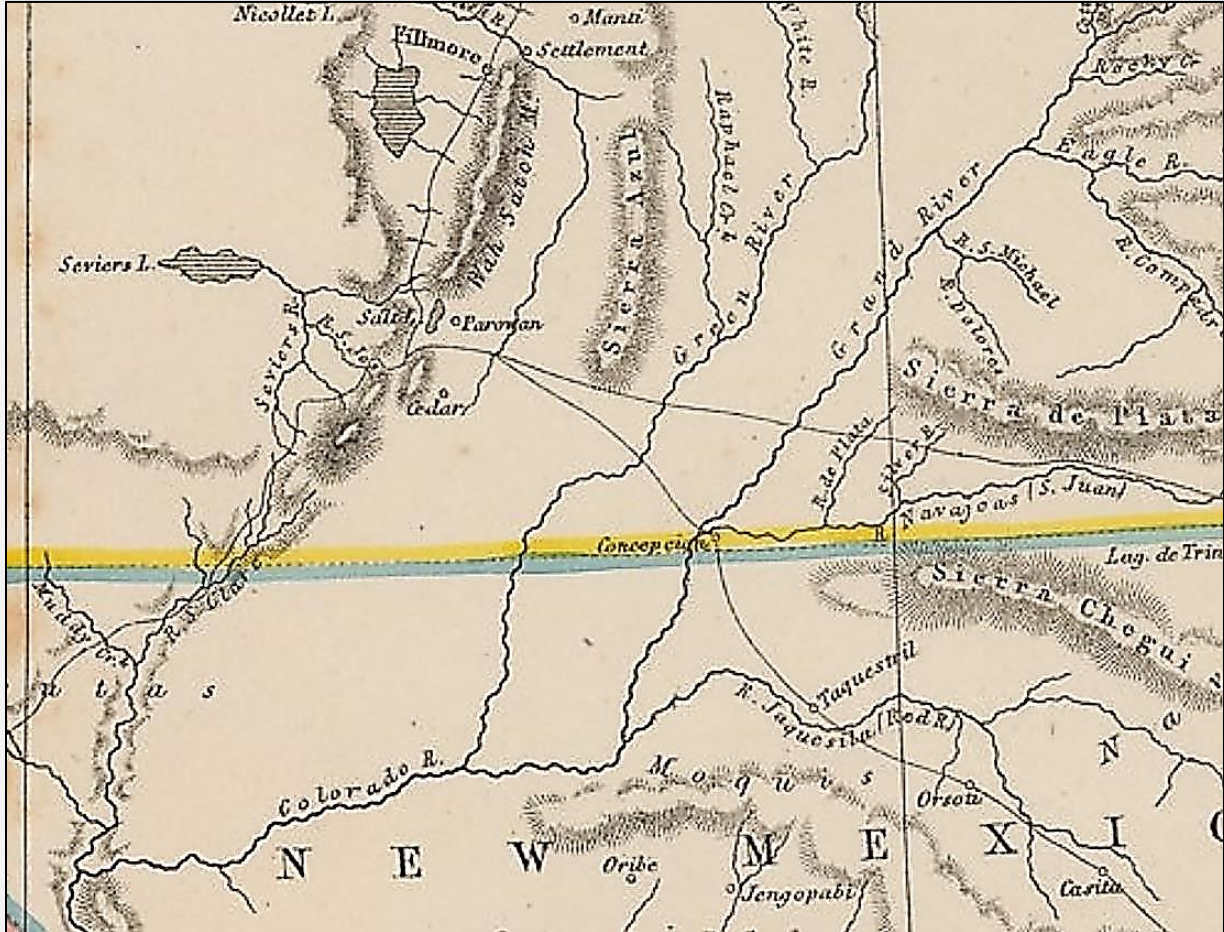
The river, *Colorado*, is delineated from the confluence of *Green* and *Grand*, which follow parallel southwesterly courses in *Utah-Gebiet* (Utah Territory) before turning south in *Neu-Mexico* (New Mexico [Territory]) where they meet to form the Colorado. *S. Juan* is a tributary to *Grand* within today's Arizona; and not far below that confluence is the confluence of the river *Lino* (Little Colorado River).

In the Grand Canyon region (no labels) the Colorado passes directly through three north-south-trending mountain ranges. The westernmost range resembles the Grand Wash Cliffs, accentuated by a correct relative placement of the Virgin River confluence (not labeled). With the exception of a stretch of the lower Colorado River between the Virgin and Bill Williams Rivers (not labeled), the San Juan is the only river displayed with hachures that portray an encanyoned reach!



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 7. Parallel Green and Grand Rivers as Colorado Tributaries



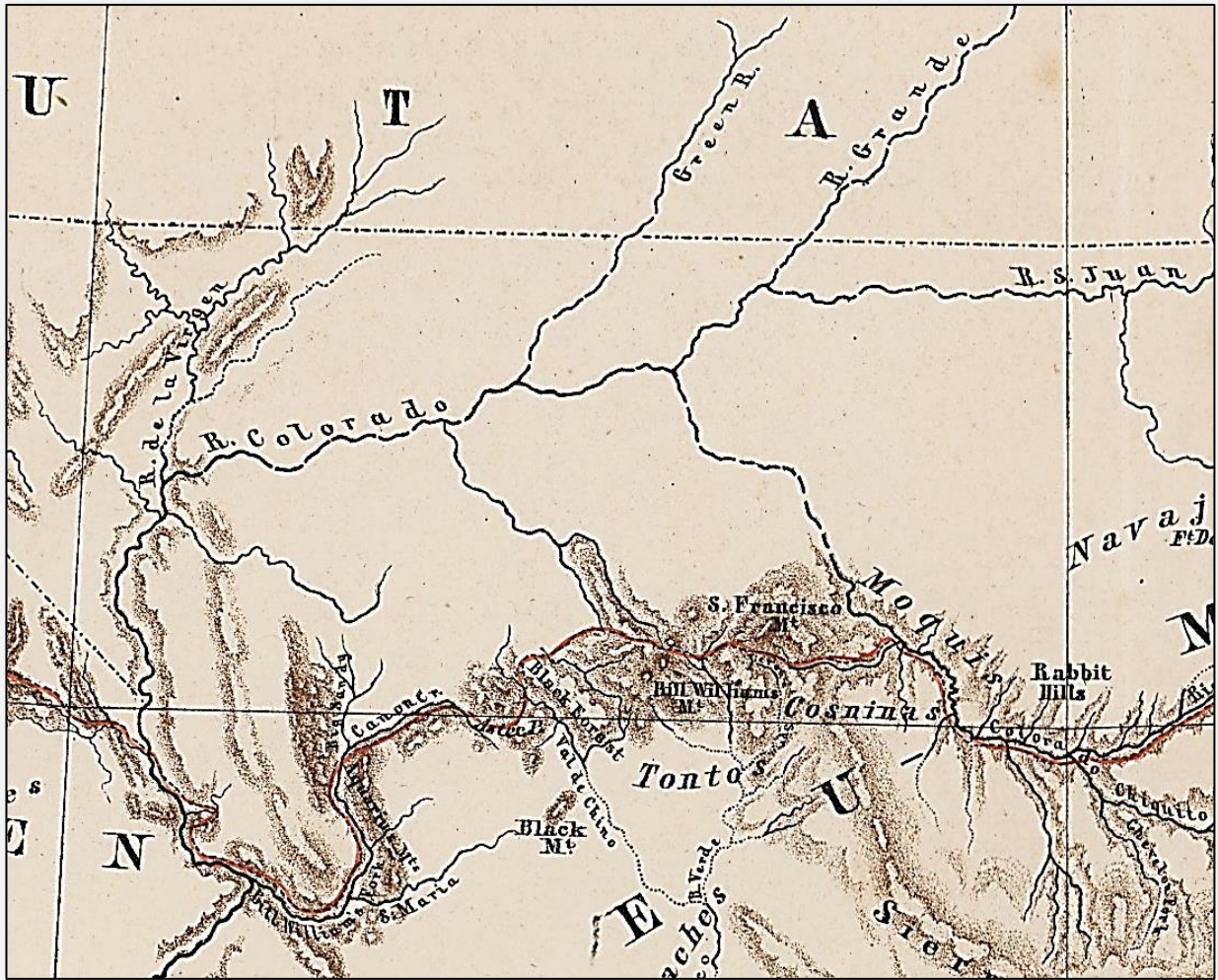
▲ Fig. 7.5 Ettling, T. [Ettling, Theodor] 1858 *The Dispatch Atlas California[,] Utah, L<sup>t</sup> California and New Mexico*. London, "Supplement to the Weekly Dispatch of Sunday January 31<sup>st</sup> 1858". (Spamer 25.1699, Wheat IV:942)

*R. Colorado* (in the Grand Canyon reach it is labeled as *Colorado R.*, as shown in the detail here) is delineated between the eastern part of what is the Grand Canyon and the Gulf of California.

The *Green River* and *Grand River* follow parallel courses from the northeast. *R. Navajoas (S. Juan)* is a tributary to the Grand from the east, in Utah. In what today is Arizona, *R. Jaquesila (Red. R.)* (Little Colorado River) reaches the Grand from the northeast, after a meandering course from the east which passes, notably, *north* of the Hopi pueblos. Through the Grand Canyon region, the Colorado follows a very generalized west-southwestward course to the confluence of *R. S. Clare* (Virgin River) before turning southward to the gulf.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 7. Parallel Green and Grand Rivers as Colorado Tributaries



▲ ► Fig. 7.6 Möllhausen, Balduin [Möllhausen, Heinrich Balduin] 1858 Karte zu Balduin Möllhausen's Reise vom Mississippi nach der Küste der Südsee im Jahre 1853-1854. Entworfen und gezeichnet von Dr. Henry Lange. In: Möllhausen, *Tagebuch einer Reise vom Mississippi nach den Küsten der Südsee*. Leipzig: Hermann Mendelssohn. (Spamer 25.977, Wheat IV:955)

*Green R.* and *R. Grande* run in parallel from the northeast to *R. Colorado*. *R. S. Juan* (San Juan River) is a tributary to the “Grand” in today’s Arizona. *Colorado Chiquito* (Little Colorado River) is likewise a tributary to the “Grand”. An unlabeled tributary to the Colorado, heading near *Bill Williams Mt.*, is *Cataract Creek*. The lower “Green,” and the Colorado from there to the confluence of *R. de la Virgen* (Virgin River), is delineated conjecturally by dashed lines, as also are the San Juan and Little Colorado.

(This map illustrated Möllhausen’s publication about the Whipple Expedition of 1854, which he accompanied, that crossed the northern part of New Mexico Territory to the lower Colorado and traveled on to the west coast. The route is marked in red, along which the topography is sketched in.)





▲ Compare this detail from Fig. 7.6 with the courses of the Colorado and its tributaries as displayed in the Egloffstein model (Style 6 herein). Möllhausen had written about his exploits with the Whipple expedition of 1854, in advance of his experiences with the Ives expedition of 1858. Note here that the courses of the Little Colorado River (at right, from the southeast) and Cataract Creek (in center, from the southeast), which although the Green and Grand Rivers (at top) are out of phase with reality, are closer to their actual relative positions with respect to the Colorado than would be advanced in the Egloffstein model that developed from the Ives expedition.



THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

7. Parallel Green and Grand Rivers as Colorado Tributaries



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 7. Parallel Green and Grand Rivers as Colorado Tributaries



◀ ▲ Fig. 7.7 Bineteau, P. 1860 Map Drawn to illustrate the travels & from the Documents of the Abbe Domenech showing the actual situation of the Indian Tribes of North America and the road described by the author[.] P. Bineteau geographer del 1860. In: Domenech, Em. (Abbé) [Domenech, Emmanuel Henri Dieudonne], *Seven years' residence in the great deserts of North America*. London: Longman, Green, Longman, and Roberts. (Spamer 25.1245, Wheat IV:1008)

The nomenclature is as confused as are the courses of the rivers shown on this map. The principal stream is *Rio Colorado of the West*, which includes what really is the Green River to the north. *R. Grande* (Grand River) forms a confluence with the Green, as expected, but note that there is a *separate*, and foreshortened, *Green R.* that runs parallel to and to the west of the Colorado that retains the idea of parallel Grand and Green rivers. The confluence of this short “Green” with the Colorado is downstream from *Red Riv.* (Little Colorado River); both of these rivers are conjecturally marked on their lower courses by dashed lines). *R. S<sup>t</sup> John* (San Juan River) hugs the Utah–New Mexico boundary, in today’s Arizona. West of the putative confluence of the short “Green” is an unlabeled tributary from the south east, heading near *M<sup>t</sup> S. Francisco*, which is Cataract Creek. Between that confluence and the confluence of the *Virgen* (Virgin River) the Colorado’s course is nearly due west and delineated conjecturally by a dashed line.

(The red line on the examined copy of this map is drawn over the delineated track of the 35th parallel railroad survey.)



7. Parallel Green and Grand Rivers as Colorado Tributaries



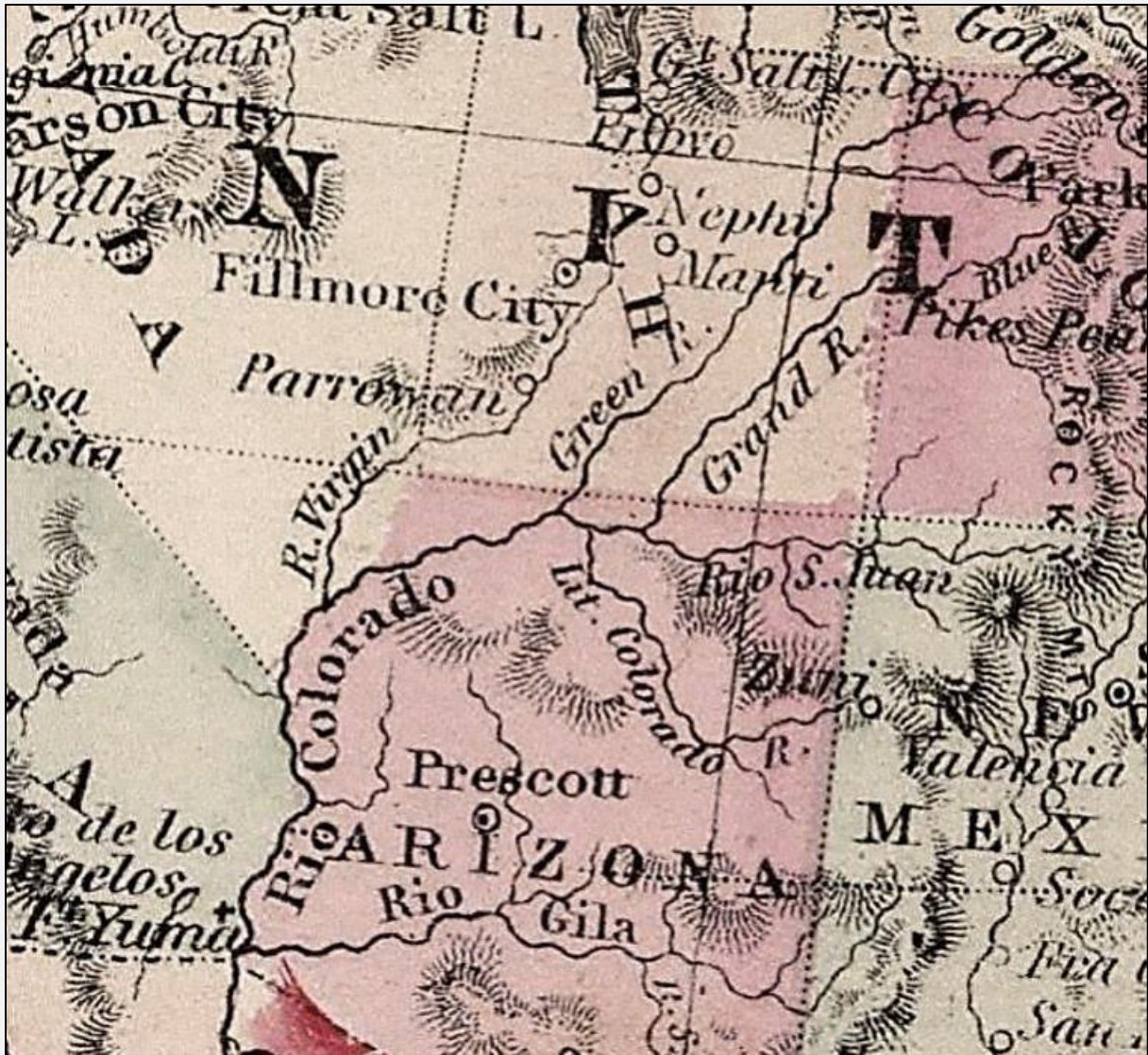
▲ **Fig. 7.8** Ravenstein, L. 1872 **Nord-America.** In: *Meyers Hand-Atlas der neuesten Erdbeschreibung in 100 Karten. Redigirt von L. Ravenstein. Neue Berichtigte Ausgabe.* Hildburghausen: Verlag des Bibliographischen Instituts. (Spamer 25.2023)

*Green R.* and *Grand R.* run southwest and parallel to each other entirely within *Utah Terr.*, with the Grand turning west-northwest to meet the Green. The river, *S. Juan*, hugs the boundary within *Arizona Terr.* before turning northwest to its confluence with the Grand just within Utah. (Contrarily, due to the manner in which the labels are laid out, the Grand could be discerned as a tributary to the San Juan, the latter then continuing to a confluence with the Green.) The Colorado, from the mapped Green–Grand confluence, continues to follow the southwesterly course established by the Green until it receives *Colorado Chiquito* (Little Colorado River) from the east-southeast, in the area now known to be the central Grand Canyon. The Colorado turns to the northwest at the distinctive bend wherein Diamond Creek (not delineated) reaches the river. The configuration of the rivers in the Grand Canyon area resembles the Egloffstein model (Style 6 herein).



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 7. Parallel Green and Grand Rivers as Colorado Tributaries



▲ **Fig. 7.9 Gray, O. W. 1873 Gray's Atlas Map of North America.** *In: Gray's atlas of the United States, with general maps of the world. Accompanied by descriptions geographical, historical, scientific, and statistical.* Philadelphia: Stedman, Brown and Lyon. (Spamer 25.2067)

*Green R. and Grand R. are on parallel courses into Arizona. Both Rio S. Juan and Lit. Colorado (San Juan and Little Colorado Rivers) are tributaries to the Grand. (Contrarily, due to the manner in which the labels are laid out, both the Grand and the Little Colorado could be discerned as tributaries to the San Juan, the latter then continuing to a confluence with the Green.) From the Green–Grand confluence, the course of Rio Colorado is southwest and arcs broadly to the south, receiving en route R. Virgin.*

Compare also Figs. 8.4, 8.5, from the same volume.



## **8. The Colorado's Bactrian Course Through the Grand Canyon** **(Examples 1868–1876)**

One of the visually peculiar and short-lived styles of mapping the Colorado River is where a wildly serpentine course through the Grand Canyon region is displayed—here called a “bactrian” course for the resemblance to the two humps of bactrian camels. The style, which does allow for reasonable placements of tributary confluences, seems to be otherwise wholly contrived, in that no other style incorporates a transcanyon passage like this.

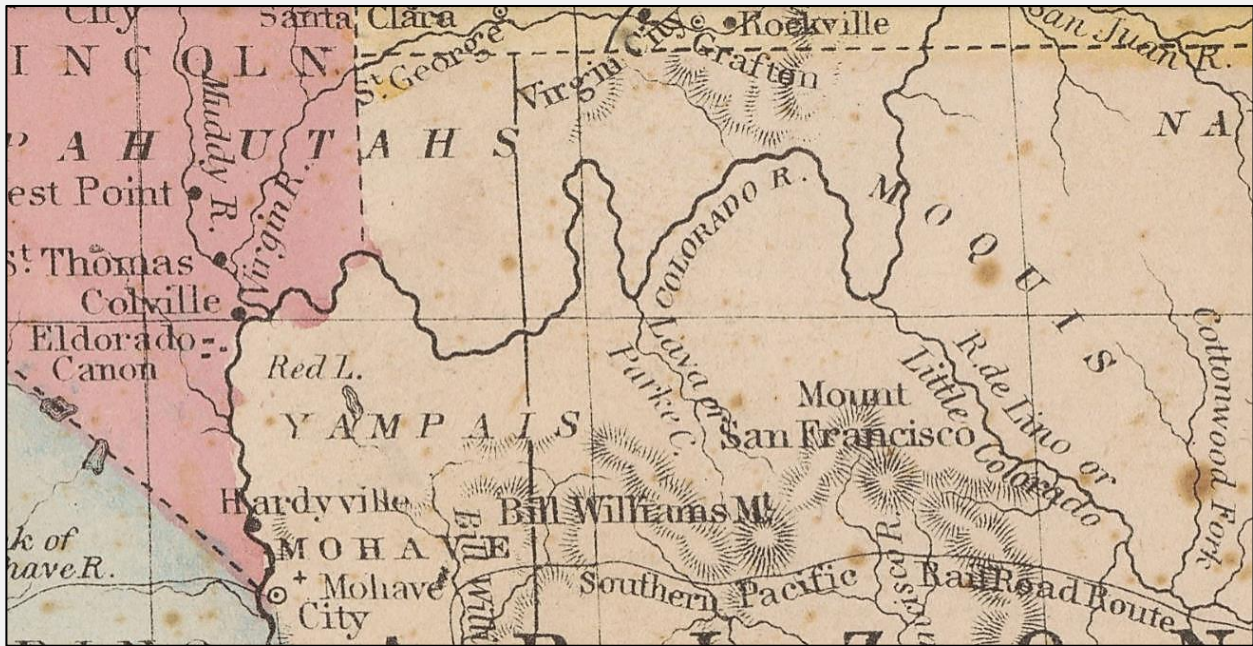
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## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 8. The Colorado's Bactrian Course Through the Grand Canyon

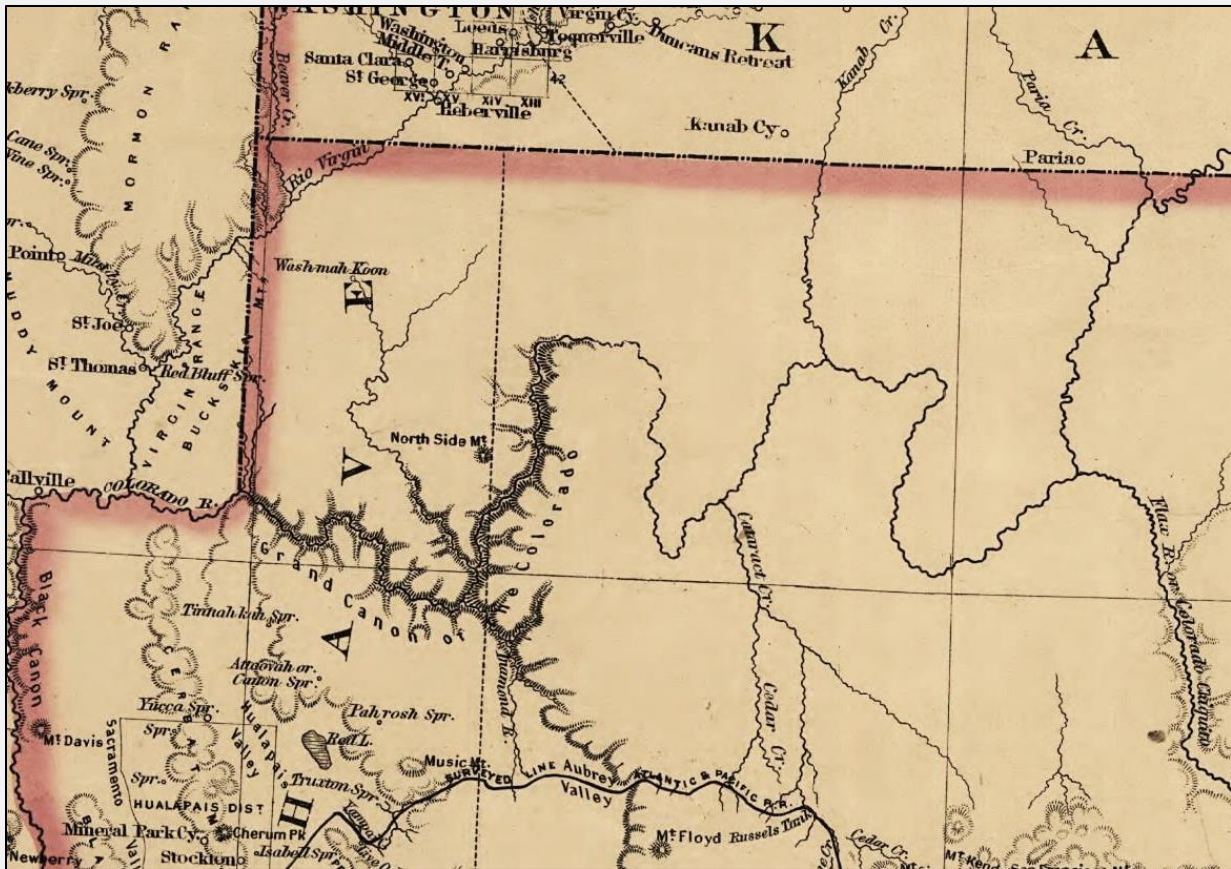


▲ **Fig. 8.1 Mitchell, Samuel Augustus, Jr. 1868 California, Oregon, Idaho, Utah, Nevada, Arizona and Washington.** *In: Mitchell's new general atlas : containing maps of the various countries of the world, plans of cities, etc., embraced in sixty-three quarto maps, forming a series of one hundred maps and plans, together with valuable statistical tables.* Philadelphia: S. Augustus Mitchell, Jr. Map XIX. (Spamer 25.1036, Wheat V:1188)

The course of *Colorado R.* through the Grand Canyon region is drawn imaginatively between *R. de Lino or Little Colorado* and *Virgin R.*, with asymmetrical bactrian “humps.” Cataract Creek is labeled *Lava or Parke C.*, names which on most other contemporary maps have been applied to headwater streams of Cataract Creek. On the north side, there is a faintly drawn tributary, apparently on the western side of what would be the Kaibab Plateau, which could be meant to be Kanab Creek, although it is too far west with respect to the displayed position of Rockville, Utah.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 8. The Colorado's Bactrian Course Through the Grand Canyon



▲ ► Fig. 8.2 G. W. and C. B. Colton and Co. 1873 **Colton's New Mexico and Arizona** Published by G. W. and C. B. Colton & Co. N<sup>o</sup> 172 William S<sup>t</sup> New York. (Spamer 25.1562)

*Colorado R.* in the western part of *Grand Canon of the Colorado* is depicted as encanyoned, as also is the tributary *Diamond R.* (Diamond Creek, which as shown here is geographically awry, on a south-to-north course that seems to be conflated with an unlabeled Peach Springs Wash). This general area seems to borrow upon the Egloffstein model, including the Parashant Canyon tributary, but east of that area, the portrayal departs from that style. The Colorado's course in central and eastern Grand Canyon is wildly conjectural with its two bactrian "humps" and is noticeably not encanyoned. *Cataract Cr.* is very approximately in a proper location. *Kanab Cr.*, by this time a known geographical feature thanks to the Powell expeditions of 1869 and 1871–1872, meets the Colorado from the north midway in the Colorado's first bactrian "hump." *Flax R. or Colorado Chiquito* (Little Colorado River) reaches the Colorado in eastern Grand Canyon about where it would be expected and as discerned by the Powell expeditions. It is curious that the Grand Canyon area in general, with some correctly positioned elements, largely overlooks Powell's own observations regarding the Colorado River at large.

Compare also Fig. 8.3, from the same publisher and year.



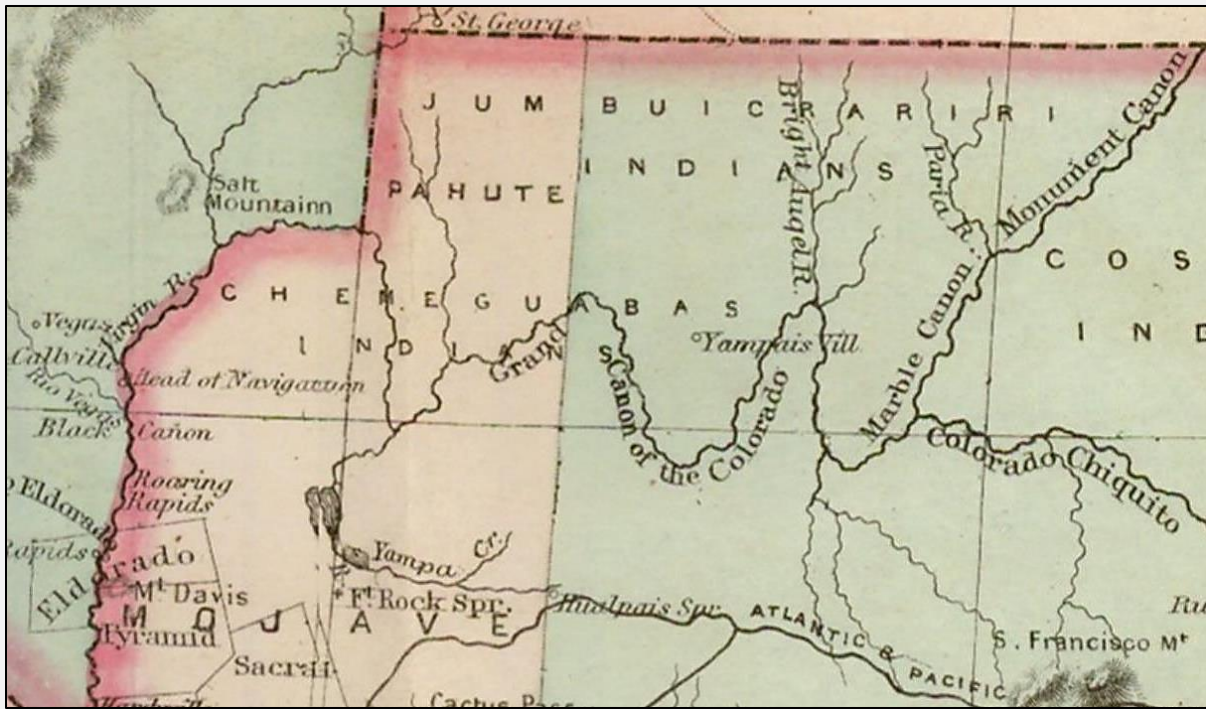
THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

8. The Colorado's Bactrian Course Through the Grand Canyon



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 8. The Colorado's Bactrian Course Through the Grand Canyon



▲ ► Fig. 8.3 G. W. and C. B. Colton and Co. 1873 Colton's California, Nevada, Utah, Colorado, Arizona & New Mexico. Published by G.W. and C.B. Colton & Co., N<sup>o</sup>.172 William St. New York. 1873. [In covers with embossed stamping, "Colton's Map of California, Nevada, Utah, Colorado, Arizona, and New Mexico. G.W. & C.B. Colton & C<sup>o</sup>."] (Spamer 25.1704)

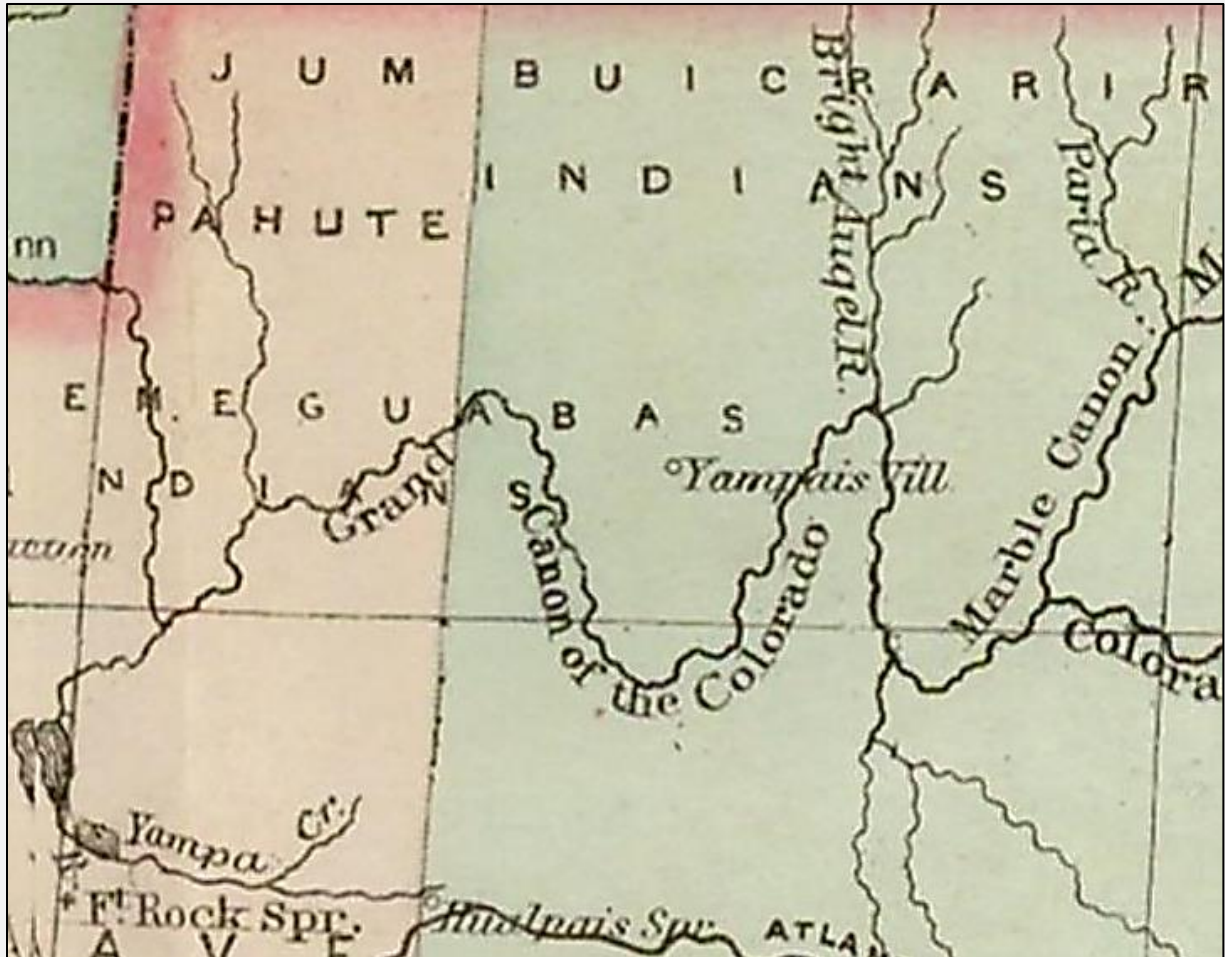
This map adopts many of the canyon names along the Colorado River that were given by John Wesley Powell, but otherwise it ignores Powell's correct geography and is a curious mix of the Egloffstein style (No. 6 herein) and the contrived bactrian course of the Colorado. In the detail above, Powell's *Monument Canon* (Glen Canyon today) appears first after the Colorado crosses into Arizona, where it receives *Paria R.* It passes into *Marble Canon* where it receives *Colorado Chiquito* (Little Colorado River) about where that confluence should be placed. Thereafter the map devolves into the Egloffstein and bactrian styles, with other peculiarities (*refer to the greater detail on next page*).

At the western end of the Grand Canyon the Colorado follows a westerly course, arcing eventually to its southerly course, receiving a tributary from the north that is not labeled except for the presence of *Salt Mountainn* [sic] which confirms it is the Virgin River. However, the reach of the Colorado between that confluence and the confluence of *Rio Vegas* (Las Vegas Wash), passing by *Callville* and *Head of Navigation* is labeled *Virgin R.*!

Compare also Fig. 8.2, from the same publisher and year.

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 8. The Colorado's Bactrian Course Through the Grand Canyon

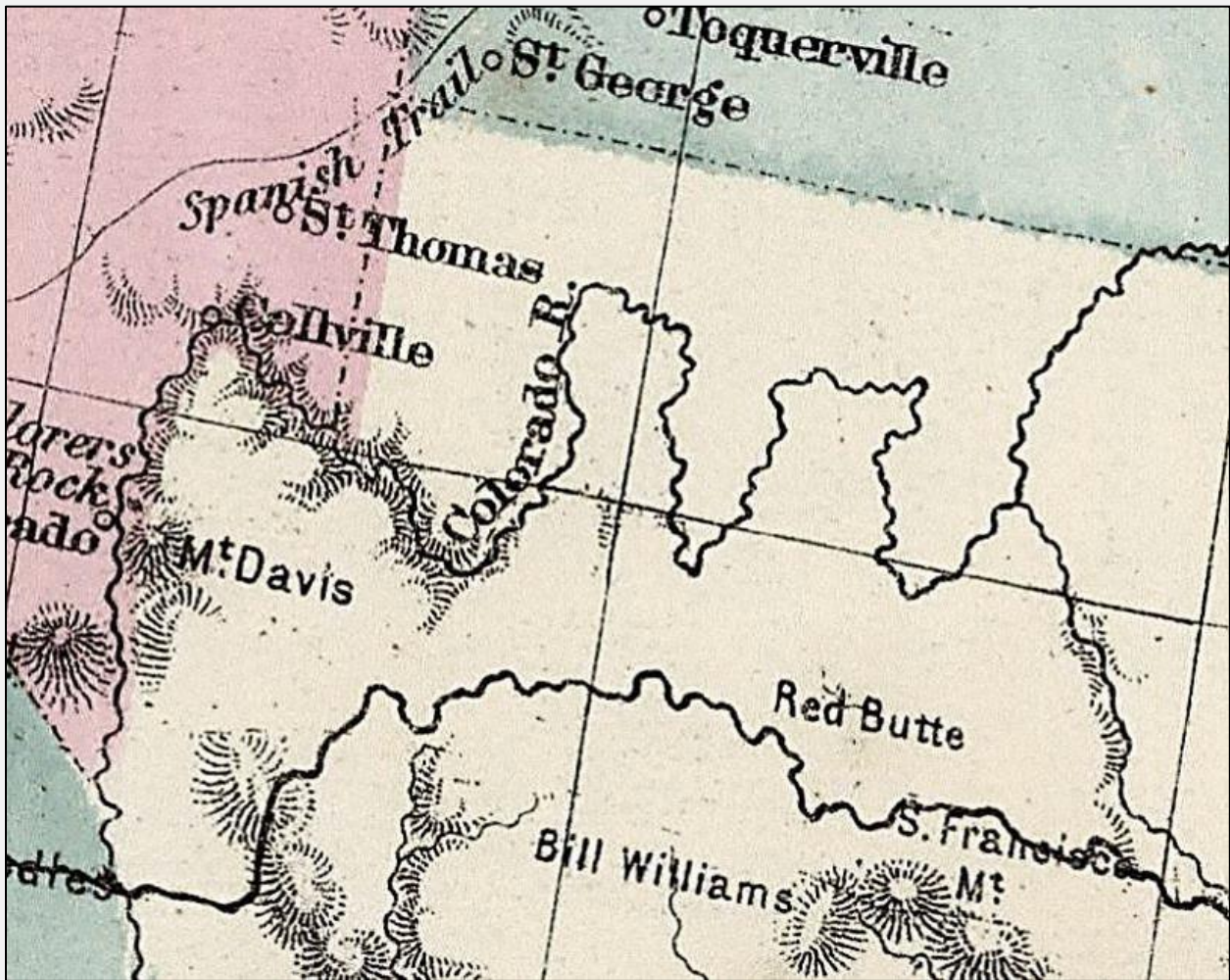


▲ G. W. and C. B. Colton and Co. 1873 (*greater detail*)

Entering its wildly conjectural bactrian course through *Grand Canon of the Colorado*, the river first receives a tributary (not labeled) from the south that must be meant *Cataract Creek* (seriously misplaced and striking a greatly different confluence than as shown in Fig. 8.2). The Colorado turns northward and then, before turning southwestward, receives from the north at that point *Bright Angel R.* (*Bright Angel Creek*, reflecting a Powell contribution, but which is apparently confused with *Kanab Creek* (not shown but it does appear in Fig. 8.2). In the western part of the Grand Canyon, the Colorado, along a southwesterly course, receives a tributary (not labeled) from the north (but which corresponds to the *Parashant Canyon* configuration of the Egloffstein model). Thereafter the river receives *Yampa Cr.* from the southwest, where it then turns abruptly north-northwestward. The mapped *Yampa* has at its head *Hualpais Spr.*, which actually is on *Peach Springs Wash*. The *Diamond Creek* tributary is absent on this map.



8. The Colorado's Bactrian Course Through the Grand Canyon



▲ Fig. 8.4 Gray, O. W. 1873 Gray's Atlas Map of the United States of America 1873. In: Gray's atlas of the United States, with general maps of the world. Accompanied by descriptions geographical, historical, scientific, and statistical. Philadelphia: Stedman, Brown and Lyon. (Spamer 25.2067)

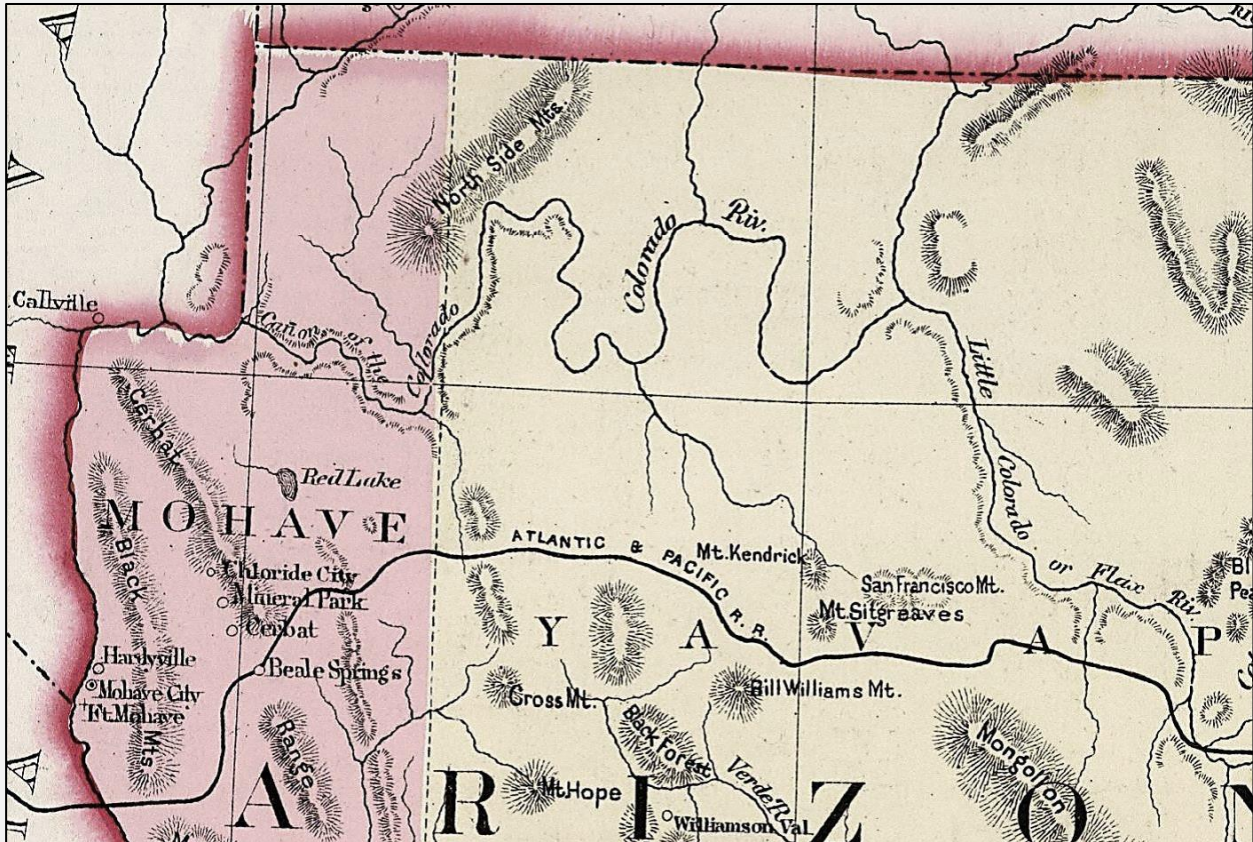
From the confluence of the Green and Grand Rivers (*not shown in this detail*) the course of *Colorado R.* arcs from southwest to south, reaching the confluence of *Colorado Chiquito* (Little Colorado River, label not shown here). Through the area that is the eastern and central Grand Canyon the Colorado's course is in the bactrian style before proceeding northwest to *Callville* (the Virgin River is not on the map), then turns southward toward the gulf. Only the western Grand Canyon is depicted as encanyoned. (The heavy, irregular line striking east–west delineates the route of the Beale Wagon Road, although the San Francisco Peaks are plotted too far to the south.)

Compare also Figs. 7.9, 8.5 (►), from the same volume.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 8. The Colorado's Bactrian Course Through the Grand Canyon



▲ Fig. 8.5 Gray, O. W. 1873 **Gray's Atlas Map New Mexico and Arizona.** In: *Gray's atlas of the United States, with general maps of the world. Accompanied by descriptions geographical, historical, scientific, and statistical.* Philadelphia: Stedman, Brown and Lyon. (Spamer 25.2067)

In Arizona, *Colorado Riv.* is depicted on the full map from the Utah boundary to the lower international boundary with Mexico. It appears that the Paria River (not labeled) is displayed upstream from the confluence of *Little Colorado or Flax Riv.* (Little Colorado River). The Colorado's course through the Grand Canyon region is in the bactrian style, with several tributaries (not labeled): Kanab Creek from the north; Cataract Creek from the southeast; an undetermined stream that is apparently the Parashant Canyon course as represented on the Egloffstein map, from the north in west-central Grand Canyon; and Diamond Creek from the south (which by its extension to the railroad suggests that Peach Springs Wash is incorporated).

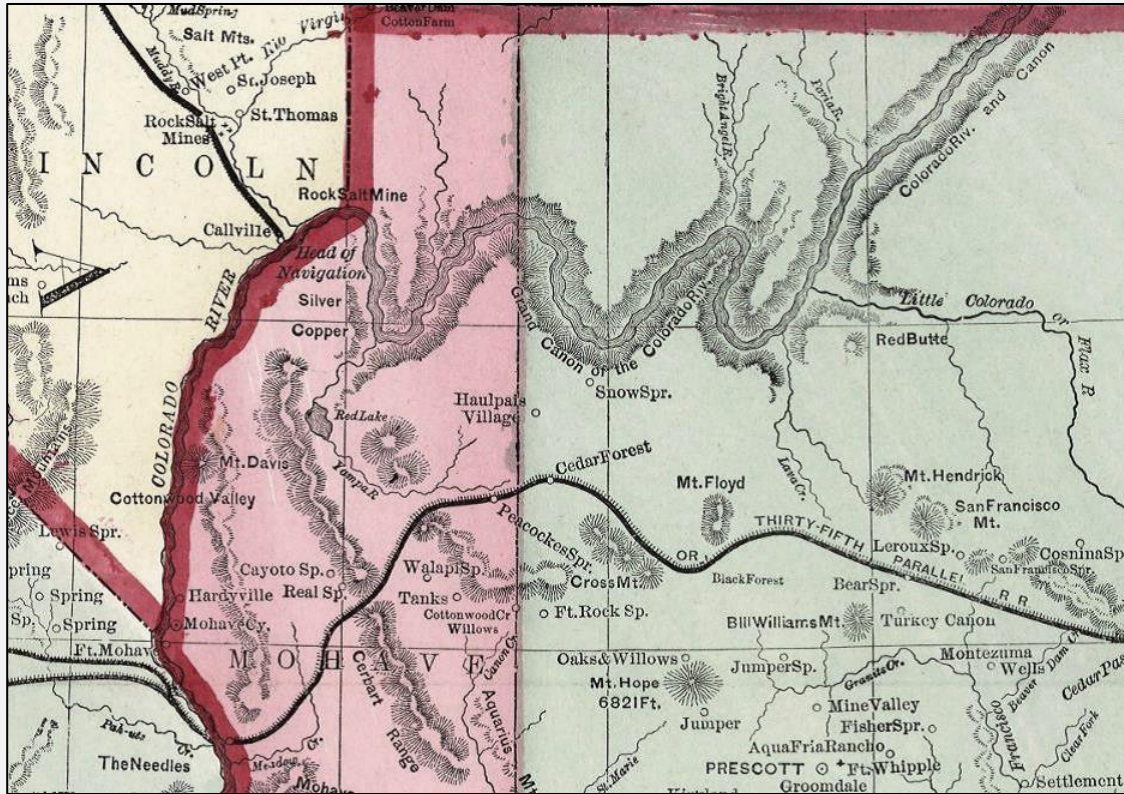
As compared to Fig. 8.4, the east-west heavy line delineates the route of the Atlantic & Pacific Railroad, which partly traced the Beale Wagon Road; and here the San Francisco Peaks are more in their proper location.

Compare also Figs. 7.9, 8.4 (◀), from the same volume.



## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

### 8. The Colorado's Bactrian Course Through the Grand Canyon



▲ ► **Fig. 8.6 Watson, Gaylord 1875 Watson's new county and railroad map of the Pacific States and Territories. Published by Gaylord Watson, 16 Beekman Street, N.Y. 1875.** *In: Watson's new commercial county and railroad atlas of the United States and Dominion of Canada. Compiled from the latest official sources. Boston: Perry and Spaulding. (Spamer 25.1039)*

The *Grand Canon of the Colorado Riv.* is labeled in the central Grand Canyon, with an additional label, *Colorado Riv. and Canon*, upstream from the confluence of *Little Colorado or Flax R.* From there nearly to the confluence of *Rio Virgin*, the *Colorado River* is decidedly depicted as encanyoned. Other tributaries in this area are *Paria R.*, *Lava Cr.* (labeled on a fork of the unlabeled *Cataract Creek*, seriously misplaced to the east), *Bright Angel R.* (*Bright Angel Creek*, more probably meant to be *Kanab Creek*), an unlabeled tributary from the north in western Grand Canyon that is probably the *Parashant Canyon* interpretation from the *Egloffstein* map, and *Yampa R* that passes through *Red Lake*. *Diamond Creek* does not appear on this map. Also of note on this map is the misplacement of *Red Butte* too far to the northeast, and an imaginary tributary (not labeled) to the *Little Colorado* coming from the east side of *San Francisco Mt.*

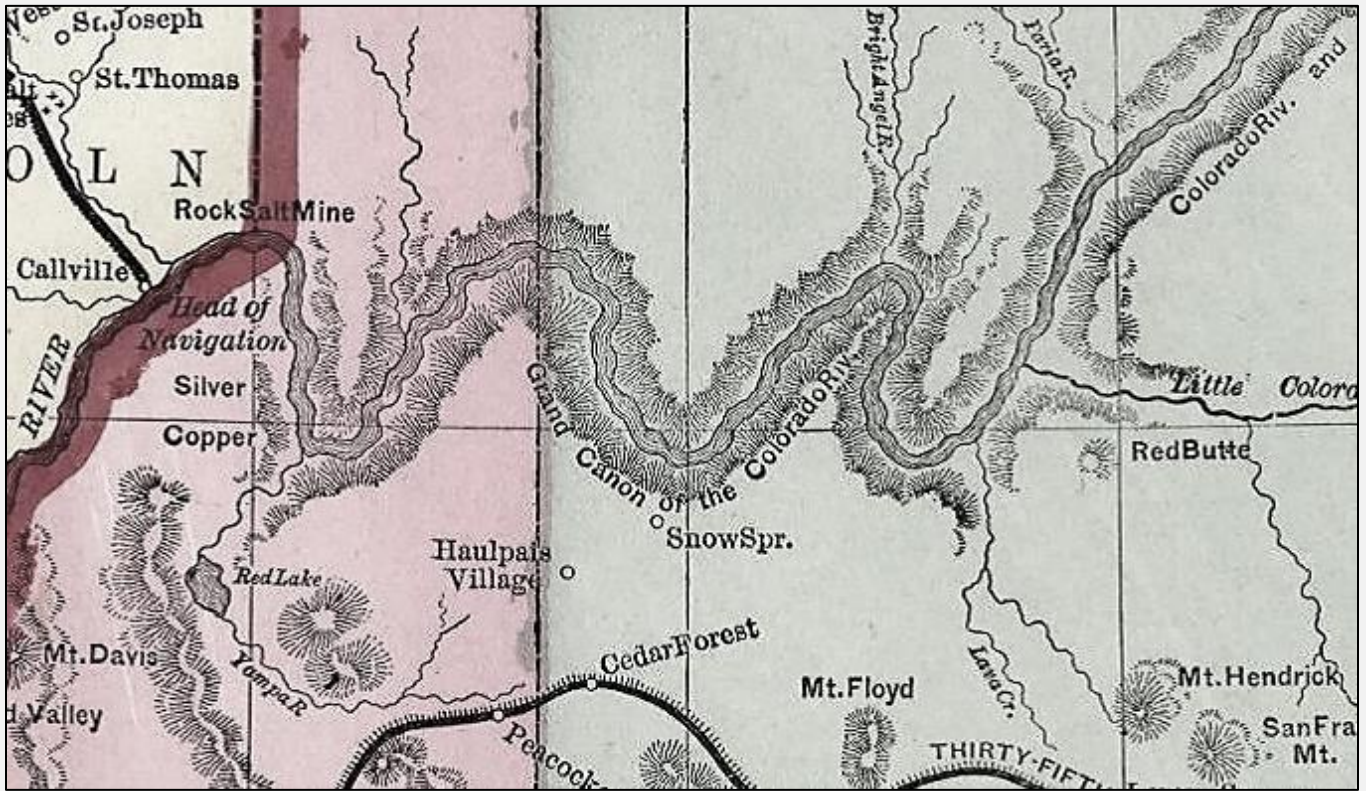
The labeled heavy line on the detail above, “or, Thirty-fifty Parallel R.R.”, on the full map has twinned labels for the first part. They appear on the split routing (*note the divide at left, north of “The Needles”*) as “*Southern Pacific R.R.*” on the northern [sic] branch and “*Atlantic & Pacific R.R.*” on the southern branch.

Compare *Watson (1876) (Fig. 8.7 ►)*.



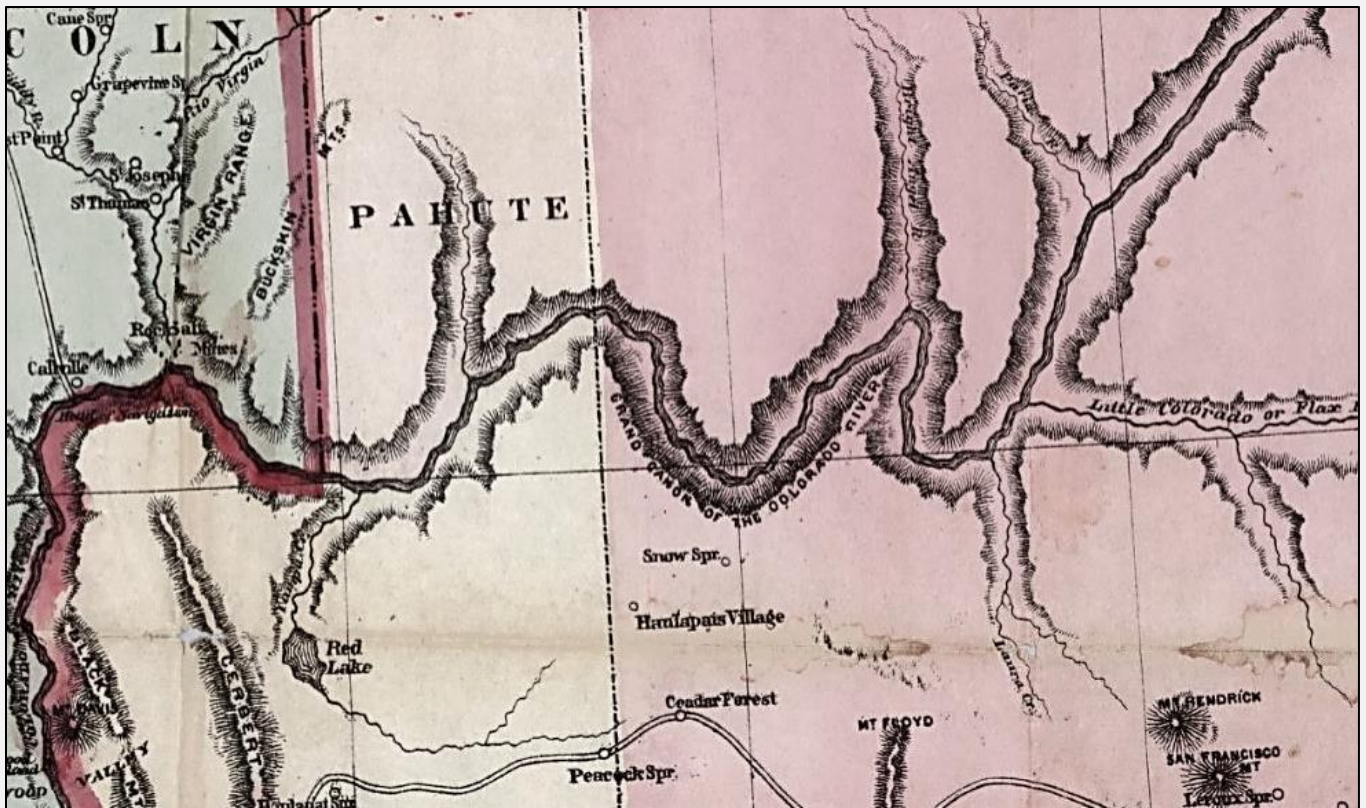
THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

8. The Colorado's Bactrian Course Through the Grand Canyon



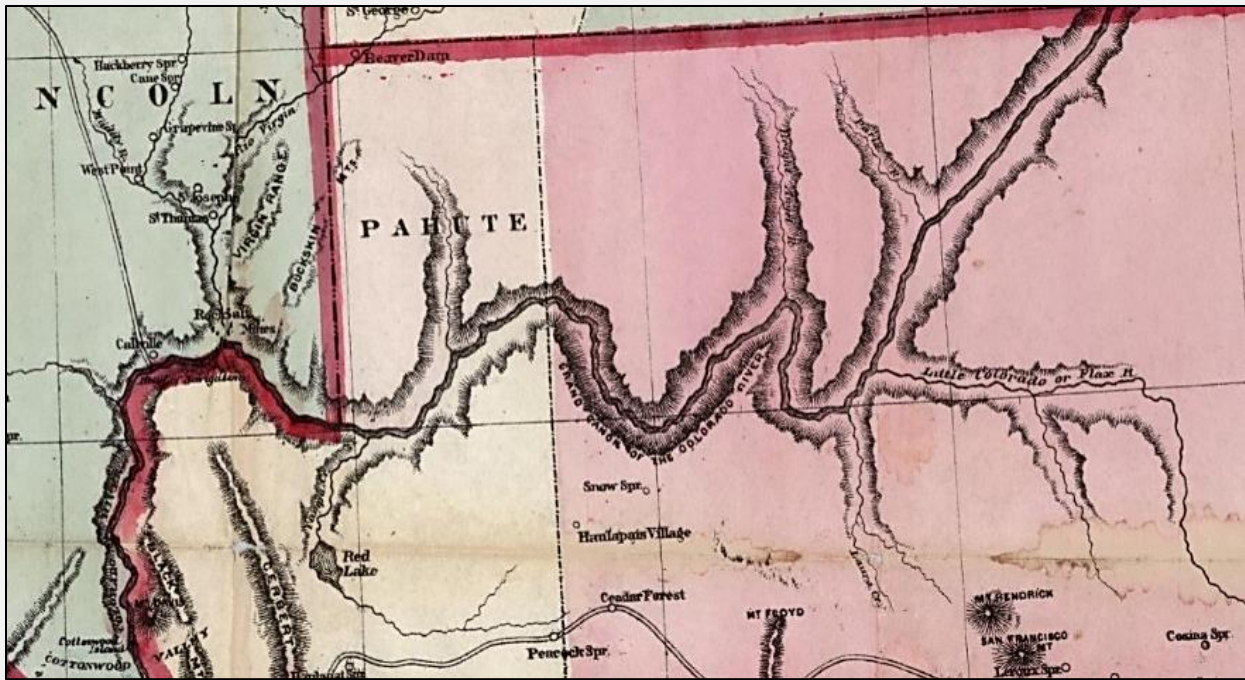
▲ Detail of Fig. 8.6.

▼ Cropped version of Fig. 8.7 (next page) for comparison.





8. The Colorado's Bactrian Course Through the Grand Canyon



▲ Fig. 8.7 Watson, Gaylord 1876 Watson's new county and railroad map of the Pacific States Published by G. Watson, N° 16 Beekman Street, N.Y. 1876. (Spamer 25.2092)

The *Grand Canon of the Colorado River* is decidedly depicted as encanyoned. Tributaries to the *Colorado River* in this area are *Paria R.*, *Little Colorado or Flax R.*, *Laura Cr.* (*sic*, meant to be *Lava Cr.*, labeled on a fork of the unlabeled *Cataract Creek*, which is seriously misplaced to the east), *Bright Angel R.* (*Bright Angel Creek*, more probably meant to be *Kanab Creek*), an unlabeled tributary from the north in western *Grand Canyon* that is probably the *Parashant Canyon* interpretation from the *Egloffstein map*, and *Yampa R.* that passes through *Red Lake*. *Diamond Creek* does not appear on this map. Also of note on this map an imaginary tributary to the *Little Colorado* coming from the east side of *San Francisco Mt.*

In these respects this map is essentially the same as that of *Watson (1875; see Fig. 8.6)*. However, it adds *Buckskin M<sup>ts</sup>*, which is usually reserved for the *Kaibab Plateau*, in the far western *Grand Canyon* near the *Virgin Range*, straddling the *Arizona–Nevada* boundary. Also, the course of the *Colorado* between the confluences of the *Yampa R.* and *Rio Virgin* is more correctly shown here on a northwesterly track (whereas in the 1875 map this reach is nearly due north before turning southwestward to the *Virgin* confluence).

## APPENDIX

### Selected Early Maps of Historical Importance

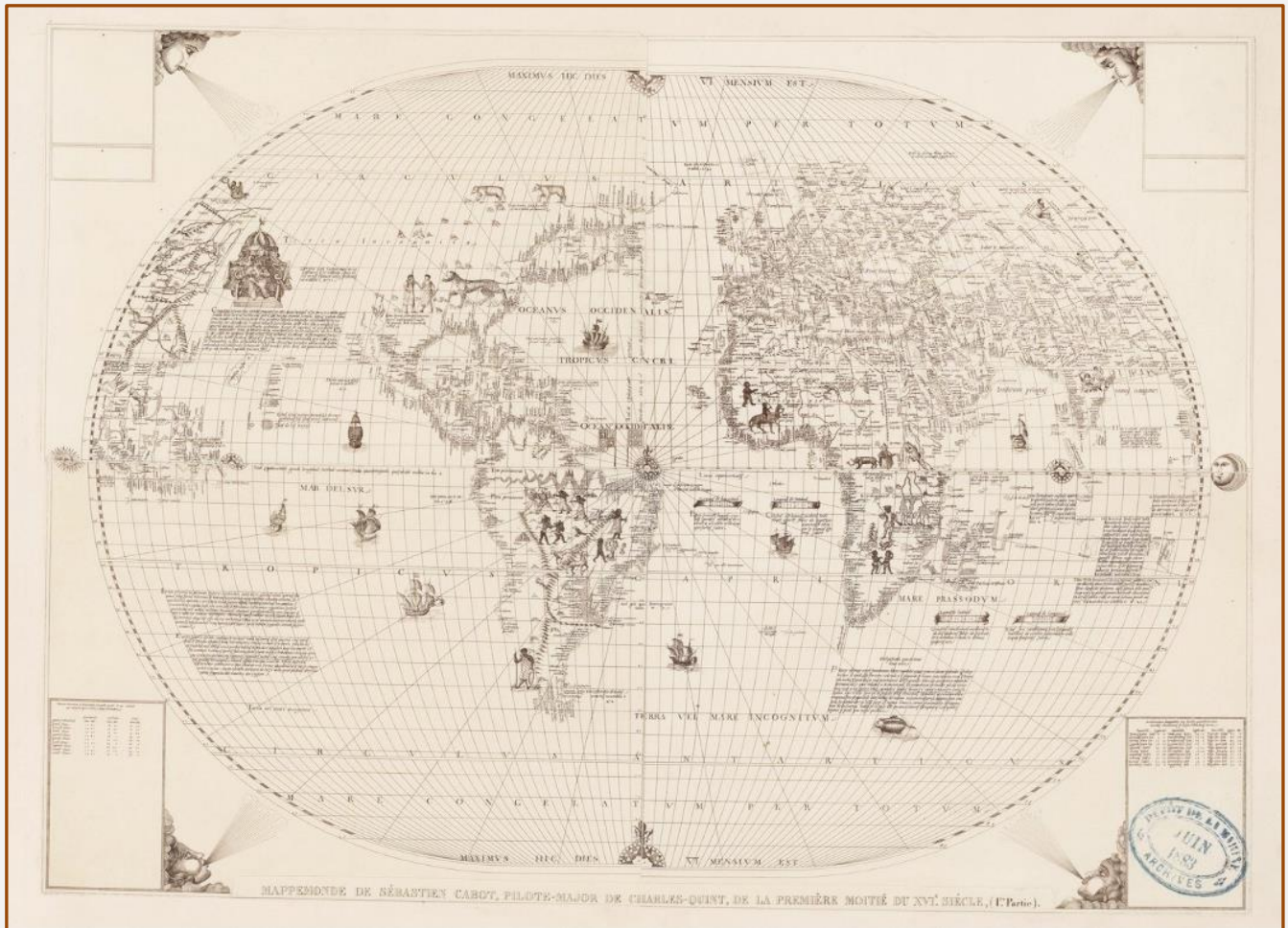
Several unique or scarce maps of importance to Colorado River and Grand Canyon history are reproduced on the following pages; they comprise manuscript and printed maps. This Appendix is included for its historical perspective, reprinted with additions and emendations from Earle E. Spamer, *Cartobibliography of the Grand Canyon and Lower Colorado River Regions* (Raven's Perch Media, <https://ravensperch.org>).

These pages are laid out to be best examined as opposing pages, in book format.



# THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

## Appendix



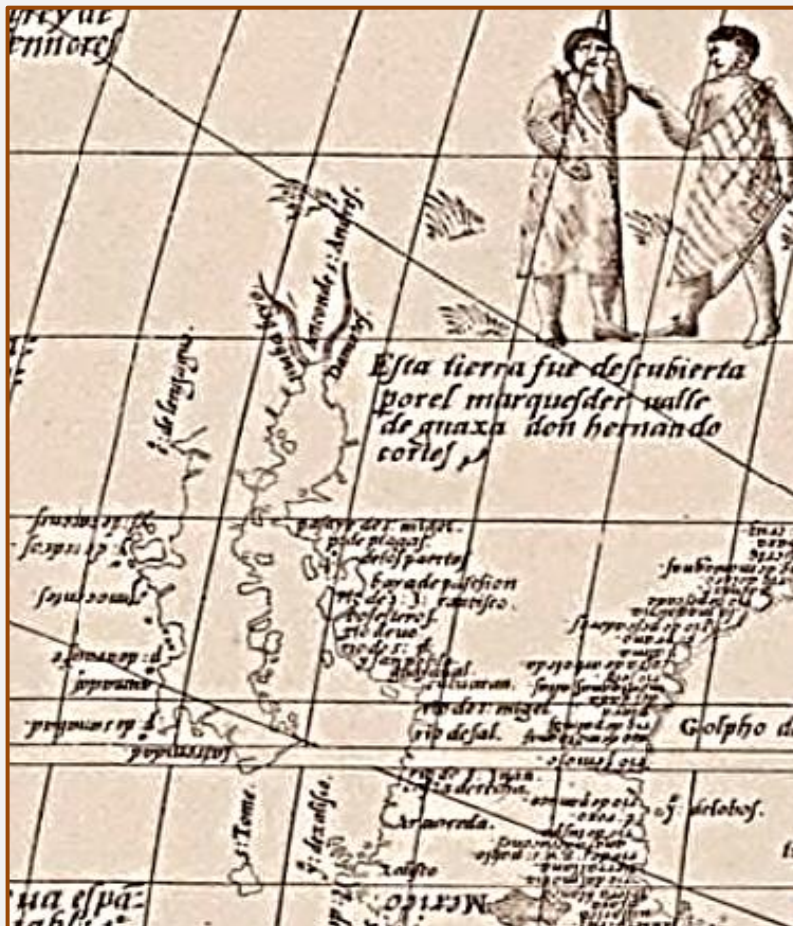
(Bibliothèque nacional de France, <https://gallica.bnf.fr/ark:/12148/btv1b53148963q/f1.item.r>, domaine public)

**Cabot (1544)**

**“Mappemonde de Sébastien Cabot, pilot-major de Charles-Quint, de la première moitié de XVI<sup>e</sup> siècle, (I<sup>re</sup> partie)”**

◀ **Fig. A-1** Sebastian Cabot’s map of 1544 was the earliest to definitively portray the region at the head of the Gulf of California, displaying the late discoveries reported by Spanish explorers (see *next page* for full citation and remarks). This illustration shows a contemporary reproduction with a title in French (as noted above) but incomplete text boxes. (*Cartobibliographical citation and chorographical notes are on the next page.*)

▼ **Fig. A-2, detail, digitally enhanced** Southwestern North America, showing the Gulf of California with two tributaries at its head, labeled (in Spanish and likely confused), “mar ba beyo” [*mar bermejo?*] and “Damales” [*de males?*], with the land between labeled “Ancon de s:Andres” [*Ancón de San Andrés*]. Note also the adjacent legend (in Spanish) that indicates that this land had been discovered by Hernándo Cortés.



**Cabot, Sebastian**

- 1544 **[No title.]** Antwerp: [Cabot]. **[In Latin.]** [This is a map of the world depicting the Americas in their entirety near the center of the sheet. The southwestern coast of North America depicts an oversized Californian peninsula with two tributaries at the head of the gulf, and a notation that this land was discovered by Herndo Cortes. Adjacent to the two tributaries are labels, thus, "mabubeyo." [?] (on the western tributary) and "Dametes." [?] (eastern tributary), with between them the label "Anconde s: Andres." ] [(Winship, 1896, Plate 48, reproduces this map "after Kretschmer", where these three labels are given as, respectively, "mababeyu", "Damote" (*sic*), and "Anconde s. andres".) Shirley notes (p. 92), "The map also takes into account the explorations by Ulloa in 1539 and Coronado in 1540-42 into the interior of the south-west of the United States." Compare also a 1769 redrawing of a manuscript map of the Gulf of California originally made by the pilot Domingo del Castillo in 1541, published in Cortés and Lorenzano (1770; see farther above).] • [This map, attributed to Sebastian Cabot, is the earliest published map to definitively portray the region at the head of the Gulf of California. It is sometimes suggested that Cabot's Gulf of California is reproduced from the Castillo map; however, while similarities can be seen, accounting for artistic variance, Castillo depicts the gulf as trending northwest-southeast, with a prominent twist to the northeast at its head, while Cabot maps the gulf as trending effectively north-south, without any twist at the head. Cabot's map, with legends in Latin, Spanish, and French, is illustrated online at <https://gallica.bnf.fr/ark:/12148/btv1b53148963q/f1.item.r>; the Bibliothèque national de France catalogs this as (including square brackets) "[Mappemonde / par Sébastien Cabot en guise de titre, une inscription bilingue dont le texte latin est le suivant], Présentant dans son quart sud-ouest in hac protens in planum figura continetur totus terre glodus, insule Portus, flumina Sinus Syrtus Et Brevia Que Hatenus A Neotericis Adaperta Sunt...". There is also a variant illustrated at <https://gallica.bnf.fr/ark:/12148/btv1b53189475q.r>; and a variant with completed text at <https://gallica.bnf.fr/ark:/12148/btv1b55011003p/f1.item.r>. The Cabot map has been indicated by some workers as a manuscript; however, given that these are engravings and that there are variants, and the fact that one is an imperfect printing with overstrikes, it should not be so indicated even if an individual copy is unique.] [Wheat (1957, Volume I, p. 19) mentions the Cabot map but did not include it in his cartobibliography because it lacks "inland place names."]











**Vélez y Escalante, 1777 (manuscript)**

**“Derrotero hecho por Antonio Veléz y Escalante, Misionero para mejor conocimiento de las Misiones, pueblos de Indios y Presidios que se hallan en el Camino de Monterrey a Santa Fé de Nuevo Mexico. Laus deo Anno Domini 1777.”**

◀ **Fig. A-3** This manuscript map (likely the work of Bernardo de Miera y Pacheco) was produced following the Domínguez–Escalante expedition of 1776, which from Santa Fé circled the Colorado Plateau. It is the first map to include a name for what became known as the Grand Canyon, employing the honorific “Puerto de Bucareli” that was given by Padre Francisco Garcés after he visited the Havasupai in 1776 and who included a map in correspondence with others in Santa Fé and elsewhere. His information, as well as that gathered by Padre Pedro Font, was immediately included in this map of Indian tribes of part of the Southwest. The map was printed for the first time as a woodcut by Manuel Villavicencio (1781; see Figs. A-5, A-6).

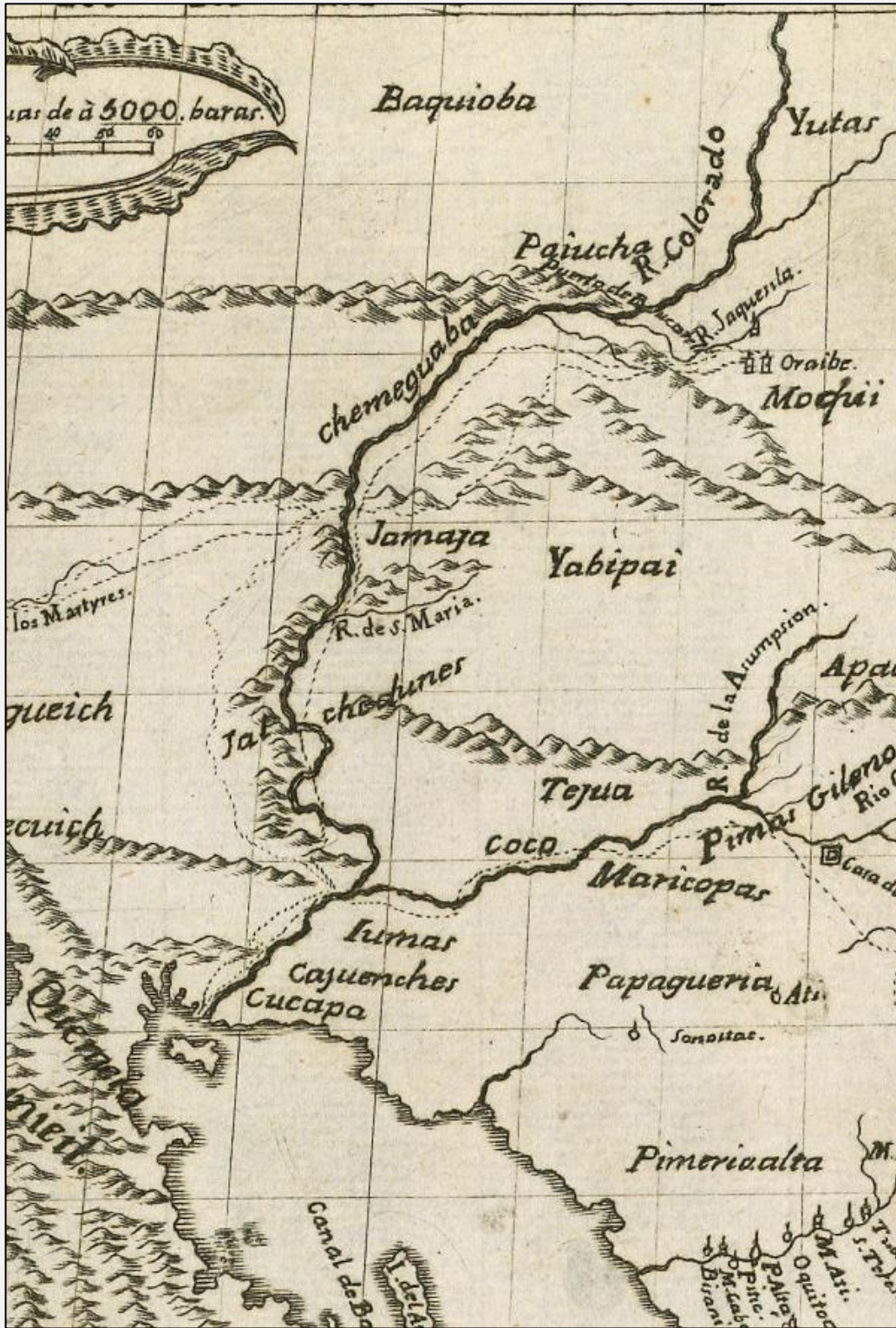
▼ **Fig. A-4, detail** The name, “Puerto de Bucareli,” appears above the confluence of the Colorado and Little Colorado Rivers. The markings alongside the streams delineate canyons.





THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

Appendix



(Carter Brown Library)

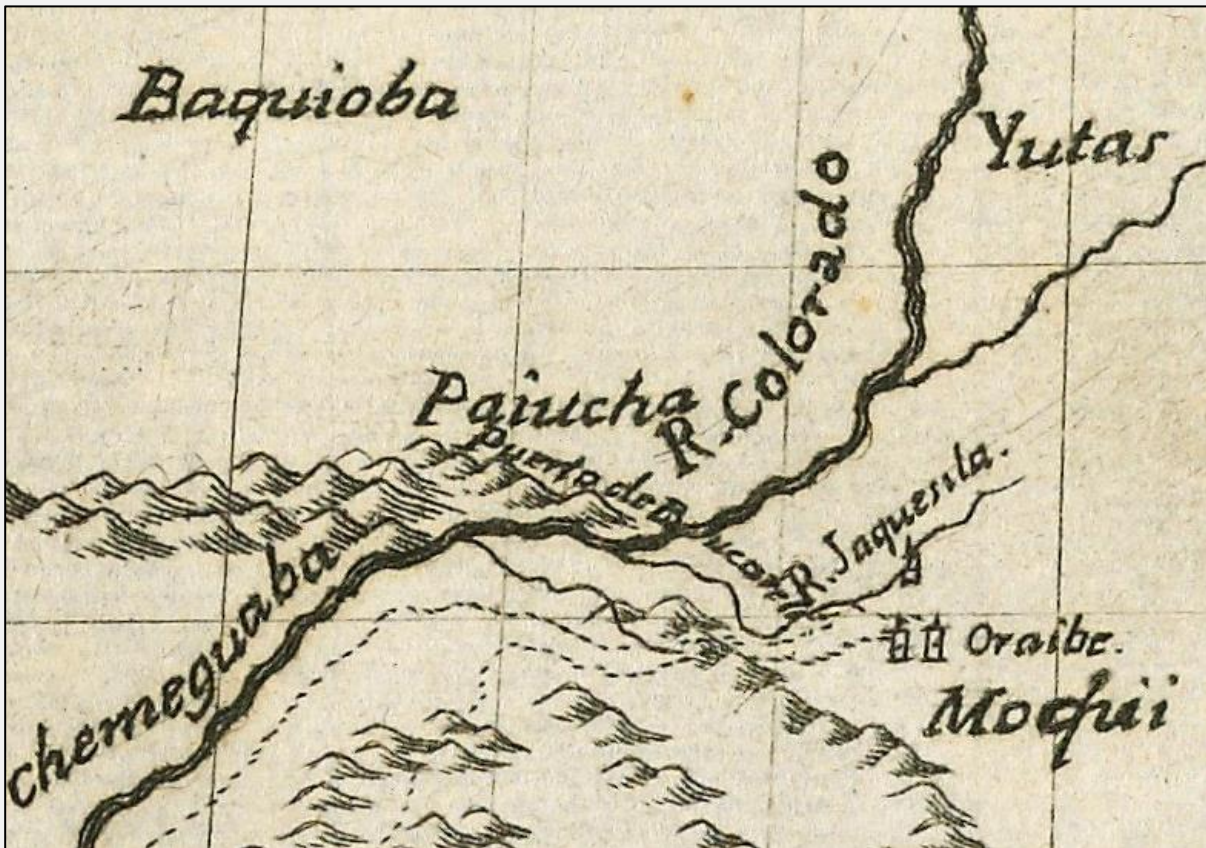
**Manuel Villavicencio (*sculpsit*, 1781)**

**“Carta geographica de la costa, y parte de la peninsula de la California naciones que comprehende hasta el Nuevo Mexico, y viàge q’ hizieron Fr. Fran<sup>co</sup> Garces, y Fr. Pedro Font al Rio Colorado[,] S. Gabriel, y Moqui el año de 1777”**

**[Mexico, no imprint (never published?)]**

◀ **Fig. A-5** Detail of the one-page map, apparently copied from or influenced by the manuscript map that likely was the work of Bernardo de Miera y Pacheco (see *Figs. A-3, A-4*). This is the first printed map to portray the landscape of the entire lower Colorado River (with the expected geographical faults). “R. Colorado” is delineated up into present-day Utah, passing through a mountainous terrain in the vicinity of Grand Canyon. The river enters the Gulf of California (not labeled) at its northeastern head. The routes of travel followed by Padres Francisco Garcés and Pedro Font are shown. (Notes found in descriptions of this map indicate that it may have been prepared for a book that was never published.)

▼ **Fig. A-6, greater detail**) *Puerto de Bucareli* is labeled at the portal—the “pass”—in mountainous terrain where is positioned the confluence of the Colorado and *R. Jaquesila* (Little Colorado River). The dashed line depicts Garcés’s route south of the Grand Canyon, to and from the Hopi mesas.





THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

Appendix



(American Philosophical Society)



**Cortés and Lorenzana, 1770 (after a Castillo 1541 manuscript)**

**“Domingo del Castillo. Piloto me Fecit en Mexico año del Nacimiento de N.S. Jesu Chisto de M.D.XLI.”**

◀ **Fig. A-7** The earliest known drawing of the Gulf of California to include the Colorado River delta region was made by Domingo del Castillo, the pilot of the expedition under Francisco de Ulloa that reached the upper gulf in 1539. The manuscript map was made in 1541, which was recovered two centuries later in the Hernán Cortés family papers, redrawn in 1769 and published in Cortés and Lorenzana (1770). (*Bibliographical citation and chorographical notes relating to the map appear on the next page.*)

▼ **Fig. A-8** Detail of the delta region, with the Colorado labeled as “Rio de buena Guia,” its earliest non-Indigenous name. Note the illustration of “La Ciudad de Cibora” [*sic*], which imaginatively (hopefully) portrays one of the Seven Cities of Cibola.



**Cortés, Hernán, AND Lorenzana, Francisco Antonio**

- 1770 [Two maps.] *In: Historia de Nueva-España, escrita por su esclarecido conquistador Hernan Cortes, aumentada con otros documentos, y notas, por el ilustrissimo Señor Don Francisco Antonio Lorenzana, Arzobispo de Mexico.* México: Imprenta del Superior Gobierno, del Br. D. Joseph Antonio de Hogal, xvi, [18], 400, [18] pp., maps, plates. [In Spanish.] [See “Viage de Hernan Cortes á la Peninsula de Californias, y noticia de todas las Expediciones, que á ella se han hecho hasta el presente año de 1769. para la mejor inteligencia de la quarta Carta de Cortés, y sus designios”, pp. 322-328.] [Two fold-out maps (legends transcribed exactly): [1] (as volume frontispiece): “**Plano de la Nueva España en que se señalan los Viages que hizo el Capitan Hernan Cortes assi antes como despues de conquistada el Imperio, Mexicano; Dispuesto por D.<sup>n</sup> Jph. Ant<sup>o</sup>. de Alzate y Ramirez ano de 1769.**” This map depicts the western Gulf of Mexico and adjacent lands of today’s U.S. and Mexico; on its western side it depicts the lower portion of the Baja peninsula and lower Gulf of California (“Mar Roxo de Cortes”) but does not reach the upper gulf (for which then see map [2]). [2] (facing p. 328): “**Domingo del Castillo. Piloto me Fecit en Mexico año del Nacimiento de N.S. Jesu Chisto de M.D.XLI.**” (“Este Mapa esta sacado de el Original que para en el Estado de el Marques de el Valle. En lo alto pone una Ciudad, que entonzes o por Relaciones se creio cierta i la llamaron Quivira. En la desembocadura del Rio Colorado enel Golfo de Californias pone dos Rios el uno le llama de Buena Guia, i puede ser el Colorado el oltro de Miraflores, upuede ser el Gila que incorporados en una Madre entran en el Seno de Californias. Navarro Sc. Mex<sup>o</sup>. año 1769.”) Note as well the imagined illustration at top, “La Ciudad de Cibora”, which identifies the region in which was believed to be the seven cities of Cibola.] [Map [2] (illustrated above) serves as a frontispiece to the section (pp. 329-400) with title, “Carta de Relacion, que D. Fernando Cortés, Gobernador, y Capitan General por su Magestad en la Nueva-España del Mar Océano Embió al Muy Alto, y Muy Potentísimo, Invictísimo Señor Don Carlos, Emerador Siempre Augusto, y Rey de España Nuestro Señor.”] ► Chorographical Note: The Californian peninsula is labeled “California” in small lettering near the southern tip. This map is significant for its being the earliest drawn record (1541) of the head of the Gulf of California (not labeled) and the Colorado River delta region (the river is labeled “Rio da buena Guia p<sup>o</sup>.~~x~~”), the manuscript redrawn in 1769 for this publication from the original found in the Cortés family papers. The map also seems to have left open the possibility that “California” is an island. On either side of the mouth of the Colorado are suggested two arms of the gulf, “Brazo de laguna p<sup>o</sup>.~~x~~” leading northwestward, and the more certainly drawn “Brazo de Miraflores p<sup>o</sup>.~~x~~” leading northeastward.





THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

Appendix



(Biblioteca Digital Real Academia de la Historia, Madrid)  
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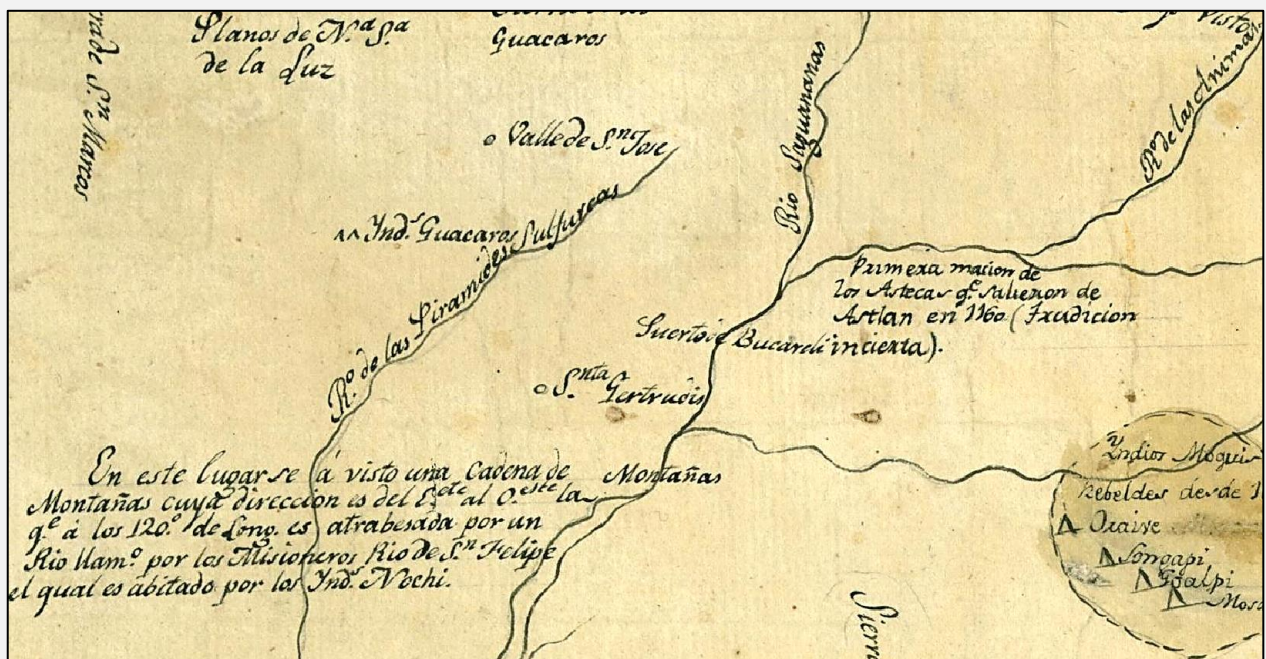
**Manuscript copy by Juan Segura (after Humboldt manuscript, 1804)**

**[Carta geográfica general del reino de Nueva España]**

◀ **Fig. A-9** When Alexander von Humboldt researched his monumental map of New Spain while in Mexico, Juan Segura of Guanajuato made at least one copy of Humboldt's map. The map shown here is a copy, though one not signed, which is held in the Real Academia de la Historia, Madrid. Compare this map against the second-generation manuscript copy made in Washington, D.C., which appears on the following pages. Another copy, in the University of Texas at Arlington, is titled "Carta Geografica Gral del Reyno N.E. Sacada de la Original hecha en 1803 por el Sor. Baron de Humboldt. Y Dedicada al Sor. Conde de la Valenciana," which "is possibly the earliest surviving version of Alexander von Humboldt's personal manuscript map of New Spain."\*

\*Paula Rebert, "A Map Meeting at the University of Texas at Arlington, October 2008," *Investigaciones Geográficas* (Instituto de Geografía, México), no. 68 (2009), pp. 149-152.

▼ **Fig. A-10, detail** In addition to portraying much of the Colorado River basin, including the mouth of the river in the Gulf of California, Humboldt's map reproduced Francisco Garcés's 1776 name for the Grand Canyon, "Puerto de Bucareli," labeled at the confluence of unlabeled rivers, but obviously the Colorado and Little Colorado Rivers. (The Colorado is not labeled anywhere on the map; upstream from the *puerto* is the confluence of "Rio Saguananas" and "Rio de los Animas," as shown here.) Note as well that it prominently displays "R<sup>o</sup> de las Piramides Sulfureas [or Sulfurcas]," about which river see the [historical note](#) in the Introduction herein.





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Appendix



(Library of Congress)



**Manuscript copy (19th century)  
(after Humboldt manuscript copy, 1804)**

**“General Chart of the Kingdom of New Spain Bet<sup>n</sup> parallels of 16 & 38° N.  
From materials in Mexico at commencement of year 1804. by Humboldt [rubric]”**

[See also [endnote](#) to this Appendix]

◀ **Fig. A-11** When Alexander von Humboldt visited the United States in 1804, during his return to Europe from Central America, he temporarily left maps and notes of his studies of New Spain with Secretary of the Treasury Albert Gallatin in Washington, D.C., who copied them (or had ordered copies of them be made). The copy in the Library of Congress (Geography and Map Division, call no. G4410 1804.H8), illustrated here, has also been indicated to be a later tracing of the copy. Humboldt first published his map in 1808, though more acclaimed in his 1811 publication; and two redrawn versions were published in 1810, one by a London publisher and the other in the U.S. by Zebulon Pike (*see on following pages*). Note that this is seemingly a rougher copy than that made by Segura in Mexico (*see above*).

▼ **Fig. A-12, detail** In addition to portraying much of the Colorado River basin, including the mouth of the river in the Gulf of California, Humboldt’s map reproduced Francisco Garcés’s 1776 name for the Grand Canyon, seen here as “Puerto de Bucarelli” (*sic*, Puerto de Bucareli), labeled at the confluence of the “Rio Colorado” and “R. Jaquesila” (*i.e.*, Little Colorado River).







**London edition, 1810 (after Humboldt, 1808)**

**A Map of New Spain, from 16°. to 38°. North Latitude reduced from the Large Map drawn from astronomical observations at Mexico in the Year 1804, by Alexandre de Humboldt . . . .**

[See also [endnote](#) to this Appendix]

◀ **Fig. A-13** A Map of New Spain, from 16°. to 38°. North Latitude reduced from the Large Map drawn from astronomical observations at Mexico in the Year 1804, by Alexandre de Humboldt . . . . (Longman, Hurst, Rees, Orme and Brown, London, 1810). This is a redrawing of Humboldt's 1808/1811 map.

▼ **Fig. A-14, detail** Humboldt's labeling includes Francisco Garcés's Puerto de Bucareli (as "Puerto de Bucarelli") at the confluence of the Colorado and Little Colorado Rivers. The redrawn map of 1810 mislabels Humboldt's "R. Jaquesila" (i.e. Little Colorado River) as "R. Nabajoa," erroneously repeating "Rio Nabajoa" that labels the next river northward that is today's San Juan River.





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Appendix



**Arrowsmith, 1810 (after Humboldt, 1808)**

**A new map of Mexico and adjacent provinces compiled from original documents  
By A. Arrowsmith 1810. London. Published 5<sup>th</sup> October 1810. by A. Arrowsmith  
10 Soho Squ<sup>e</sup> Hydrographer to H.R.H. the Prince of Wales. Engraved by E. Jones.**

[See also [endnote](#) to this Appendix]

◀ **Fig. A-15** Detail from "A new map of Mexico and adjacent provinces compiled from original documents By A. Arrowsmith 1810. London. Published 5<sup>th</sup>. October 1810. by A. Arrowsmith 10 Soho Squ<sup>e</sup>. Hydrographer to H.R.H. the Prince of Wales. Engraved by E. Jones." This is a redrawing, without credit, of Humboldt's 1808/1811 map (although an inset on the map, not illustrated here, has the title, "Valley of Mexico, from M<sup>r</sup>. Humboldt's Map"). Detail from the northwestern of four sheets.

▼ **Fig. A-16, greater detail** Arrowsmith's labeling includes Francisco Garcés's Puerto de Bucareli (as "Puerto de Bucarelli") at the confluence of the Colorado and Little Colorado Rivers. The redrawn map is rather more faithful to Humboldt's original than others of 1810, take note that Arrowsmith includes the route and campsites of the Domínguez–Escalante expedition of 1776, which do not appear on Humboldt's map; hence there is an additional source, and it was not Pike nor the London map from Longman.





THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

Appendix



(American Philosophical Society)



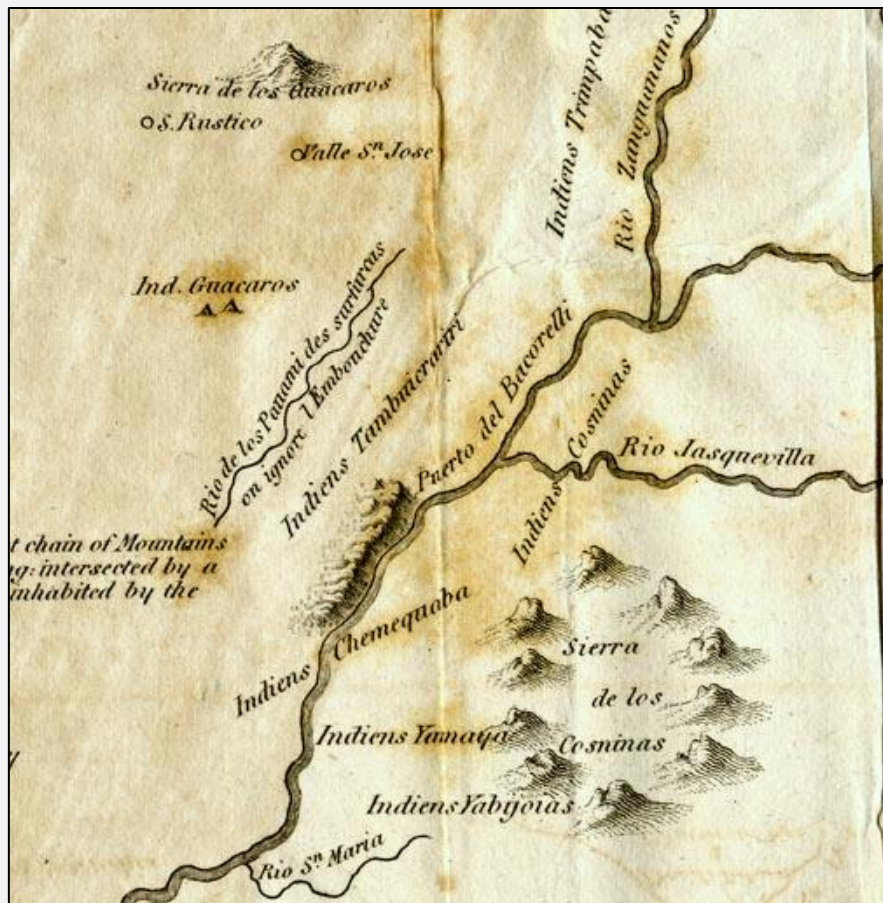
**Pike, 1810 (after copy of Humboldt manuscript, 1804)**

**A Map of the Internal Provinces of New Spain . . . .**

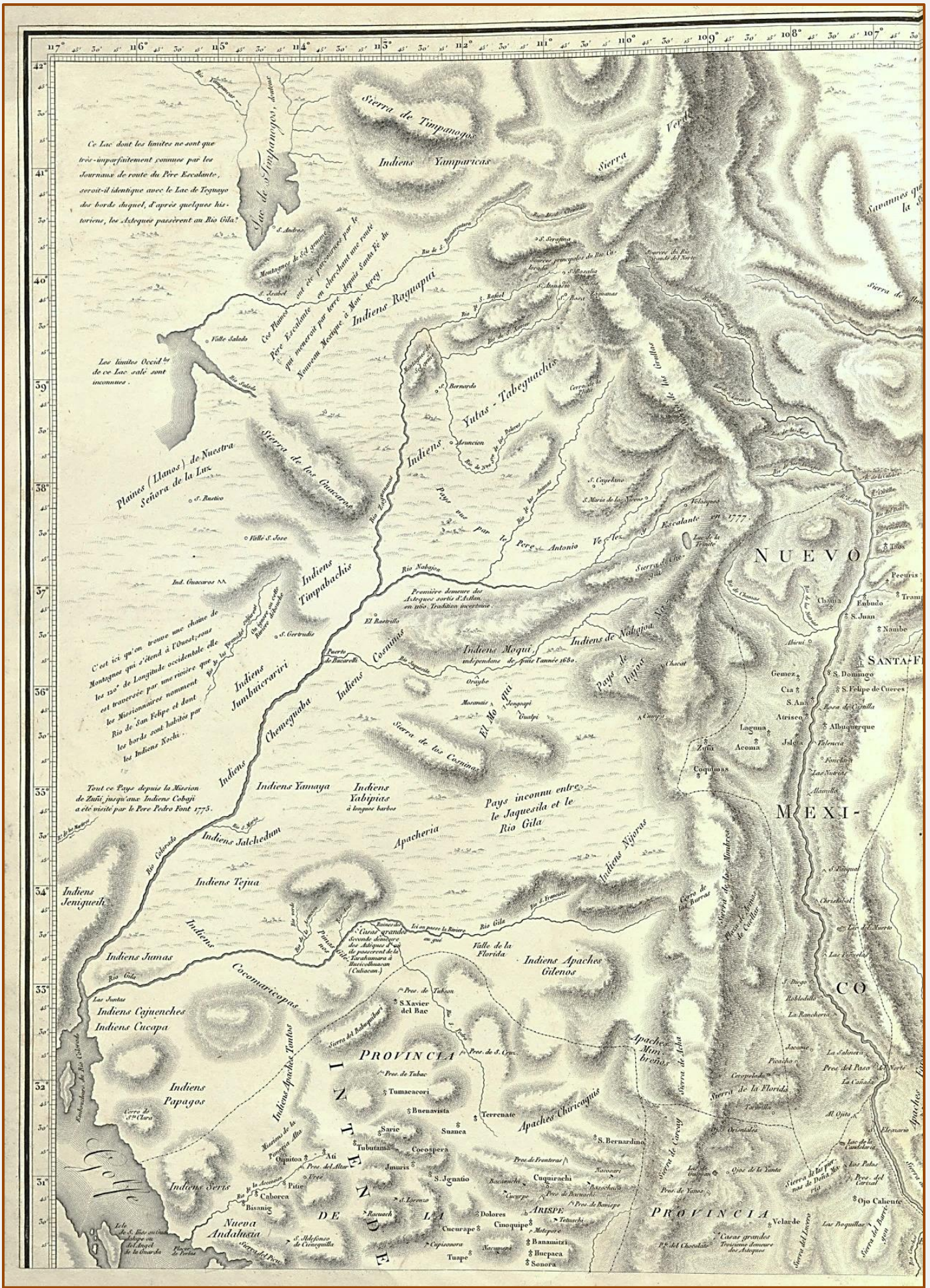
[See also [endnote](#) to this Appendix]

◀ **Fig. A-17** Northwestern quadrant of Zebulon Pike’s map of New Spain. Part of the map was copied without credit from the American copy of Humboldt’s 1804 manuscript map, which had been made when Humboldt temporarily left his materials during his visit to President Thomas Jefferson in Washington, D.C. in June 1804. Secretary of the Treasury Albert Gallatin was entrusted by Humboldt to make the copies. [This view is also used on the cover of the present volume.]

▼ **Fig. A-18, detail** Humboldt’s labeling shows Francisco Garcés’s Puerto de Bucareli (as “Puerto del Bacorelli”) as the river reach approaching the “Rio Jasquevilla” (Little Colorado River). Pike’s redrawn map of 1810 mislabels Humboldt’s “R. Jaquesila” as “Rio Jasquevilla” and (see larger section at left) fails to label the Rio Nabajoa (San Juan River). Further, Pike’s map mislabels Humboldt’s enigmatic “Rio de las Piramides sulfureas” as “Rio de los Panami des surfurcas” (about which river see the [historical note](#) in the Introduction).









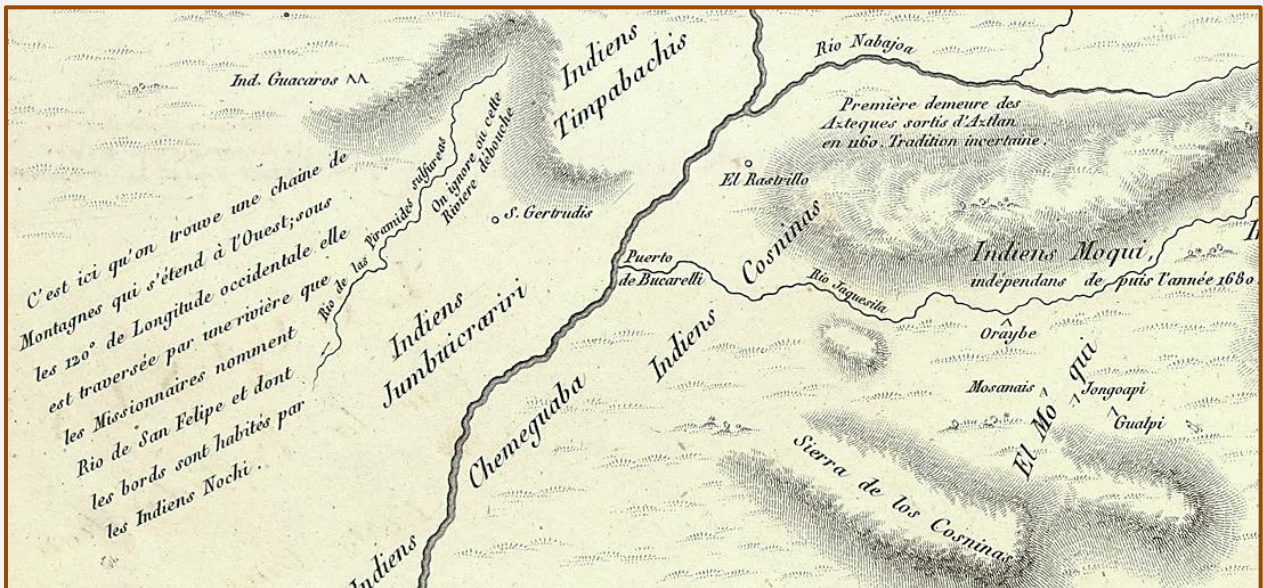
**Humboldt, 1811**

**Carte Générale du Royaume de la Nouvelle Espagne . . . .**

[See also [endnote](#) to this Appendix]

◀ **Fig. A-19** Alexander von Humboldt published what was for years the definitive atlas of New Spain (1808, the same published in 1811, *see endnote for remarks*); the first editions are in French because he had settled in Paris upon returning from America. The map is based on a manuscript map he had prepared in 1804 (*see farther above*). It includes a map on two double-folio sheets separating northern and southern halves of the region. *The northwestern quadrant is reproduced here.* The region shown is the present-day Four Corners region of Arizona, New Mexico, Colorado, and Utah, and the upper Gulf of California principally in Sonora. (The “Rio Colorado” is at left; the “Rio grande del Norte” at right is the Rio Grande.) This map is especially significant as including the Grand Canyon by name, although the canyon itself is not otherwise specially defined on the map. Humboldt mislabeled “Puerto de Bucarelli,” the name originally given by padre Francisco Garcés in 1776 as “Puerto de Bucareli” when he saw the Grand Canyon during his missionary visit to the Havasupai and Hopi people (*see Garcés’s diary in Coues, 1900 [citation is on the next page]*). With that name Garcés had honored his patron, Antonio María Bucareli y Ursúa, then the viceroy of New Spain.

▼ **Fig. A-20, detail** This portion of the northwestern quadrant clearly shows the label at the center, “Puerto de Bucarelli,” positioned at the confluence of the Rio Colorado (a name that appears farther to the south on the map [*see the whole quarter in Fig. A-19*] and Rio Jaquesila (which is the Little Colorado River). (“Rio Nabajoa” is the San Juan River. “Rio de las Piramides sulfureas” is the supposed “River of the Sulfurous Pyramids,” regarding which river see the [historical note](#) in the Introduction herein.)





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### Appendix

#### **Coues, Elliott**

- 1900 (ED., TRANSLATOR) *On the trail of a Spanish pioneer : the diary and itinerary of Francisco Garcés (missionary priest) in his travels through Sonora, Arizona, and California[,]* 1775- 1776 : translated from an official contemporaneous copy of the original Spanish manuscript, and edited, with copious critical notes by Elliott Coues. New York: Francis P. Harper, 2 volumes, pp. 1-312, 313-608. (American Explorers Series, III.) [For Grand Canyon, see Volume II; lower Colorado River, see both volumes.] [Translation based on two manuscript copies of Garcés's diary and on Garcés (1854).]

#### **Garcés, Francisco Tomás Hermenegildo**

- 1854 Diario y derrotero que siguió el M. R. P. Fr. *Francisco Garces* en su viaje hecho desde Octubre de 1775 hasta 17 de Setiembre de 1776, al Rio Colorado para reconocer las naciones que habitan sus márgenes, y á los pueblos del Moqui del Nuevo-México. *In: Documentos para la historia de México. Segunda serie, Tomo 1.* México: F. Escalante y Comp., pp. 225-374. [In Spanish.]

**ENDNOTE FOR THE APPENDIX**

Regarding Humboldt's "Carte Générale du Royaume de la Nouvelle Espagne," Stony Brook University (State University of New York) Map Librarian (emeritus) David Y. Allen (2014, p. 78, *note 1*) ascertains that "The earliest printed edition of this map appeared in 1808, and was published as two sheets of his *Atlas géographique et physique du royaume de la Nouvelle-Espagne, fondé sur des observations astronomiques, des mesures trigonométriques et des nivellemens barométriques* (Paris: F. Schoell and Tubingen: J.G. Cotta). The 1808 edition is available online from the University Complutense (Madrid) at [http://dioscorides.ucm.es/proyecto\\_digitalizacion/index.php?doc=b23177585&y=2010&p=1](http://dioscorides.ucm.es/proyecto_digitalizacion/index.php?doc=b23177585&y=2010&p=1) [link not valid, relocated 3 May 2023 at [http://dioscorides.ucm.es/proyecto\\_digitalizacion/index.php?5324332994](http://dioscorides.ucm.es/proyecto_digitalizacion/index.php?5324332994)]. An 1811 printing of the atlas by Schoell, which is sometimes cited as the first edition of this work, is available in its entirety from the David Rumsey Collection." (Spamer has used the 1811 edition in the American Philosophical Society, Philadelphia, where he was Reference Archivist. The 1808 digitized edition in Madrid is not in a resolution satisfactory for very detailed examinations.)

Regarding the 1804 manuscript map of Humboldt, copied in Washington, D.C., Hébert and Mullan (1999, no. 540) noted, "We believe that this map was traced in ca. 1846 by J. G. Bruff from an 1804 original by Alexander von Humboldt." However, there is no further documentary remark and they do not comment on the disposition of the original copy, which it would thus seem that it survived the Washington conflagration of 1814. The Library of Congress's catalog record for the map is not annotated to this effect. There also are no pertinent records in LOC online under Joseph Goldsborough Bruff. Allen (2014, p. 81, *note 6*), however, is more clear: "In 1804 Humboldt presented a copy of his map to Thomas Jefferson, but that manuscript appears to be lost. The Library of Congress has a copy of Humboldt's map dated 1804 on its Web site . . . , but this appears to be a manuscript copy of the printed 1811 version of Humboldt's map made during the Mexican-American war by American military cartographer Joseph Goldsborough Bruff." Wheat, 1959, Volume III, p. 97, notes that "maps Bruff drew languished unused in government archives . . . ." Bruff had gone West in 1849 to the gold fields, where he kept diaries and made maps, so his interest and involvement in this region is documented (see Wheat, pp. 97-102). Perhaps he also also made a copy of the 1804 copy of Humboldt (a postulation added here; that is, if Hébert and Mullan's supposition is correct). Harvey (2020, pp. 69, 81 *note 122*) observes, "There appear to have been two copies of the map, one commissioned by [Albert] Gallatin from Mr. Kraft [*sic*, identified only as a Washington, D.C., cartographer; likely F. C. de Krafft of the District of Columbia Surveyor's Office; this

## THE COLORADO RIVER OF THE WEST : CARTOGRAPHIC STYLES

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would be the 1804 copy of Humboldt's original] the other made surreptitiously by General James Wilkinson for use by Zebulon Pike.”

Humboldt was aware of the unsanctioned 1810 copies of his “great map of New Spain” (that is, Humboldt, 1808). He criticized Arrowsmith's 1810 production (Humboldt, 1811, 1812; see also Allen, 2016, 2017), where he appended remarks on the Pike copy. In 1814, specifically noting his manuscript map, he commented on the pirated editions by Arrowsmith and Pike, wherein he specially noted Pike's map, “Les cartes du Mexique qui se trouvent annexées à la relation de son voyage, sont des réductions de ma grande carte de la Nouvelle-Espagne, dont une copie étoit restée en 1804 à la Secrétairerie d'État de Washington.” The comment was also noted in English translation (1814, p. xxx [second series]; 1815, p. xxi *note*): “The maps of Mexico, which are annexed to the narrative of his journey, are reduced from my great map of new Spain, of which I left a copy, in 1804, at the secretary of state's office at Washington.” (Humboldt was first introduced to Secretary of State James Madison via dispatch from Vincent F. Gray, the American consul in Havana, Cuba, where Humboldt had decided to visit the United States. In Washington, he met treasury secretary Gallatin, as well as President Thomas Jefferson and a roster of politicians and scientists and their wives, adding more as he moved back and forth from Philadelphia, where he had arrived and would leave for Europe.) Humboldt did not remark on the 1810 map produced by the London firm of Longman, Hurst, Rees, Oremé and Brown, which although it, too, includes errors, does credit Humboldt in the title.

### REFERENCES FOR THE ENDNOTE:

#### **Allen, David Y.**

- 2014 Alexander von Humboldt and the mapping of Mexico. *e-Perimtron*, 9(2): 79-96.
- 2016 Alexander von Humboldt's critique of Aaron Arrowsmith's 1810 map of Mexico. *Imago Mundi*, 68(2): 232-236.
- 2017 Mapping in Humboldt's shadow: aaron Arrowsmith and the cartogrpahy of mexico, 1802-1825. *Terrae Incognitae*, 49(1) (April): 50-67.

#### **Arrowsmith, A. [Arrowsmith, Aaron]**

- 1810 *A new map of Mexico and adjacent provinces compiled from original documents By A. Arrowsmith 1810. London. Published 5<sup>th</sup> October 1810. by A. Arrowsmith 10 Soho Squ<sup>e</sup>. Hydrographer to H.R.H. the Prince of Wales. Engraved by E. Jones.*

#### **Harvey, Eleanor Jones**

- 2020 *Alexander von Humboldt in the United States : Art, Nature, and Culture.* Washington D.C.: Smithsonian American Aert Museum, in association with Princeton University Press, Princeton (New Jersey), and Oxford, 442 [444] pp.



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#### Hébert, John R., and Mullan, Anthony P.

- 1999 *The Luso-Hispanic world in maps : a selective guide to manuscript maps to 1900 in the collections of the Library of Congress.* Washington, D.C.: Library of Congress, 282 pp. [This resource is also online at <https://www.loc.gov/rr/geogmap/luso/> (last accessed April 25, 2023).

#### Humboldt, Alexander von

- 1808 Carte Générale du Royaume de la Nouvelle Espagne depuis la Parallele de 16° jusqu'au Parellele de 38° (Latitude Nord) Dressée Sur des Observations Astronomiques et sur l'ensemble des Matériaux qui existoient à Mexico, au commencement l'anée 1804. Par Alexandre de Humboldt. [2 sheets.] *In: Atlas géographique et physique du Royaume de la Nouvelle-Espagne, fondé sur des observations astronomiques, des mesures trigonométriques et des nivellemens barométriques.* Paris: Chez Fr. Schoell, rue des Fossés-S.-Germain-l'Auxerrois, N°. 29; et a Tübingue, chez J. G. Cotta, libraire.
- 1810 *A map of New Spain, from 16°. to 38°. North latitude reduced from the large map : drawn from astronomical observations at Mexico in the year 1804, by Alexandre de Humboldt, and comprecending the whole of the information contained in the original map, except the heights of the Mountains.* [London]: "Published as the Act directs, Oct<sup>r</sup>. 25, 1810, by Longman, Hurst, Rees, Oreme and Brown, Paternoster Row."
- 1811 Carte Générale du Royaume de la Nouvelle Espagne depuis la Parallele de 16° jusqu'au Parellele de 38° (Latitude Nord) Dressée Sur des Observations Astronomiques et sur l'ensemble des Matériaux qui existoient à Mexico, au commencement l'anée 1804. Par Alexandre de Humboldt. ("L<sup>s</sup>. Aubert pere Scripsit".) *In: Atlas géographique et physique du Royaum de la Nouvelle-Espagne, fondé sur des observations astronomiques, des mesures trigonométriques et des nivellemens barométriques.* Paris: Chez F. Schoell, folio.
- 1811 *Sur une carte de la Nouvelle-Espagne: publiée par Mr. Arrowsmith, en 1810.* Paris: [no imprint]. [Critique of Arrowsmith's pirated copy of Humboldt (1808).]
- 1812 Über eine Karte von Neuspanien, herausgegeben von Hrn. Arrowsmith, im J. 1810. *Montatliche Correspondenz zur beförderung der Erd- und Himmels-Kunde*, 25 (March): 265-272. [Critique of Arrowsmith's pirated copy of Humboldt (1808).]
- 1814 *Voyage aux régions équinoxiales du nouveau continent, fait en 1799, 1800, 1801, 1802, 1803 et 1804, par Al. de Humboldt et A. Bonpland, rédigé par Alexandre de Humboldt; avec un atlas géographique et physique. Tome Premier.* Paris: Chez F. Schöll, 643 pp. [Author's name published as Alexandre de Humboldt.]
- 1814 *Personal narrative of travels to the equinoctial regions of the new continent, during the years 1799-1804. By Alexander de Humboldt, and Aimé Bonpland; with maps, plans, &c. Written in French by Alexander de Humboldt, and translated into English by Helen Maria Williams. Vol[.] I.* London: Printed for Longman, Hurst, Rees, Oreme, and Brown; J. Murray; and H. Colburn, xi, li, 289 [291] pp.
- 1815 *Personal narrative of travels to the equinoctial regions of the new continent, during the years 1799-1804. By Alexander de Humboldt and Aimé Bonpland. Written in French by Alexander de Humboldt, and translated into English by Helen Maria Williams.* Philadelphia: M. Carey. Dec. 23 1815, pp. i-xxxii, 33-432.

#### Pike, Zebulon

- 1810 *An account of expeditions to the sources of the Mississippi, and through the western parts of Louisiana, to the sources of the Arkansaw, Kans, La Platte, and Pierre Jaun, rivers : performed by order of the government of the United States during the years 1805, 1806, and 1807. And a tour through the interior parts of New Spain, when conducted through these provinces, by order of the Captain-General, in the year 1807.* Philadelphia: C. and A. Conrad, and Co.; Petersburg (New York): Somervell and Conrad; Norfolk (Virginia): Bonsal, Conrad, and Co; and Baltimore (Maryland): Fielding Lucas, Jr. (John Binns, Printer.)

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#### **Wheat, Carl Irving**

1959 *Mapping the Transmississippi West, 1540-1861. Volume Three. From the Mexican War to the boundary surveys, 1846-1854.* San Francisco: Institute of Historical Cartography, xiii, 349 pp.

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The perched-raven colophon of Raven's Perch Media recalls this bird's habit of gathering and caching objects, one of its mischievously intelligent interactions with its kind and humans alike. It is a detail from an 1861 lithograph that depicts a camp scene during the Ives expedition's land component on the southern part of the Colorado Plateau in 1858. [*"Camp—Colorado Plateau"*, lithograph by John J. Young after original watercolor and gouache artwork by Heinrich Balduin Möllhausen, published as *General Report Plate VII* in Joseph C. Ives, *Report Upon the Colorado River of the West, Explored in 1857 and 1858* (U.S. Government Printing Office, Washington, 1861), [Part I].]





<https://ravensperch.org>