

THE GRAND CANON

A Worldwide Bibliography

of the

Grand Canyon

and

Lower Colorado River

Regions in the United States and Mexico

1535–2021

Volume 1 : Introduction and Bibliography

106,000 CATEGORIZED AND AUGMENTED CITATIONS FOR
PUBLICATIONS FROM AROUND THE WORLD IN 114 LANGUAGES

WITH EXTENSIVE BACKGROUND AND SUPPORTING INFORMATION

Earle E. Spamer





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THE GRAND CANON 2022

Volume 1 Introduction & Bibliography [Fourth Edition]

Volume 2 Cartobibliography [Second Edition]

Volume 3 Grand Canyon, Colossal Mirror [First Edition]

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THE GRAND CANON : A WORLDWIDE BIBLIOGRAPHY OF THE GRAND CANYON AND LOWER COLORADO RIVER REGIONS IN THE UNITED STATES AND MEXICO, 1535–2021

Volume 1: Introduction and Bibliography

by Earle E. Spamer

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Raven's Perch Media
Philadelphia, Pennsylvania, USA

Spamer, Earle Edward (1952–)

The Grand Canon : a worldwide bibliography of the Grand Canyon and lower Colorado River regions in the United States and Mexico, 1535–2021 : Volume 1: Introduction and bibliography

13,784 p.

Collation [6], I-XXII, [2], A-M, Español A-N, [2], i-xxiii, Introduction 1-568, [2], Bibliography 1-13,130

Portable Document Format (PDF); electronic resource, <https://ravensperch.org>

THE GRAND CANON : Volume 1

FOURTH EDITION

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CATALOGERS NOTE

canon : *a standard or essential list of works*

The Grand Canon
not The Grand Canyon

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ONE DOES NOT just sit down and transcribe citations for a bibliography—although that is just how *THE GRAND CANON* began in 1974, simplistically, on 4-by-6-inch, mostly handwritten, index cards. Evaluation, editing, and commentary eventually rule it; revision and reformatting are made to convey essential information, added perspectives, and clarifications.

Each citation in *THE GRAND CANON* is a receptacle for at least one fact regarding the Grand Canyon or the lower Colorado River regions—even for works of fiction because the “facts” therein are the characters and scenarios of an author’s creative work. Every citation documents a person’s—or many persons’—work to describe, interpret, or imagine the things that have contributed to a publication, whether to inform, enlighten, or entertain. In sum the citations are a whole image of human experiences, activities and uses; elements of the natural world; and spiritual, emotional, analytical and critical responses through the activities of professions, avocations, and livelihoods. One user may object that within *THE GRAND CANON* there are citations that are superfluous, but to another reader attending to a task particular to them at that time, some of those “superfluous” citations may provide just the documentation they seek, or may expose something useful about which they had no idea.

In *THE GRAND CANON* the term “publication” is very broadly defined. Rather than referring to products run off on a press or otherwise produced usually for broad distribution, they include publicly available documents that never were meant for wide distribution; most notably, that genre of publication called “gray literature”. To these are added theses and dissertations, which although not distributed as publications they have been made available through academic libraries and are widely accessible, once through microfilm reproductions, many of them now on public websites; they are frequently cited, too. All of these kinds of technically “unpublished” and “non-conventional” productions still are used and cited by researchers and other interested

parties and are a part of the bibliographical heritage expressed by this bibliography. They are part of the historical record of work in, and attention to, the regions covered by the bibliography.

The descriptive and explanatory sections that follow are intentionally detailed. They serve as a documentary record of how THE GRAND CANON is arranged and comprise a helpful introduction for those who may be interested in understanding more about the craft of bibliography.

HYPERLINKS : POSITION CURSOR ON ANY LINE AND ACTIVATE TO JUMP AHEAD

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TOPICAL COVERAGE

A BIBLIOGRAPHY includes whatever its compilers wish to include. Francis Farquhar's 1953 gem, *The Books of the Colorado River and the Grand Canyon: A Selective Bibliography* is a celebrity title among bibliophiles of the Southwest, at least those who

admire the Colorado River. There really is no such thing as a “selective bibliography”, though, just a purposefully incomplete one. Indeed, such works may be criticized as “poor excuse[s] for selecting other scholars out.”¹⁴ Nonetheless, one should bear in mind the geographical realm of coverage in *THE GRAND CANON*; this is not a bibliography of all works by the authors listed herein. Some users may decry that one important work or another by an author is not cited. A work is listed only if it mentions or embraces, even in small part, the geographic region attended to by this bibliography—the Grand Canyon and lower Colorado River and the areas bounding them. If the work does not touch on these areas, it is not listed, regardless of the prominence of the author, the worth of the work, or its otherwise obvious applicability to studies of the region without actually referring to these areas. Each cited work must embrace some part of the geographical range of this bibliography. Temporally, I have restricted citations from periodicals to those that appear no more frequently than a week. Exceptions are *The New York Times* (which comprises its own part within this bibliography, [Part 3](#)), and pertinent citations that appear in the daily *Federal Register* (U.S. National Archives and Records Administration, Office of the Federal Register).

We have only to blame ourselves and centuries of forebears for the number and kinds of things cited in this bibliography: books, articles, whole periodicals, excerpts, abstracts, pamphlets, translations, atlases, maps, records, CDs, DVDs, films, videos, published separate photographs—not to overlook the products of lectures, reading circles, authors’ and publishers’ book promotions, travel agency literature, and the personally produced works of just plain dedicated enthusiasts. All are the main instruments of the spread of information on the Grand Canyon and Colorado River.

This bibliography began in 1974 simply enough: a short list on the subject of Grand Canyon geology. Now it is what you see. My decision to exclude the upper Colorado River basin is based entirely on my personal preferences, which expose the limits of my experience. I know far less of the Upper Basin; moreover, I have not traveled as much there. I have traveled throughout Arizona, along the lower Colorado River too, venturing into the Colorado Desert. My seventeen trips on the Colorado River through Grand Canyon, between 1989 and 2001 (all but two through to Lake Mead, the others out at Diamond Creek), pale against the tallies of those who are boatmen and scientist-workers on the river, but at least now I am comfortable with recollections and references to specific places in the river corridor. The same applies to some backcountry locales in the canyon and nooks along the lower Colorado.

¹⁴ Alfred Runte, [Review of] Rebecca Bedell, “The Anatomy of Nature: Geology and American Landscape Painting, 1825-1875”, *Isis*, Vol. 93, no. 4 (December 2002), p. 745.

The topical coverage in THE GRAND CANON is nearly without bounds. Books, articles, and other items wholly about these subjects are of course the mainstay of this work; but it also embraces those items that contain a snippet merely of passing interest. All make their ways into this bibliography. The absolute criterion is that they must in some way make mention of the Grand Canyon or the lower Colorado River, in any context, however brief—although it must have a contextual link to the region, and not, for example, just including Grand Canyon in a list of places run through in a discussion of something. So this is in fact partly a bibliography of subject-specific items and partly an index to publications containing notes on the Grand Canyon–Colorado River country.

I have observed and preached for years that one cannot presuppose what is “most useful” to the user of a reference work such as this. This means that everything is added without regard to an artificial evaluation of either scholarly or literary merit. I do not feel that it is the purpose of this bibliography to be selective, because an item may prove to be of value—even for reasons unknown or unimagined—to someone in the future. This even includes minutia that some people may prefer to call detritus. Among them are hundreds of “news notes” and “filler” that in fact trace goings-on that may not be published elsewhere, or which may even be republished in various venues, sometimes identically, sometimes not. But together these are a historical record; and just as often they may document the activities of individuals or organizations (for example, notices of lectures).

This approach is not wholly without broader conceptual omissions; take as an example, *Footprints of Hopi History*.¹⁵ While each separately authored chapter has *application* to the theme of THE GRAND CANON, particularly with regard to Hopi philosophy and perspectives, not every chapter invokes the *place* of Grand Canyon and its immediate environs. (This is not to be confused with the intellectual knowledge conveyed by such publications about ethnobotanical and archaeological work conducted in the region, but pertains to the cultural knowledge understood through oral traditions and *living* the life in which they are understood and communicated.) Omitting the applied works that embrace the intangible knowledge without mentioning the places in the publications counters the Hopi idea of footprints—*kuveni*—so THE GRAND CANON fails to distinguish these publications that otherwise include cultural oversights and histories embedded in the landscape. But for many users of this bibliography the concept of non-place applications take the bibliography too far afield from its conceptual boundaries as defined by its table of contents and mission. This is not

¹⁵ Leigh J. Kuwanwisiwma, T. J. Ferguson, and Chip Colwell (eds.), *Footprints of Hopi history : Hopihiniwtiput kukveni'at* (University of Arizona Press, Tucson, 2018), 274 pp.

to displace the importance of the traditional knowledge of Indigenous peoples, but it is beyond my station to interpret in publications what *is* part of these people’s footprints and Grand Canyon without having the traditional knowledge to understand it. Capturing those kinds of citations for the use of others will have to be a bibliographical journey for someone who does hold the knowledge.

The categories of this bibliography have evolved ever since work began around 1975 on broadening the original 1974 geology bibliography into its ever-more expanded versions (it was at the beginning restricted to geology). Similarly, the print editions of the bibliography, first in 1981, had employed arrangements that differ from those of later editions, including THE GRAND CANON. (See the [Appendices to Part 1](#) of the bibliography for a complete description of the arrangement of the previous editions.) The selection of categories is partly routine (history, sciences, and so forth), and partly from the suggestions made by others (health and safety, and reviews, for example). The bibliography also includes documents that once had been denoted as “classified”, “restricted” or “secret” for purposes of national security, but which were reclassified for public release. Only then are these and comparably secured documents included in this bibliography; they are pertinently noted.

There are an undetermined number of citations herein (probably more than a thousand) that are listed in more than one part, due to their overlapping subjects.¹⁶ A geological work by its content that pertains both to the Grand Canyon region and the lower Colorado River will be listed in Parts 11 and 21 of this bibliography. Similarly, a work that deals with both geological and archaeological aspects of a certain locale will be listed in Parts 16 and 21 of the bibliography. Or, fisheries studies of the Colorado River that include both the Grand Canyon and lower Colorado River regions will be cited in Parts 11 and 19. While this inflates the total “number of citations”, it serves those who will study and extract only from certain parts of the bibliography, ignoring the other parts. Compared to the tens of thousands of citations, the number of replicated entries is estimated to be between one and two thousand, perhaps on the lower end.

It is nevertheless impossible to ensure that every topical component of a broadly scoped work is listed under all topics that are included in it. For example,

¹⁶ For example, the report by Richard Hereford, Glenn E. Bennett, and Helen C. Fairly, “Precipitation variability of the Grand Canyon region, 1893 through 2009, and its implications for studying effects of gullying of Holocene terraces and associated archeological sites in the Grand Canyon, Arizona” (*U.S. Geological Survey, Open-File Report 2014-1006*, 2014), is listed in this bibliography in Parts 16 (ARCHAEOLOGY), 18 (PHYSICAL ENVIRONMENT), and 21 (GEOLOGY). There are a very small number of citations that are cited across even more parts of the bibliography. The actual number of replicate citations in this bibliography is undetermined.

Richard Felger's *Flora of the Gran Desierto and Río Colorado of Northwestern Mexico* (University of Arizona Press, 2000) is cited with natural history publications in [PART 11, SECTION 1](#). However, it contains extensive introductory material that addresses not only botany and ecology but past and present climates, geology and hydrology (as influencing major habitats), history, human influences including those of Indigenous peoples, and agriculture. Many works thus might be more properly cross-indexed by subject in a database, but within this monographic bibliography it would be a practice that would make it misleadingly and unhelpfully enlarged.

Some users may notice the absence of some publications. These omissions are usually not purposeful exclusions. Occasionally, too, there is a title that a user may think belongs here for good reason that it may relate to a nearby region or events there. However, if it does not touch upon either the Grand Canyon, its immediately adjacent lands, or the broad corridor of the lower Colorado River, it will not be included herein. Still, the extent of bibliographical explorations by me and contributors go only so far. If something is not cited herein, and it clearly should be, we had not seen it; we have not chosen to omit it. Users who know of more things that should be listed here have the advantage over us.

Material that appears in periodically published regional tourists' guides is selected. Often the texts are repeated from one season, and from one year, to the next; repeating them in the bibliography, especially in significant numbers, is not necessarily helpful. Thus, a representative sampling is included in the bibliography. If an item stands out from others that are usually repeated, or if their eye-catching titles differ greatly between installments, they will be cited as examples of editorial style and the editors' intention to refocus the article's interest for the visitor. More specifically, from the *Grand Canyon Tusayan Guide* (and variant titles) and the affiliated *Williams* guide that also includes Grand Canyon and Tusayan, both published by the Williams-Grand Canyon News, all general items are included in [PART 2](#) (General Publications), rather than mixing them between this part and Part 9 (Travel Guides). This was done because the contexts and content of individual items are so closely interrelated that they could be listed in either part, or both, probably to even greater distraction to those who are browsing this bibliography. I feel that it is more beneficial to keep these frequently addressed, selected, items together.

Material that many users would consider "fiction" are nevertheless categorized in this bibliography under the subject areas to which they putatively pertain. Material regarding unidentified flying objects (UFOs) and subjects such as alien "bases" in the Grand Canyon are listed in [PART 2](#). Material about putative ancient Egyptian relics in the canyon are listed in [PART 16](#) (Archaeology). And material pertaining to creationist

and “young-earth” interpretations of Grand Canyon geology are listed in [PART 21](#) (Geology and Paleontology).

Finally, Parts 2, 7, 9, 26, 28, and 30 of the bibliography include items that contain potentially offensive material, with sexual or other matter that some users, for religious, moral, or personal reasons, may not wish to encounter. These are grouped in supplements to each part. It is additionally important to segregate these citations as this is an internationally focused bibliography with an international audience, whose particular perspectives may not be known to this compiler. (Off-color language is not considered reason for segregation.) The cited items themselves may contain explicit material but a few of them do not; yet these, too, are segregated because the serials in which they appear do contain such matter. Bearing in mind the specific reasons that some users may have to avoid or overlook such material, each of the supplements is clearly marked. (Material that has been produced specifically as pornographic has not been gathered for this bibliography.)

AS A MATTER OF INTRODUCTION, the subject areas of the bibliography are as follows:

BIBLIOGRAPHIES, INDICES, AND COMPARABLE PUBLICATIONS FOR THE GRAND CANYON AND LOWER COLORADO RIVER REGIONS : [PART 1](#) is a guide to other bibliographies, indices, and similar guides to published materials about the Grand Canyon and lower Colorado River regions. The opportunity is also taken to include an Appendix to Part 1, which outlines the changing content arrangement of the Grand Canyon–Lower Colorado River bibliography from 1981 to the present.

GENERAL PUBLICATIONS (HISTORICAL, GEOGRAPHICAL, SOCIAL, CULTURAL, BIOGRAPHICAL, POPULAR, AND COMMONPLACE WORKS CONCERNING THE GRAND CANYON AND LOWER COLORADO RIVER REGIONS) : [PART 2](#) is by far the largest part of this work; nearly a third of the bibliography. It includes everything that is not categorized by other parts of the bibliography; most notably, everything that is classified as history, geography or biography. It embraces popular and scholarly productions. Part 2 includes everything from commonplace (or “casual”) items and notes on the fly, to lengthy monographs.

A great many publications include both the Grand Canyon *and* the lower Colorado River; others pertain to the lower Colorado River alone. It is impractical to list “Grand Canyon” and “Lower Colorado River” items separately because of the huge overlap. Instead, what I have done in Part 2 is to specially mark those citations that

pertain solely to the lower Colorado region; these citations are identified by their Item numbers in *colored italics* (for example, *2.13255*).¹⁷

Part 2 includes most items that, in previous bibliographies, had been heaped into a “Miscellaneous” part that was an arbitrary and unhelpful category inasmuch as such wayward items are as “general” as they are “miscellaneous”. Part 2 accommodates as well things that relate to, but are not categorized with, material in other parts of the bibliography. For example, it includes publications that pertain to modern social issues of the regions that otherwise are accommodated for their respective parts of the bibliography—such as Part 11, which embraces scientific and technical issues of the lower Colorado River region, but for which issues relating to modern social conditions would be out of place. (Examples include the social concerns that pertaining to Indigenous peoples of this region, and social and labor issues in the Imperial Valley.)

THE NEW YORK TIMES (GRAND CANYON AND LOWER COLORADO RIVER ARTICLES AND REPORTS FROM 1851 TO PRESENT) : [PART 3](#) embraces the entire run of *The New York Times*, from 1851, for the reason that this widely accessible newspaper (first on microfilm, now online) includes every aspect of Grand Canyon and Colorado River history dating to the first American expedition into the region in 1851 (the Sitgreaves expedition). Originally these citations were included as an assist to those researchers who needed to consult microfilm copies, which are widely distributed. Now that the *Times* is available online in searchable formats, researchers are less encumbered by issues of access; but for continuity the citations are continued forward to the present.

Part 3 is divided into two sections. The first is a comprehensive chronological listing of all citations from the *Times*; second is an alphabetical list of citations for articles that have an author’s by-line.

MEMORIALS : [PART 4](#) contains citations for obituaries and similar contemporary notices about men and women who were in some fashion a part of Grand Canyon and lower Colorado River history, or who died in these places. This part is divided into two sections; the first lists citations by author name, the second groups citations under the names of the decedents. Conventional biographical publications are consolidated with [Part 2](#) of the bibliography.

PUBLICATIONS FOR PEOPLE WITH DISABILITIES : [PART 5](#) contains four sections. [Section 1:](#) Publications produced especially for the blind and vision-impaired. This section

¹⁷ *Colored italics* are used for aesthetic and pragmatic reasons; color to stand out more on the page, italics in the event that a page in this bibliography is reproduced without the benefit of color, thus the lower Colorado-only items will still be noticeable.

contains citations mostly for items that are in large-print or Braille formats and audio materials made expressly by agencies who produce materials for the blind and vision-impaired. Other, unusual formats are included, too; for example, tactile material in Moon Type. Many citations have been derived from Library of Congress catalogue records, and of course this part of the bibliography should not be construed to be comprehensive because there are likely to be many products for this audience that are not in accessible catalogs. [Section 2](#): Conventional publications that relate to the experiences of or information of interest to the blind and vision-impaired. [Section 3](#): Publications that relate to people with hearing impairments. [Section 4](#): Publications that relate to people with mobility or activity impairments. Sections 2–4 mostly repeat citations that are included in other parts of the bibliography.

PUBLICATIONS FOR AND BY YOUTH AND YOUNG ADULTS : [PART 6](#) contains citations for material produced for younger audiences, which includes some material written by young authors. This includes school students through the high-school years. Traditionally this is material classified as “juvenile”. This part is divided into two sections; [Section 1](#) for non-fiction and [Section 2](#) for fiction.

“Graphic novels”, once known just as “comic books”, were chiefly for young-reader audiences. In more recent time the genre has evolved to include graphic novels produced for adult audiences. These distinctly newer productions, with themes for more mature readers, are relegated in this bibliography to [Part 7. Fiction](#). Even the “comic book” market of productions originally for younger readers has also evolved to embrace readers of post-adolescent ages, as the attendance at “comic book” conventions and similar events testifies, even though this is driven more by the collectibles market. Nonetheless, following convention implicit young-reader titles (for example, *Superman* or *Justice League of America*) remain listed in [Part 6, Section 2](#) of this bibliography.

FICTION : [PART 7](#) contains all works of fiction that are not deemed to be directed to the young-reader audience.

VERSE : [PART 8](#) lists items that are poetry and verse about places or experiences in the Grand Canyon and lower Colorado River regions.

TRAVEL AND TRAIL GUIDES : [PART 9](#) lists material that is explicitly guide information to travel in the region; that is, publications that include information on access, accommodations, and such. These include trail guides, but guides to the Colorado River are relegated to [Part 10](#) of the bibliography. Material that is of a general nature, such as essays on travel experiences, are cited in [Part 2](#) of the bibliography.

COLORADO RIVER GUIDES : [PART 10](#) lists items that are specifically guides to the Colorado River.

SEPARATE-COVERAGE GROUP: SPECIALIZED MATERIAL ABOUT THE LOWER COLORADO RIVER REGION (BELOW GRAND CANYON) [PARTS 11 AND 12] : The lower Colorado River is defined in this bibliography as that region between Grand Canyon and the Gulf of California, including the areas of the Salton Sea and the Imperial and Mexicali Valleys in California and Baja California.

The reason that Parts 11 and 12 now comprise a separate-coverage group is that in the 2000 redesign of the bibliography these parts represented an outgrowth of a single “Lower Colorado River” part of the earlier print bibliographies. Since then, Parts 11 and 12 have grown substantially and have been subdivided into thematic sections; and it is not practical to redesign the bibliography to accommodate this special group on its own.

Although it might not seem necessary to include the marine environment of the Gulf of California, its northern end has for millennia been influenced by the outflow of the Colorado River, flush with the mighty, silt- and sand-laden torrents from the continental interior, perhaps at times influenced by the formation of geologically temporary lakes enroute—and, today, absolutely and contemptuously impacted by the complete cessation of river flow, every last drop shunted off to farms and cities, which has had impacts on the environment of the northern gulf. Geologically, the tectonic structure of the gulf is in fact a part of the Salton Trough region; and again, to separate the northern gulf from the lower Colorado is impossible.

[PART 11](#) (Lower Colorado River—Natural History, Environment and Special Scientific, Technical, or Cultural Issues) and [PART 12](#) (Lower Colorado River—Water Supply, Management and Policy Issues of the Lower Colorado River, including infrastructural projects along the Colorado River from lower Glen Canyon, Arizona, to Mexico) are purposely separated from the Grand Canyon focus of this bibliography to facilitate a more sensible breakdown for those users who may be interested only in the special issues of the lower Colorado River region.

To create a separate, *comprehensive* bibliography for the lower Colorado River region by itself would require that thousands of citations also be copied from [Part 2](#) (General Publications). Duplication of citations on such a scale would seriously, unnecessarily, inflate the bibliography. Thus I have deemed it most effective to separate the “general” publications about the lower Colorado from the more technical publications, to suit distinctly different groups of users.

Users of Parts 11 and 12 of the bibliography will realize there is a very large number of items that constitute “gray literature”,¹⁸ specialized publications of usually very limited distribution, often created by governmental agencies or contractors working for those agencies. Similarly, theses and dissertations written as part of an individual’s work toward an academic degree are generally “unpublished”, yet they are important contributions to their subjects and are in fact available online, through microform, or in hard copy through University Microfilms. While online library catalogs such as WorldCat are quite helpful today in locating some of these documents, many more may have never been cataloged into these systems; many cited herein were found through conventional searches on the web.

Certain specialized areas, such as geothermal energy and related investigations may be found in online sources devoted to these areas; for example, the International Geothermal Association’s “Geothermal Conference Paper Database”, online at:

http://www.geothermal-energy.org/publications_and_services/conference_paper_database.html.

The U.S. Department of Energy’s Office of Scientific and Technical Information likewise has a comprehensive database, SciTech Connect, which consolidates the contents of OSTI’s Information Bridge and Energy Citations Database; this is accessible online at <http://www.osti.gov/scitech/>.

Part 11 (Environment, Natural History, and Special Scientific, Technical, or Cultural Issues of the Lower Colorado River Region, with Guides to U.S. and Mexican Topographic Quadrangles)

As indicated in the title for [Part 11](#), this part embraces mostly scientifically and technically oriented material. For the sake of convenience to researchers working within disparate fields of study, Part 11 is now subdivided into three separate sections: [Section 1](#)—Environment, Ecology, Biology, and Public Health and Safety. [Section 2](#)—Geology, Paleontology, Hydrology, and Related Disciplines; [Section 2A](#)—Separately Published Geologic and Special Maps. [Section 3](#)—Archaeology, Native American Culture and Issues, and Contemporary Cultural Resources and Preservation. (Note, however, that publications relating to 20th and 21st century social or socioeconomic conditions of this region are consolidated with [Part 2](#) (General Publications) due to their historical perspectives.) Further topical breakdown of Part 11, such as to mirror all the various parts of the bibliography, would be too distracting. [Section 3A](#) provides a “General Guide to Documentation for Places in the Lower Colorado River Region

¹⁸ For more on this topic with respect to this bibliography, see the commentary on [gray literature](#) herein (INTRODUCTION PAGE 457).

Listed in or Nominated to the *National Register of Historic Places* and the *National Historic Landmark System* Administered by the U.S. National Park Service.

Regarding Section 1, I have enlarged the geographic coverage of this bibliography to embrace the environmentally protected areas at the northern end of the Gulf of California. With regard to the marine faunas there, the environmental changes caused by the effective cessation of Colorado River flows into the gulf, and the effects of fishing activities, intertwine to such a degree that it is imperative to cite publications that relate to these areas and subjects.

Regarding Section 2, I likewise enlarge the geographic coverage of the bibliography to embrace the regional geological influences expressed in the upper Gulf of California and the Colorado River delta region generally.

Regarding Section 3, the lower Colorado River region hosts Indigenous peoples who have traditional and legislatively administered lands in the U.S. and Mexico. Most items in this bibliography that relate to them are listed in this section. These Indigenous groups and their reserved lands are:

- Moapa River Indian Tribe, Moapa River Indian Reservation (Nevada)
 - Fort Mojave Indian Tribe, Fort Mojave Indian Reservation (Arizona, California and Nevada)
 - Colorado River Indian Tribes (Chemehuevi, Hopi, Mohave, and Navajo), Colorado River Indian Reservation (Arizona and California)
 - Chemehuevi Indian Tribe of the Chemehuevi Reservation (California)
 - Quechan Indian Tribe, Fort Yuma Indian Reservation (Arizona and California)
 - Cocopah Indian Tribe, Cocopah Indian Reservation (Arizona)
 - Cabazon Band of Mission Indians, Cabazon Reservation (California)
 - Torres Martinez Desert Cahuilla Indians, Torres Martinez Reservation (California)
 - Cucapá (or Cocopa, *Xawill kunchawaay*) (Baja California, México; traditional lands in the Rio Colorado delta)
- In addition, bands of the Southern Paiute people have traditional-use ranges within the northern part of the lower Colorado River region

Subjectively, I have not included probably thousands more citations that pertain only generally to agricultural issues in the lower Colorado River region. These would, in fact, best be the subject of a separate, specialized bibliography, which of course must be constructed from the start. Occasional agricultural items will be found in this bibliography, though. These are included for more specific focuses; for example, aspects of irrigation or taxonomic, ecological, or historical matters in the lower Colorado River region.

As for the peculiar appendage of the Salton Sea region, as also covered in this bibliography, were it not for natural breakouts of the Colorado River to the Salton Sink, the natural history of the lower Colorado River region would not be attached to

this bibliography. The Salton Sink (and its historical ancient Lake Cahuilla) is as much a part of the Colorado River delta as that which sinks actually into the Gulf of California. Then, with the anthropogenic breakout of the river during 1905–1907, the whole Salton Sea region—and eventually the Imperial and Mexicali valleys—opened itself in every other respect to the coverage of this bibliography, in terms of geography, geology, and all aspects of human affairs, like engineering, agriculture, culture, and tourism. Thus while a periodic hydrogeologic event let this bibliography embrace the physical Salton Sink, an accident by hapless water managers also forced it to embrace lasting environmental effects and human activities in this region.

In the 4th Edition of THE GRAND CANON, the [Appendix to Part 11](#) was removed and incorporated as Section 4B of Volume 2, *CARTOBIBLIOGRAPHY OF THE GRAND CANYON AND LOWER COLORADO RIVER REGION*. It provides guides to the quadrangle systems of topographic maps in the lower Colorado River region used by the U.S. Geological Survey and Mexico’s Instituto Nacional de Estadística y Geografía and likewise for geological maps of the Servicio Geológico Mexicano.

Part 12 (Water Supply, Management, and Policy; with Expanded Coverage for Basin-Wide Issues and Unrealized and Unrelated Infrastructural Projects) ¹⁹

Water—its abundance (or lack thereof) and its quality and uses—are the crucial concern of the world’s people in the 21st century. In the American Southwest concerns will become as dire as any known in the civilized world, and will without partiality be just as humanly devastating as the shortages in villages of other continents; inevitably with geographical, economic, and political muddling. References in [Part 12](#) of the bibliography will give some case examples of how we in the American Southwest got to the point of imbalancing climate, technology, and legislation—and our perspectives, however limited right now, on how to work with them.

The water-management citations in [Part 12, Section 1](#) of the bibliography, restricted to the lower Colorado River corridor and its artificial extensions such as canals and powerlines, must by default embrace partly the Grand Canyon and some basin-wide issues. This is mostly due to the proposed construction of dams in the Grand Canyon, which ideas began with power-production facilities proposed for the Colorado at Diamond Creek in the closing years of the 1800s and in the heart of the canyon at the mouth of Bright Angel Creek in the early 1900s. Similar proposals continued for the entire Southwest through the dam-survey period (the 1920s mostly) and during which Hoover Dam was built in the 1930s, and which came famously to a head politically and civilly in the 1960s–1970s with proposals to build two power dams

¹⁹ Refer also to the [map at the beginning of Part 12](#).

that would have bracketed Grand Canyon National Park (its boundaries were smaller then). Since the Bridge Canyon and Marble Canyon Dams were never constructed, a conundrum presented itself as to where in THE GRAND CANON to cite water-management citations that pertained to proposed facilities in Grand and Marble Canyons. Since these structures, though never realized, were a part of more ambitious plans covering the Southwest, I deemed it more sensible to include these citations in the water-management part of the bibliography for the lower Colorado River.

Regarding the water-management facilities of the lower Colorado River—principally Hoover Dam (Lake Mead), Davis Dam (Lake Mohave), Parker Dam (Lake Havasu), Imperial and Laguna Dams (Lake Martinez), and Morelos Dam (diversion structure for Mexico)—most citations in THE GRAND CANON pertain to the dams and their appurtenant works as well as to administrative aspects of the lakes impounded by them. In the case of Hoover Dam and Lake Mead, a substantial number of citations relate to them; fewer for dams and lakes farther downstream, largely due to the frequent recognition of Hoover Dam in history, engineering, and water management policy. Appurtenant works include, for example, power-production facilities and specialized construction facilities during the building and operating phases.

Productions of cultural resource documentation of significant water-management sites and projects, conducted by the U.S. National Park Service’s Historical American Engineering Record, are relegated to [Part 11, Section 3](#) of this bibliography; specifically to citations under “[U.S. National Park Service, Historical American Engineering Record](#)” in that section.

Aqueducts and irrigation canalworks in the lower Colorado River region are also covered in Part 12. But no special attempt has been made to provide comprehensive coverage because this material of course carries farther from the lower Colorado River region, where in those destinations there are sure to be a separate bibliography’s worth of published material, though out of scope to this one. Items pertaining to the Central Arizona Project are cited herein only when they take note of operations at the Colorado River, or with reference to proposed supporting projects such as Marble Canyon Dam and Bridge Canyon Dam.

Bridges in the Grand Canyon and lower Colorado River regions—the most recently notable of which is the Mike O’Callaghan–Pat Tillman Memorial Bridge, or Hoover Dam Bypass between Arizona and Nevada, completed in 2010—along with other infrastructure that is not related to water-management facilities, are cited in a separate “ancillary coverage” section ([Part 12, Section 2](#)). Other bridges include the Navajo Bridges, Kaibab Bridge, and Silver Bridge, and spans on the lower Colorado linking Arizona and California. (Items relating to tramways across or on the sides of

the Grand Canyon are relegated to [Part 2](#). Items relating to the Navajo Nation's proposed Grand Canyon Escalade in the early 21st century are included in [Part 17](#). Further omitted in this part are items that pertain to the reconstruction of London Bridge in Lake Havasu City, Arizona. This is a tourism destination that does not cross the Colorado River and has no contribution to the history of lower Colorado River infrastructural projects; thus, items pertaining to London Bridge will be found in [Part 2](#).)

Also listed here are some documents related to Glen Canyon Dam, although the dam is otherwise extralimital to this bibliography. Certain other items that relate to the area, conditions and operation of Glen Canyon Dam, particularly as it affects the region downstream from it, will be found as appropriate in other categories, depending upon whether the subject is related to; for example, general interest ([Part 2](#)), administration ([Part 13](#)), physical environment ([Part 18](#)), biological ecology ([Part 19](#)). Construction projects outside the immediate Colorado River corridor are listed with items of general interest (Part 2). And general interest items pertaining to facilities constructed in the Colorado River corridor—such as social, tourism and political issues pertaining to Boulder City, Nevada, that are not related to the actual construction of Hoover Dam—will be found in Part 2.

Many items pertaining to the U.S. Geological Survey expedition (Birdseye Expedition) of 1923 on the Colorado River through Grand Canyon will be found in [Part 2](#) (General Publications). This expedition principally examined potential sites for dams, but quite a lot of general and public interest was reported from and about this expedition. Only specifically technical items relating to the expedition are included in Part 12, Section 1.

Items pertaining to the plans for, construction of, and physical structure of Glen Canyon Dam, as well as items pertaining to Lake Powell impounded behind the dam, are not included in THE GRAND CANON. Exceptions are selected items that relate to effects downstream in the Colorado River as the result of physical alteration of the dam and its appurtenant works or from alterations to the operation of the dam.

The U.S. Reclamation Service (later U.S. Bureau of Reclamation) published the monthly *Reclamation Record* (later *New Reclamation Era* and *Reclamation Era*, in that order). These include monthly updates on the progress of work on the various reclamation projects (for example, the Yuma Project in Arizona and California). Citations for these monthly updates are *not* included in this bibliography, as users should be aware of these updates as a matter of course, and thus every issue should be examined for a period of time in which the user is interested. At first these reports

were published only under the section heading; later, individual reports included by-lines.

Omitted from Part 12, Section 2, are items that relate to the survey for the Denver, Colorado Cañon & Pacific Railroad—the Stanton Expedition—of 1889–1890. It is historically more well known as a Colorado River boating expedition with a photographic record, with significant numbers of items written about it in that context. Never built, few published items relate to the technical details of engineering problems of the railroad; none (of course) to construction news. All citations regarding the Stanton Expedition will be found in [Part 2](#). Items that rely on the historical series of photographs taken during this expedition in Grand Canyon will be found in different parts of the bibliography; for example, citations about general views in [Part 2](#), comparative surveys of vegetation in [Part 19](#) [BIOLOGY AND ECOLOGY], and comparative surveys of sedimentation along the Colorado River in [Part 22](#) [HYDROGEOLOGY OF THE COLORADO RIVER].

ADMINISTRATIVE AND MANAGEMENT ISSUES IN THE GRAND CANYON AND LOWER COLORADO RIVER REGIONS : [PART 13](#) of the bibliography relates to administrative issues at all levels, but each as it relates to some geographic or political area embraced by this bibliography. By and large these are government documents, but include public opinion and other publications about issues that pertain to legislative and management concerns. As many as possible of known administrative documents produced by or for federal and state units are listed in this part. However, with regard to legislative documents, such as those of the U.S. Congress and state legislatures, the citations herein should be seen as representative and opportunistic rather than an attempt to provide a definitive list. A comprehensive listing will necessarily have to be an exhausting, separate project.

*AS A pragmatic matter of bibliography all items relating to water-management in the lower Colorado River, including legislative and judicial actions regarding dams and other water-management infrastructure, and international treaties and agreements pertaining to these subjects (which might otherwise be relegated to Part 13 of this bibliography), are consolidated in [Part 12, Section 1](#). An **exception** to this are productions of cultural resource documentation of significant water-management sites and projects, conducted by the U.S. National Park Service’s Historical American Engineering Record, which are relegated to [Part 11, Section 3](#) of this bibliography; specifically to citations in that section under “[U.S. National Park Service, Historical American Engineering Record](#)”.*

SOCIOLOGY, RECREATION, EDUCATION, ECONOMICS, AND RELATED SUBJECTS IN THE GRAND CANYON–LAKE MEAD REGION : [PART 14](#) of the bibliography relates to various aspects of human affairs except, specifically, health and safety issues, which are consolidated with [Part 15](#). The Whale Foundation, a not-for-profit organization, provides services to the Grand Canyon river-guiding community that first included mental and physical health care but which now embraces various matters that relate to social and personal support, and a scholarship. For the sake of convenience, citations for items produced by The Whale Foundation that are not specifically health related are grouped in Part 14.

HEALTH AND SAFETY IN THE GRAND CANYON–LAKE MEAD REGION : [PART 15](#) lists items relating to human health, safety, and public well-being in Grand Canyon National Park and immediate vicinity. Because the waters of Lake Mead encroach upon the lower portion of Grand Canyon, for bibliographical convenience this part is expanded to include all items that relate to public health and safety in the Lake Mead region overall. Items pertaining to issues of workplace harassment are included in this part. Items pertaining to infrastructure that has direct bearing on the topics of health and safety are included. This part also includes documents on therapeutic programs, mishaps, rescues, accident investigations, missing persons, and cautionary reports by example.

ARCHAEOLOGY AND CULTURAL RESOURCES IN THE GRAND CANYON REGION : [PART 16](#) of the bibliography relates to archaeology and to aspects of cultural resources including 19th- to 21st-century activities. Some items dated during and after the later-20th century may be available to the public only in redacted versions, wherein culturally sensitive or specific geographical data are omitted or physically obliterated. Unredacted versions will be in files accessible to qualified researchers and administrators. If no note regarding redacted parts appears with the document, or if there is no such note with its citation here, it does not necessarily mean that the document as seen or as available does not have data redacted. One may assume that modern publications in scholarly serials already have been written in such a fashion that sensitive or restricted data are left out. Documents or citations that may have been seen by the compilers that pertain to wholly restricted documents not available publicly are not cited in this bibliography. While thus not properly compiling the body of work of individuals, firms or agencies within the scope of this bibliography, the general unavailability of a document leaves no merit for inclusion within a work such as this one, which identifies publicly available materials.

Included in this part are pertinent U.S. National Park Service summary records for historic sites, which include the Historic American Buildings Survey (HABS),

Historic American Engineering Record (HAER), and Historic American Landscapes Survey (HALS) series. Most of these are accessible online through the Library of Congress website. An [Appendix to Part 16](#) provides a “General Guide to Documentation for Places in the Greater Grand Canyon Region Listed in or Nominated to the *National Register of Historic Places* and the *National Historic Landmark System* Administered by the U.S. National Park Service.

Archaeological work relating to the lower Colorado River region, including Lake Mead, will be found in [Part 11, Section 3](#); and similarly that section will also contain pertinent HABS, HAER, and HALS reports.

NATIVE AMERICANS IN THE GRAND CANYON REGION : [PART 17](#) of the bibliography relates to Native Americans of, and their relation with, the Grand Canyon. By default of their residency at and in the canyon, the Havasupai and Hualapai people are the principal focus of this part of the bibliography; also the nearby Kaibab Band of Paiute Indians. In addition, there are citations that relate in some fashion to the cultural relationships and claims that other tribes and nations have in the Grand Canyon. This is not a bibliographical listing for the tribes in general; only their relationships with the canyon, though more comprehensively regarding the currently resident Havasupai and Hualapai. Some topics that may seem to be out of scope, insofar as the tribal relationships with Grand Canyon are concerned, are nonetheless included here. For example, some citations relate to Havasupai legal claims against Arizona State University, which relate to the unsanctioned uses of blood samples that were given by tribal members to a university researcher specifically for research on diabetes in this community (a disease that disproportionately afflicts many of these people, and notably other tribal peoples as well). While this in itself may seem unrelated to the Grand Canyon, additional studies were conducted with the samples, without the permission or knowledge of those from whom the blood was taken. These other studies arrived at scientific conclusions and social statements, which were published, that are decidedly contrary to the cultural beliefs of the Havasupai people and their relationship with the Grand Canyon. The resolution of these legal issues has provided some positive outcome for the individuals and the tribe. Now the affair remains the subject of worldwide cautionary and instructive attention among bioethicists and legal scholars, citations about which are also included here. Many of these publications produced during the progress of the legal case and thus provide evolving perspectives of the issues prior to the final resolution between the tribal litigants and the university. The effects of this case further emphasize the weight and truth of cultural beliefs.

Ophelia Watahomigie-Corliss, a Havasupai woman who has been a strong defender of Havasupai culture, has noted that “. . . culturally we are taught to never look back or live in the past.”²⁰ While the idea of a bibliography may seem like a contradiction to such teachings, her belief does not necessarily mean that the past is not to be remembered, but that human life is meant to move ahead. A bibliography such as this one does document past interactions and activities, but they contribute to the learning that goes on in the present and prepares people and communities for the future.

Not all of the Native American tribes who exercise cultural claims to the Grand Canyon may have citations listed in *THE GRAND CANON*, except in a general or summary fashion; only the publications that have come to our attention, and which relate specifically to activities in the Grand Canyon region, are cited herein. The involved tribes (as defined by the federal government) are:

Havasupai Tribe, Havasupai Reservation (Arizona)

Hopi Tribe (Arizona)

Hualapai Indian Tribe, Hualapai Reservation (Arizona)

Kaibab Band of Paiute Indians, Kaibab Indian Reservation (Arizona)

Las Vegas Band of Paiute Indians, Las Vegas Indian Colony (Nevada)

Moapa Band of Paiute Indians, Moapa River Indian Reservation (Nevada)

Navajo Nation (Arizona, New Mexico & Utah)

Paiute Indian Tribe of Utah

Cedar Band of Paiutes, Kanosh Band of Paiutes, Koosharem Band of Paiutes, Indian Peaks Band of Paiutes, and Shivwits Band of Paiutes

San Juan Southern Paiute Tribe (Arizona)

The Pueblo of Zuni, Zuni Reservation (New Mexico)

Yavapai-Apache Nation, Camp Verde Indian Reservation (Arizona)

An [Appendix to Part 17](#) lists material that was published in *The Supai Weekly News* and *The Supai News*, 1957-1959, which was produced by missionaries.

Work relating to the Indigenous cultures of the lower Colorado River region, including Lake Mead, will be found in [Part 11, Section 3](#).

PHYSICAL ENVIRONMENT OF THE GRAND CANYON AND THE SOUTHWEST REGION : [PART 18](#) of the bibliography relates to the physical environment; that is, items of physical, chemical, biophysical, or biochemical aspects of land, water, and atmospheric environments of the Grand Canyon region. This includes multidisciplinary research of the environment in the Grand Canyon region and the Colorado River corridor through the Grand Canyon, and climatological and hydroclimatological

²⁰ Ophelia Watahomigie-Corliss, “Rock Medicine”, *Colorado Plateau Advocate* (Fall/Winter 2021), pp. 9-13.

investigations relating to the Colorado River basin. With regard to the last subject area, it is necessary to expand the area of coverage to embrace the entire region covered by this bibliography and the American Southwest generally. This is because climatic investigations by nature often encompass rather large geographical regions. With regard to the area covered by this bibliography, many such investigations overlap the entire Colorado River drainage, or sometimes more specifically a portion of Arizona or the lower Colorado River region. In any case, all climatic studies, including those that cover the larger regions, are listed in this part of the bibliography for their topical context and the logical application of them to the artificially restricted area of the Grand Canyon and lower Colorado River.

BIOLOGY AND ECOLOGY OF THE GRAND CANYON REGION : [PART 19](#) This part includes documents on biological censuses and the biology and ecology of animal, plant, and protist organisms as occurring in the Grand Canyon region. This part also includes biological reports and studies that have been part of scientific investigations conducted for the purpose of environmental management of public lands in the Grand Canyon region. Also included here are general articles about information on organisms, resources and activities; for example, fishing, hunting, and conservation. Documents that are Environmental Impact Statements, and similar administrative and guidance documents, are included in [Part 13](#) (Administrative and Management Issues) because they usually embrace multiple areas of administrative oversight, are not solely focused on ecological concerns as might be inferred from the title, and may offer a variety of management alternatives. Exceptions are those documents that are specifically or predominantly biological or ecological in perspective.

GLEN CANYON ENVIRONMENTAL STUDIES PROGRAM : [PART 20](#) comprises a guide to reports and studies that were produced as part of the Glen Canyon Environmental Studies program under the U.S. Bureau of Reclamation; since ceased under that administrative entity. (The GCES programmatic responsibilities have continued as a part of the U.S. Geological Survey's Grand Canyon Monitoring and Research Center, in Flagstaff, Arizona.) The program was implemented to study the effects of, and to contribute to administrative plans for, the operation of Glen Canyon Dam on the downstream environmental and cultural resources through lower Glen, Marble, and Grand Canyons. This part was compiled by Richard D. Quartaroli, then GCES Librarian, and incorporated in 2000 as a separate table originally designed for the former Internet Edition of the Grand Canyon-lower Colorado River bibliography. The GCES program had ended thus Part 20 is complete.

GEOLOGY AND PALEONTOLOGY OF THE GRAND CANYON REGION : [PART 21](#) comprises references to the geology (broadly speaking) of the Grand Canyon region. THIS part comprises references to the geology (broadly speaking) of the Grand Canyon region. It includes regional studies that embrace the Grand Canyon, plus material that examines the stratigraphic continuity of the Grand Canyon's formations. Noticeable among these citations are those that pertain to areas outside of the geographical coverage of the main body of THE GRAND CANON (see the map in this volume's [Frontispiece](#)). These extralimital references are important for their focus on correlative stratigraphic and sedimentological analyses that, in turn, reflect upon studies in the Grand Canyon. This is akin to examining the meteorological or climatological aspects of the greater Southwest (as in [Part 18](#) PHYSICAL ENVIRONMENT) since they pertain to effects observed also in the Grand Canyon. Part 21 further includes broad studies of the geologic history of the Colorado River basin, inasmuch as these studies all pertain in some measure to the Grand Canyon and, in turn, the history of the river in the lower Colorado River region. Including these extralimital materials does not greatly inflate the number of citations in this part of the bibliography. Items that relate to the chemistry of surface and ground waters including springs are cited in [Part 18](#).

Part 21 includes numerous extended abstracts of the works by Clarence E. Dutton, most notably his 1882 *Tertiary History of the Grand Cañon District*. While they were essentially reviews of recently published items, they are in fact lengthy extracts, sometimes with editorial notes. For this reason these extended items appear in this part rather than in [Part 30](#) (REVIEWS AND NOTICES).

Many items pertaining to the U.S. Geological Survey expedition (Birdseye Expedition) of 1923 on the Colorado River through Grand Canyon will be found in [Part 2](#) (GENERAL PUBLICATIONS). This expedition principally examined potential sites for dams, but quite a lot of general and public interest material was reported from and about this expedition. Only specifically scientific items relating to the geology of the expedition are included in Part 21.

Added to Part 21 are items that pertain to theoretical and practical computerized analyses of data that utilize the Grand Canyon topographic model. These are not mathematical modeling studies of the development of actual topography of the Grand Canyon but are landscape imaging studies. Because they use a Grand Canyon elevational data set to analyze the relationships of cells or sets of data points in two- and three-dimensional image representations, I include them within the geology subject area for their use of topographical data sets. But inasmuch as the cited publications do not usually pertain to studies of the actual Grand Canyon, nor are they products that pertain to the canyon, they are not considered for THE GRAND CANON's separate section on Computer and Interactive Media.

Many citations from publications produced by the Geological Society of America include references to supplementary material in the Geological Society of America's Data Repository. Originally, this material could be requested by mail application to the society, and in the early 1990s a compilation of Data Repository items was available on microfiche, but today all of it is accessible online at <https://www.geosociety.org/datarepository/>).

Citations that pertain to the Peach Springs Tuff, named originally for occurrences in northwestern Arizona, are for the sake of bibliographical convenience cited in [Part 11, Section 2](#). The Peach Springs Tuff type locality is near Peach Springs, Mohave County, Arizona, and thus falls more properly into Part 21 of this bibliography. However, the unit has more notably been the subject of detailed studies and correlations throughout the Arizona–Nevada–California region, the tuff source area being identified in the Silver Creek caldera of the southern Black Mountains; a majority of the published work pertains to those correlated occurrences and identification of source area, which occur mostly in the lower Colorado River region.

There are in Part 21 a variety of citations that pertain to material that most geologists and other users will consider to be “fiction”; for example, creationist perspectives of geology and paleontology, and the so-called “Electric Universe Theory” that posits extraterrestrial-scale electrical charges as a cause of earth topography. Regardless, all of these still are “geological” in nature, and so are recorded in this section (in the same fashion as which I also include in the part of the bibliography pertaining to archaeology items about the putative “Egyptian” cave of the Grand Canyon). Part 7 of the bibliography, on “Fiction”, contains citations for literature purposely so written (and similarly Part 6, Section 2, for fictional works for younger readers).

Publications that relate to creationist and young-earth perspectives of Grand Canyon geology are included in this part with the understanding that this is an ongoing, sometimes tempestuous, field of study that brings ideas of faith up against the tenets and methodologies of empirical and falsifiable science. Accordingly, some users of this bibliography may object to including creationist research with the science-based works of geology. However, these are topically identical so they are not segregated. To assist researchers looking for contrasting perspectives, both for and against creationist-held views embracing the Grand Canyon, these citations are denoted in the bibliography with Item numbers in *colored italics* (for example, *21.6300*).²¹

²¹ *Colored italics* are used for aesthetic and pragmatic reasons; color to stand out more on the page, italics in the event that a page in this bibliography is reproduced without the benefit of color.

Omitted from Part 21 are items that pertain to the San Francisco volcanic field. Although this area may be considered together with regional volcanism, such as that of the western Grand Canyon, I have considered the literature on the San Francisco Peaks too great for an area only of the most marginal interest to the Grand Canyon and Colorado River.

Although I have included studies of the stratigraphic continuity of the canyon's formations, I have left out discussions that relate to the canyon's upper Paleozoic strata where they occur at Meteor Crater, east of Flagstaff, Arizona—because these discussions pertain to impact effects rather than to stratigraphic or sedimentological relationships.

Geological maps of this region are separately listed in [Part 24](#).

HYDRAULICS AND HYDROGEOLOGY OF THE COLORADO RIVER IN LOWER GLEN, MARBLE, AND GRAND CANYONS : [PART 22](#) encompasses all physical studies of the water flow of the Colorado River, applied research on its carried and bottom sediment, and the effects of the river's fluctuating flow on the distribution of sediment on the banks of the river. Citations pertaining to the hydrogeology of the lower Colorado River below Grand Canyon are consolidated with [Part 11, Section 2](#) of the bibliography.

GEOLOGICAL FIELD GUIDES IN THE GRAND CANYON REGION : [PART 23](#) This includes all publications that are intended to serve as geological field guides to routes and specific localities in the Grand Canyon and vicinity. Included among them are all geological guides to the Colorado River through the Grand Canyon.

GEOLOGIC AND SPECIAL TOPOGRAPHIC MAPS IN THE GRAND CANYON REGION (WITH GUIDES TO USGS TOPOGRAPHIC QUADRANGLES) : [PART 24](#) lists only separately published maps, and atlas sheets. Regional maps that embrace the Grand Canyon area are included. Similar maps for the lower Colorado River region are consolidated with [Part 11, Section 2A](#).

In the 4th Edition of THE GRAND CANON, the [Appendix to Part 24](#) was removed and incorporated as Section 4A of Volume 2, *CARTOBIBLIOGRAPHY OF THE GRAND CANYON AND LOWER COLORADO RIVER REGION*. It provides guides to U.S. Geological Survey topographical quadrangles in the greater Grand Canyon region.

GENERAL AND SPECIALIZED MAPS OF THE GRAND CANYON AND LOWER COLORADO RIVER REGIONS : Part 25 no longer exists within THE GRAND CANON, Volume 1. Except for introductory remarks, it has been removed and incorporated into Volume 2,

CARTOBIBLIOGRAPHY OF THE GRAND CANYON AND LOWER COLORADO RIVER REGION. See notes with [PART 25](#) herein.

AUDIO-VISUAL WORKS AND AUDIO WORKS AND MUSICAL SCORES [PARTS 26 AND 27] : [PART 26](#) (Audio-Visual Works and Photographic Publications on the Grand Canyon and Lower Colorado River Regions) embraces products that employ the media of sight and sound, which include diverse products such as but not limited to films (silent and with sound), filmstrips, stereoview sets, and over-the-air broadcasts that have been made available on videotape. Part 26 includes two appendices: [Appendix 1 to Part 26](#) General Guide to Commercially Produced 3-D Transparency Products; and [Appendix 2 to Part 26](#) General Guide to Commercially and Governmentally Produced Stereographs.

Similarly, [PART 27](#) (Audio works and Musical Scores on the Grand Canyon and Lower Colorado River Regions) limits itself to aural products (narrative and musical) and published musical scores. (The scores are listed as a separate [Appendix to Part 27](#).) Citations within these sections have been encumbered by their un-booklike nature, by which even though there are some standardized means of citing them I have had to work around absent data for not having viewed many of them in their entirety. In these cases I have had to rely on data available on packaging materials, on product labels, and sometimes on external reviews or other notices.

SEPARATE IMAGERY IN THE GRAND CANYON AND LOWER COLORADO RIVER REGIONS : [PART 28](#) includes only single, extraneous items; for example, a reproduction of a single painting, or specialized folios of prints, without accompanying text other than the legend. Photographs within articles or books that are credited to specific people or sources are not generally listed separately in this bibliography.

COMPUTER AND INTERACTIVE MEDIA ON THE GRAND CANYON AND LOWER COLORADO RIVER REGIONS : [PART 29](#) embraces products that have been produced specifically for use on computers. While the definition of such products has blurred—for example, CD-ROM or DVD products including audio recordings can be construed to be “computer media”—the focus of this part of the bibliography is on graphical and interactive material; for example, map programs, interactive travel guides, older-style “screen savers”, and games. Audio and audio-visual products are consolidated in their own parts of this bibliography.

While web-based media are omitted due to their ephemeral nature (*see below*), citations in this bibliography do include announcements and similar items that pertain to digital personal-pad devices (“apps”, or applications, as they are known);

this is to make known the existence of these products through the publications that were used to promote them. The “apps” themselves are not citable, though. Similarly, the proliferation of digital “citations” that use the square-targeted “QRC” (Quick Response Code, usually referred to as a “QR code” *[right]*²²) imprints that embellish publications, posters, signs, and virtually any other place that catches one’s attention (at least since the 2010s)? The example shown here illustrates the QR code for the Grand Canyon Association, in 2013. The 2013 volume that presented the proceedings of the 3rd Grand Canyon History Symposium²³ was a first for Grand Canyon-related publications by including QR codes to serve for the citations of web-based resources according to their URLs. These are not pertinent as bibliographical citations even if they were not web-restricted, because they are only machine-readable; those users without the resources to utilize the electronic links are left empty-handed, and when the technology to use them becomes obsolete all users will be left empty-handed. Regrettably, the 21st century will be partly an intellectual Dark Age, when linked resources cannot be retrieved through the use of these links.



As a rule, items that are posted to websites are not included in this compendium. There are, however, numerous organizational newsletters and comparable documents that have been posted to internet websites in formats that are facsimiles of, or by design mimic, printed-format layouts; judged by appearance and, sometimes, the inclusion of volume and issue numbering. These items are usually posted as PDFs. Many of them have been included in THE GRAND CANON because it is not generally possible to distinguish between those that are available *only* online and those that have been printed (or otherwise distributed in paper formats); some are copies produced for paper distribution that also have been converted to PDF and posted to a website. One certain way of identifying those that have been distributed in paper format are items that include space for a mailing label and return address. One concession that eventually was made is for an obviously web-posted serial that continues a print version of the serial or which originates a volume/issue number scheme and displays in the fashion of a print publication. These will be included since it is likely that they are intended to be printed out as necessary. Webpage formats that clearly do not reproduce or do not mimic traditional printed-format layouts have been ignored; these include crudely composed items that rely on basic HTML layout and

²² The QR code is a trademarked form of two-dimensional, or matrix, barcode that is readable by portable digital devices, which redirect the user to pertinent websites and other digitally controlled sites. At present they are targets chiefly for the “smart phone” user.

²³ R. D. Quartaroli (compiler, ed.), *A rendezvous of Grand Canyon historians : ideas, arguments, and first-person accounts : proceedings of the Third Grand Canyon History Symposium, January 2012*. Grand Canyon Historical Society (Flagstaff, Arizona, 2013). (ITEM NO. 2.19684.)

graphics use, clearly designed for web presentation, as well as those that have garish, HTML-composed coloring, animation, and other kinds of graphics that do not or cannot appear in printed works.

BOOK REVIEWS AND SIMILAR NOTICES REGARDING PUBLICATIONS ABOUT THE GRAND CANYON AND LOWER COLORADO RIVER REGIONS : [PART 30](#) includes critical reviews at length in scholarly publications as well as promotional reviews, notices in general-interest publications, and cursory editorial or readers' notices. Reviews are included in this bibliography only if they relate to publications about the Grand Canyon or lower Colorado River specifically; otherwise the review must mention the canyon or the river region. Product reviews include those for audio and audio-visual productions, and computer software.

Reviews and notices are arranged by the names of the reviewers. Throughout the rest of this bibliography, citations for the reviewed or noticed publications are accompanied by ancillary notes that cross-list citations in Part 30. For an illustrated example see [explanation of the item numbers and cross-listings](#) on Bibliography page 9.

NEWSPAPER GUIDE FOR THE GRAND CANYON AND LOWER COLORADO RIVER REGIONS : [PART 31](#). Newspapers are not generally included in THE GRAND CANON. There are, however, some exceptions. *The New York Times* is accorded its own section in this bibliography ([Part 3](#)), and citations from the earlier years of the *Deseret News* (Salt Lake City) are placed within pertinent parts of the bibliography. In other instances a newspaper is cited in this bibliography if an article had been reprinted later in another periodical; the original source is acknowledged in a comment at the end of the citation.

Special-interest newspaper-format periodicals are included in the bibliography; for example, *High Country News*, a mostly biweekly serial. Some weekly newspapers, and weekly magazines included with newspapers, are also cited herein; for example, *Computerworld*, and *Flare* from the *Arizona Daily Sun* (Flagstaff).

Part 31 comprises a listing of regional newspapers that some readers may wish to use to begin locating local (or sometimes online) sources.

MARGINALIA RELATING TO THE GRAND CANYON AND VICINITY : [PART 32](#) This part contains citations which are themselves not about the Grand Canyon but refer to the Grand Canyon as a venue—for example, meetings and conferences about subjects other than the Canyon held at Grand Canyon. Similarly there are marginal references to nearby Grand Canyon locales, which are embraced within this bibliography, and significant commemorative uses of the Grand Canyon name. While these citations do not specifically contain information about the Canyon, they are peripherally a part of

the history, awareness and responsiveness to the Canyon, emphasizing its cultural reach globally and in human attentions.

PREVIOUSLY USED PARTS REMOVED

Part 33—“Other” Grand Canyons is no longer a part of THE GRAND CANON. That part, which tracked uses of the term “Grand Canyon” in other geographical locales, was removed in 2009 as a matter of pragmatic bibliography, not truly pertaining to the Grand Canyon except through nomenclature and comparison, analogy, and metaphor. A separate, greatly expanded nomenclatural summary, “Grand Canyon, Colossal Mirror”, is now accessible online through <https://ravensperch.org>.

Part 34—Miscellaneous Manuscripts was removed from the bibliography in November 2003. Originally, I had believed it was prudent to include manuscript materials that were *cited by other sources*, in order to include those records in the bibliography. However, this is not the purpose of the bibliography; tracking manuscript and other primary source materials is an entirely separate project, one for someone else to pursue.

GEOGRAPHICAL COVERAGE

When we speak of ‘The Grand Canyon’ it must be understood that the Canyon does not start at the edge of the precipice. Nor is it an arbitrary line on a map, but rather it is the sum-total of the entire area surrounding those edges.

— Stephen Verkamp²⁴

THE FOCUS of THE GRAND CANON is that great andiron of the Southwest, the region of the Grand Canyon of Arizona and the Colorado River country from there to the river’s delta in the Gulf of California, Mexico (*see the maps in this section*). Everything that has transpired in these regions is accounted for, whether natural resources or human affairs. If it happened in, or is about, this geographic region, it is fair game for the bibliography. Verkamp’s statement above pertains just as pertinently to the Colorado River region, that the Colorado River is not confined to its “banks” but is the “sum-total” of the areas that are influenced by it or which depend upon it. And for both of these regions, we hold ideas and concepts of their environmental, geological, and human importance.

The GRAND CANYON REGION is taken in this bibliography to be the physiographic canyon and its surrounding landscape, approximately from a line north of the San Francisco Peaks northward about to the Utah border, and from the lands bounding the eastern end of the canyon (including the country adjacent to the Little Colorado River gorge) westward to the Grand Wash Cliffs.²⁵ Along the Colorado River

²⁴ Stephen Verkamp, “Testimony to the Subcommittee on National Parks, Forests and Public Lands of the House Committee on Natural Resources, November 3, 2011” (originally cited as a web resource of the U.S. House of Representatives, “www.naturalresources.house.gov/UploadedFiles/VerkampTestimony11.03.11.pdf”, 4 pp., but link was no longer valid in August 2021. See instead in the published record, “Statement of Stephen Verkamp, President, Verkamp’s Inc.”, pp. 100-109 in *H.R. 1980, H.R. 2070, H.R. 2621, and H.R. 3155 : legislative hearing before the Subcommittee on National Parks, Forests and Public Lands of the Committee on Natural Resources, U.S. House of Representatives, One Hundred Twelfth Congress, First Session, Thursday, November 3, 2021 : Serial No. 112-81* (U.S. Government Printing Office, Washington, D.C., 2012)]. Verkamp testified as a long-time Grand Canyon resident and president of the family interest, Verkamp’s, Inc. His grandfather was John G. Verkamp (1877–1944), a pioneer who in 1906 established a souvenir and curio shop at Grand Canyon, one which survived for more than a century before the family turned the property over to the National Park Service, which now is a historically focused visitors’ center. [Search for “Verkamp’s” in the bibliography.]

²⁵ The arbitrarily defined southern boundary of THE GRAND CANON bypasses the towns of Flagstaff, Williams, and others. However, the user will note that occasional citations appear for these and other extralimital locales, though only when those citations make reference to the Grand Canyon.

the Grand Canyon region is taken to begin at that physical and metaphorical stopper, Glen Canyon Dam, at the northeastern corner of the region.

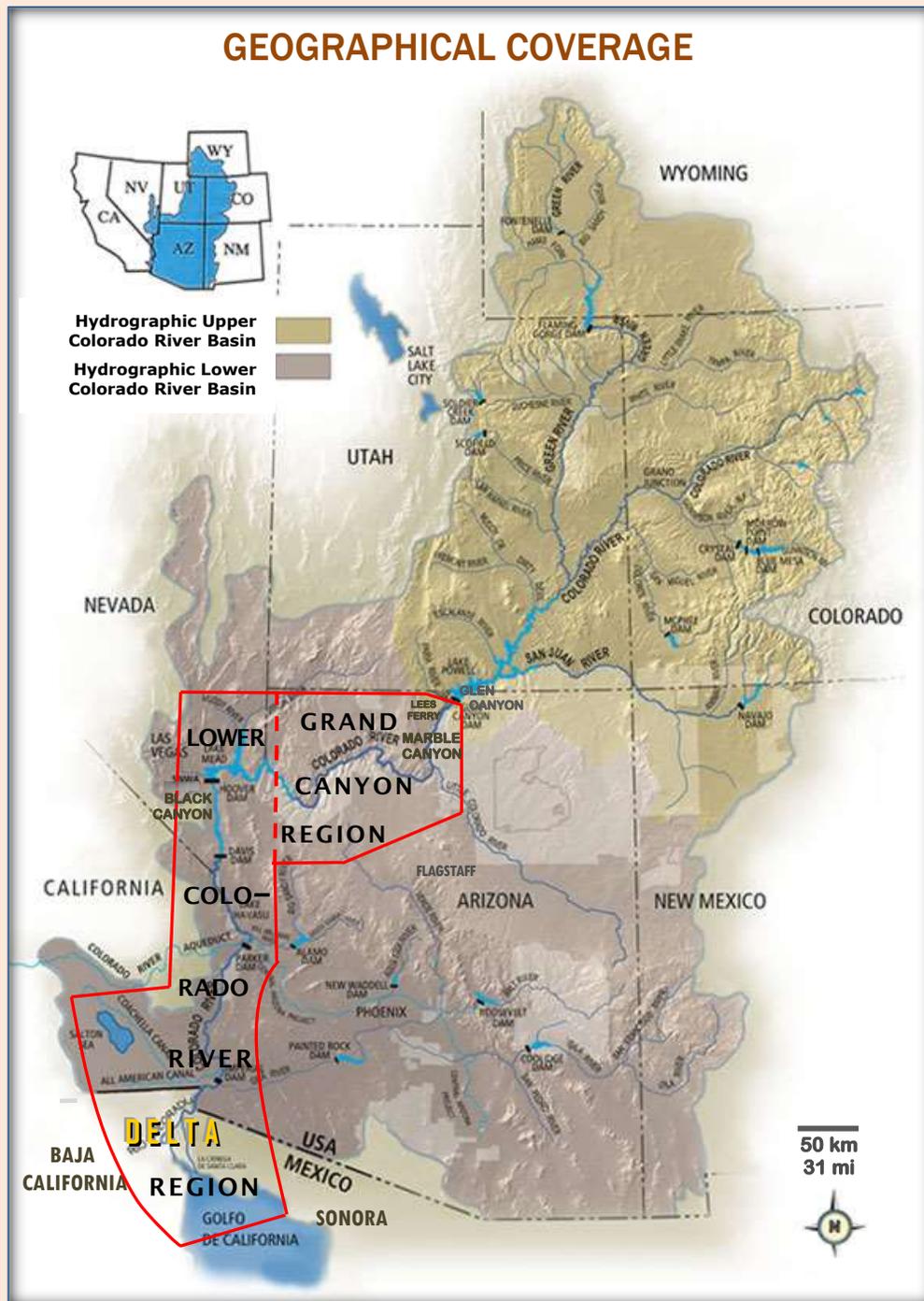
For this bibliography, the **LOWER COLORADO RIVER REGION** is distinguished by the river and its surrounding landscape below the Grand Canyon, beginning at the Grand Wash Cliffs and Lake Mead, and continuing southward with the river into its delta and the Gulf of California. Usually, the lower Colorado River is taken to be the physical river corridor from the Paria River to the delta, in the hydrographically defined Lower Colorado River Basin, but in this bibliography it is the broad span of country along the river from today's Lake Mead and lower Virgin and Muddy Rivers, and along its natural paths to the sea, occasionally overflowing into the Salton Sink to re-create the Salton Sea (although the latest breakout, in the early 20th century, was caused chiefly by humans).

These are arbitrary limits, ones adopted for compiling a bibliography. Some readers may further notice that I have not provided a definition of the "Southwest". Its definition, following decades of discussion by historians, is precisely-, over-, and under-defined, responding to interpretations of geography and culture, even ecology and climate. The Grand Canyon and lower Colorado River regions are within most definitions of the "Southwest", but not all of them. Geography is the first defining principle of this bibliography—and then embracing all the activities that take place within, or affecting, this area. So here, the idea of the "Southwest" infuses and dissipates from this region asymmetrically, and no special boundary is implied although it is guided by the limits depicted in the "Geographical Coverage" map below.

Even the idea of the "Colorado River Basin" can be muddled. Of course there is the physiographic basin, defined by the divides that separate it from adjacent river basins, which narrows at last to a thread leading into the Gulf of California. There are two kinds of basins—and I do not refer to the legislatively separated "Upper" and "Lower" basins that are used to determine the apportionment of "useful" waters. There are some misrepresentations of the effective limits of basins, based on the specific interests of those who are looking at this landscape and the happenings thereon. There is the vast Green–Grand basin (I here revert to the old definition whereby the Colorado River name was applied after the Green and Grand Rivers met). The Green–Grand feeds "the Colorado", which then passes narrowly through the Grand Canyon, discharging then into the icicle-shaped appendage (not even a basin of its own) that dives due south to the Gulf of California. It is as if the San Juan, Little Colorado, Bill Williams, and Gila River basins are only accessories, that the Colorado zips past their confluences without any regard to what goes on up those rivers; and the Virgin River is conceptually grafted to the Upper Basin, more a part of Utah, passing by necessity

• THE GRAND CANON •

COVERAGE AND FORMAT



— Approximate geographical area covered in [THE GRAND CANON](#), embracing the Grand Canyon and lower Colorado River regions. It follows the river corridor from Glen Canyon Dam to the river’s delta and the Gulf of California. The boundary in the gulf encompasses Mexico’s Reserva de la Biosfera Alto Golfo de California y Delta del Río Colorado, and in Sonora embraces part of Reserva de la Biosfera del Pinacate y Gran Desierto. This bibliography defines “lower Colorado River” as that region below Grand Canyon, which differs from the hydrological Lower Colorado River Basin that begins below the confluence of the Paria River at Lees Ferry.

- - - Approximate division between “Grand Canyon” and “Lower Colorado River” thematic regions of this bibliography [see [Contents](#)].

Base map of Colorado River drainage basin modified from U.S. Bureau of Reclamation, Glen Canyon Dam Adaptive Management Group. The Upper and Lower Colorado River Basins delineate the apportionment of the waters of the Colorado River basin by the Colorado River Compact of 1922; divided just downstream from the confluence of the Paria River near Lees Ferry. Dams and impoundments are indicated on the map. Lighter-gray areas, not labeled, are American Indian reservations. Basin boundary is not depicted in Mexico. See “Geographical Coverage” section within the introductory text for a map that delineates the natural [Colorado River delta](#) (*INTRODUCTION PAGE 86*).

PHYSIOGRAPHY AND POLITICAL GEOGRAPHY OF THE COLORADO RIVER BASIN (including Mexico)

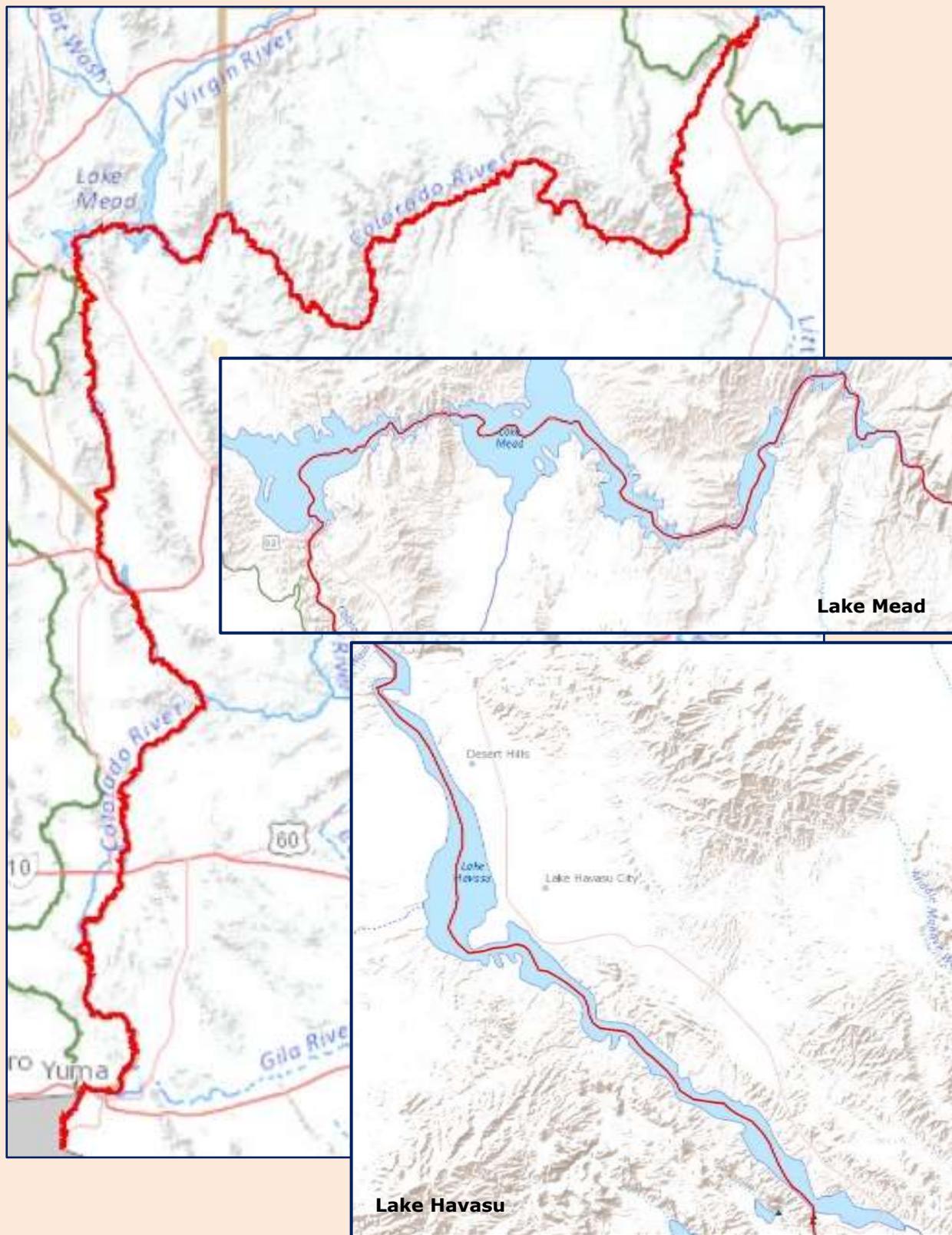


Darker-shaded area delineates the Colorado River Basin, including its reach in Mexico (note that this interpretation does not embrace the Salton Sea–Imperial/Mexicali Valley enclosed drainage area, although by inference the duller-green shaded areas in that region depict lower elevations). Purple tints delineate major urban areas.

Creative Commons ("By Shannon1—Own work, CC BY-SA 4.0")
<https://commons.wikimedia.org/w/index.php?curid=65868008>;
accessed 18 July 2019

• THE GRAND CANON •

COVERAGE AND FORMAT



Course of the Colorado River from Glen Canyon Dam to the southern international boundary.

Insets show the river's historical course through Lake Mead and Lake Havasu.

(Compiled from USGS Streamer, <https://txpub.usgs.gov/DSS/streamer/web/>)

of gravity through bits of Arizona and Nevada. It's a peculiar hydrogeography, one that comes about by the separation of human histories and how these areas have been studied. The "Colorado River Basin" as a whole is a map feature; its history comes from its separate rivers. Then there is the matter where the Colorado River Basin is an "idea", one which fades in every direction from its "center" at the Green-Grand confluence, muddled with the mistaken idea that it is the same as the Colorado Plateau; in other words, effectively limited to Utah and Colorado.

The geographical boundary of this bibliography is necessarily for my convenience, reflecting the limits of my geographic familiarity within a broad spectrum of subjects. Yet these limits also delineate a manageably sized geographical region within which is an array of tangible and intangible interactions that people initiate and experience. The people are affected by the conduct of nature; the physical and ecological world of lands, waters and air, and the animals and plants that inhabit them. The people, through ideas and actions both, influence individuals and their communities, creating what we broadly call "history"; and likewise affected are the physical and ecological landscapes and the inhabitants therein. The people here, indigenous, immigrant, and transient, experience and continue cultures that are inherited, adopted, and imposed, which instruct from ancient and historical pasts; and with these the people embark in activities with which they search for the ways and means of the future. Every action, every assertion, corresponds to another.

Now, there are good reasons to embrace both the Grand Canyon *and* the extended lower Colorado River from Glen Canyon Dam to the sea, a region whose parts may be seen as topographically, geologically, ecologically, climatically, culturally, and politically dissimilar. In fact, their human histories ever since prehistoric times and, in written records from the time since the Spanish incursions of the mid-1500s, are entwined. Their natural histories overlap in numerous ways, too, particularly the recent geological history of the Colorado River even though it flows across two distinctly different physiographical provinces of North America. One can investigate one part of the region without having to attend to things that pertain to another area, but complex interrelations reveal themselves as one refocuses broadly or when the region is viewed from multidisciplinary perspectives. To thematically separate the lower Colorado River from the Grand Canyon is done easily; the historical and cultural separation, though, is less well defined; geologically and environmentally, even more so.

To separate Native American cultures of the Grand Canyon region from those of the lower Colorado River diminishes traditional interactions and the impacts weighed upon all by European-Anglo activities over five centuries everywhere in the region. The

Colorado River traces human heritages that arose and continue through understanding and participating in life in this land. The river runs through the physical land, delivering life, death, and rebirth in absolute, inspirational and spiritual ways. It holds histories to be discovered and discovered anew, and it seems to withhold answers. So likewise this bibliography—looking at all of this land, and the life, places and things therein, it records the work of thousands; they tell us what we can understand, opine and may never know. Without the whole view, the portions fade. These intertwining views formulated and directed how *THE GRAND CANON* was compiled.

The 17th and 18th centuries in this region recorded human interactions through a geographically far-flung but sparsely sowed field of publications, focused on the lower Colorado River. The 19th century saw the first sponsored explorers in three centuries to span the whole region, rediscovering the Grand Canyon. Later in the century came an inflow of entrepreneurs and scenic investigators, geologists and geographers, archaeologists and ethnographers, biologists and nascent ecologists, and a few permanent residents and curious travelers, the harbingers of throngs of tourists.

The 20th century witnessed the infusion of a greater populace, both permanent and transient, and all manner of specialized researchers, in the humanities and sciences mostly. Plans for, and partial implementation of, a regiment of dams in the Colorado River basin brought beneficial and damaging effects alike to culture, environment, law, and administrative practices—not to overlook variant effects on the quality of life in general, including tourism, the irrigation of farms, and the safeguards of air quality and silence to mention just a few aspects. Thus far in the 21st century focuses have generally shifted away from large-scale investigations to specialized projects and, in the areas of water-management, increased attention to concerns over the effects of drought and climate change.

I realize that the hydrographical Lower Colorado River Basin, and by convention the political lower Colorado River, begins (on the river) at the U.S. Geological Survey hydrologic stream gage at Mile 0, just below the mouth of the Paria River near Lees Ferry. However, Glen Canyon Dam serves as a barrier both to the river and to the bibliographical coverage of *THE GRAND CANON*. The encanyoned river in Glen Canyon between the dam and Lees Ferry is now amputated from the body of Glen Canyon, and it is ecologically connected solely to the river downstream from the dam, so I bibliographically extend the lower Colorado River up to the dam.

That which is left of Glen Canyon between the dam and Lees Ferry is its history. To be sure, there are archaeological, geological, and biological aspects, too—each inherently altered or threatened—that continue to be of interest. Periodic reexposures of side canyons in fluctuating Lake Powell, the result of climatic distress and water

management, will continue to tantalize historians, scientists, and travelers in Utah, but unless the dam disappears or the lake is made permanently low, Glen Canyon—proper will never again be a visible and explorable geographical feature. Despite the definitions of administrative boundaries and the practical differences of geology, the slender appendix of Glen Canyon, downstream of its dam, is all we have now of Glen Canyon in the rough.

Lees Ferry as a geomorphological crossroads is tangibly linked to the history of the entire Southwest, one of the few places the Colorado could usually be crossed before bridges, a passageway between the Little Colorado River towns and the Mormon country of Utah. But now Lees Ferry is only at the end of a road, straddling the Glen Canyon and Grand Canyon political units. Bridges upstream and downstream supplant the ford and ferry; the river is no longer through-flowing, stumped momentarily by Glen Canyon Dam. Today, Lees Ferry serves as the sole unobstructed access to the bottom of Glen Canyon and, in the other direction, the starting point for one of the world's most remarkable natural and historical whitewater routes, through Marble and Grand Canyons. The distinctions of history and geography have been muddled here, too. An ironic example of this was an error in a large brown informational highway sign I saw in 1997 on the eastbound side of U.S. Route 89A, west of Marble Canyon. Riding atop piles of river equipment in the back of a stake truck, I had no way of photographing the sign as we sped past, so suddenly was it seen, yet its ironic significance weighed on me: it alerted travelers to the ambiguous and non-existent “Grand Canyon National Recreation Area”. Fortunately, the sighting was photographically proved before the sign was replaced; otherwise it would have slipped into the chronicles of hearsay.²⁶

At the western end of the Grand Canyon, where the physiographic canyon is dramatically concluded by the Grand Wash Cliffs, Lake Mead slips in past the gateway up into the western part of the canyon, stealing the Colorado River's historic identity there.²⁷ In the 1940s the lake stilled some of the Colorado's more famous rapids, like Lava Cliff Rapid and Separation Rapid. Lake Mead National Recreation Area fortunately does not also politically steal the lower Grand Canyon; its administrative boundary is pointedly if not necessarily permanently marked by a buoy in the river channel. The buoy likewise approximately marks off the two major portions of THE GRAND CANON, separating the coverage of the canyon-proper and its adjacent lands, and the region of the “lower Colorado River”, to the sea.

²⁶ C. V. Equusasinus, Grand Canyon creationists: monument to bureaucracy. *Boatman's Quarterly Review*, 12(2) (Spring 1999), p. 39. (ITEM NO. 2.2548.)

²⁷ See the noticeable blue line on the western side of the map of Grand Canyon's physiographic rim, illustrated farther below.

Flowing with the river, a short way into the main body of Lake Mead west of the Grand Wash Cliffs is another historic river crossing, Pearce Ferry, also muted. This one is less of a geomorphically constrained passage than Lees Ferry, but substantially far more used in the 19th and early 20th centuries. Expeditions, trappers following the waters, and prospectors moving north or south within the promising ranges of the Basin and Range physiographic province crossed here or nearby; so too some travelers dropping from the Old Spanish Trail, and Mormon colonists moving south from Utah to investigate and invigorate the commercial prospects of the lower Colorado. Everyone crossed here to avoid the Grand Canyon and the high plateaus on either side of it.

The spot where the Lake Mead National Recreation Area's "Pearce Ferry" is marked by official signs does not mark the historic ferry site, long since drowned and silted in beneath the surface of Lake Mead. When I first composed these paragraphs, I said that the recreation area's "Pearce Ferry" slid tiredly into the warm waters of the lake. But the vagaries of climate and the demands and allocations of water supply in the West caused the lake's water elevation to drop drastically during the opening years of the 21st century (euphemistically referred to by Lake Mead National Recreation Area as a "drawdown"); and it continues, ladling away the waters for which Hoover Dam was built in the first place. A decade after my comment the beach was dry, the lake bottom in Pearce Bay reclaimed already by desert brushland. Here, the Colorado River runs out of sight of the recreation area's "Pearce Ferry", dashing through the silty lake bottom. In the process it created "Pearce Ferry Rapid", a new, albeit temporary, rapid of the Colorado River; an unrocky pourover but one requiring alertness, respect, or avoidance. Until the western waters upstream replenish the diminished Lake Mead—ever more less likely—redrowning Pearce Bay and the river course in western Grand Canyon, the river continues to wend its way in search of its original channel.

And so the Colorado River through the Grand Canyon—as well as its history and science—is bracketed by two of the loneliest places in the country, places that only historians, river runners, and bibliographers could love.

Odd as it may seem, one may then question *how* the Grand Canyon is defined; that is, where is the rim of the Grand Canyon? The location and extent of the physiographic Grand Canyon, or more precisely its "edge", may seem to be an obvious definition for one who has stood on the brink and experienced the draw of the open abyss. Geomorphologically, the rim follows a tortuous course, tracing the topographic tendrils of every drainage, large and small and inconsequential, all of which converge upon the Colorado River. In some places more gently sloping areas may provide a more ambiguous location for the rim. But since there has never seemed to be a

particular need to define the rim except in a few instances of describing land apportionments, the whole of the physiographic rim never was precisely located.

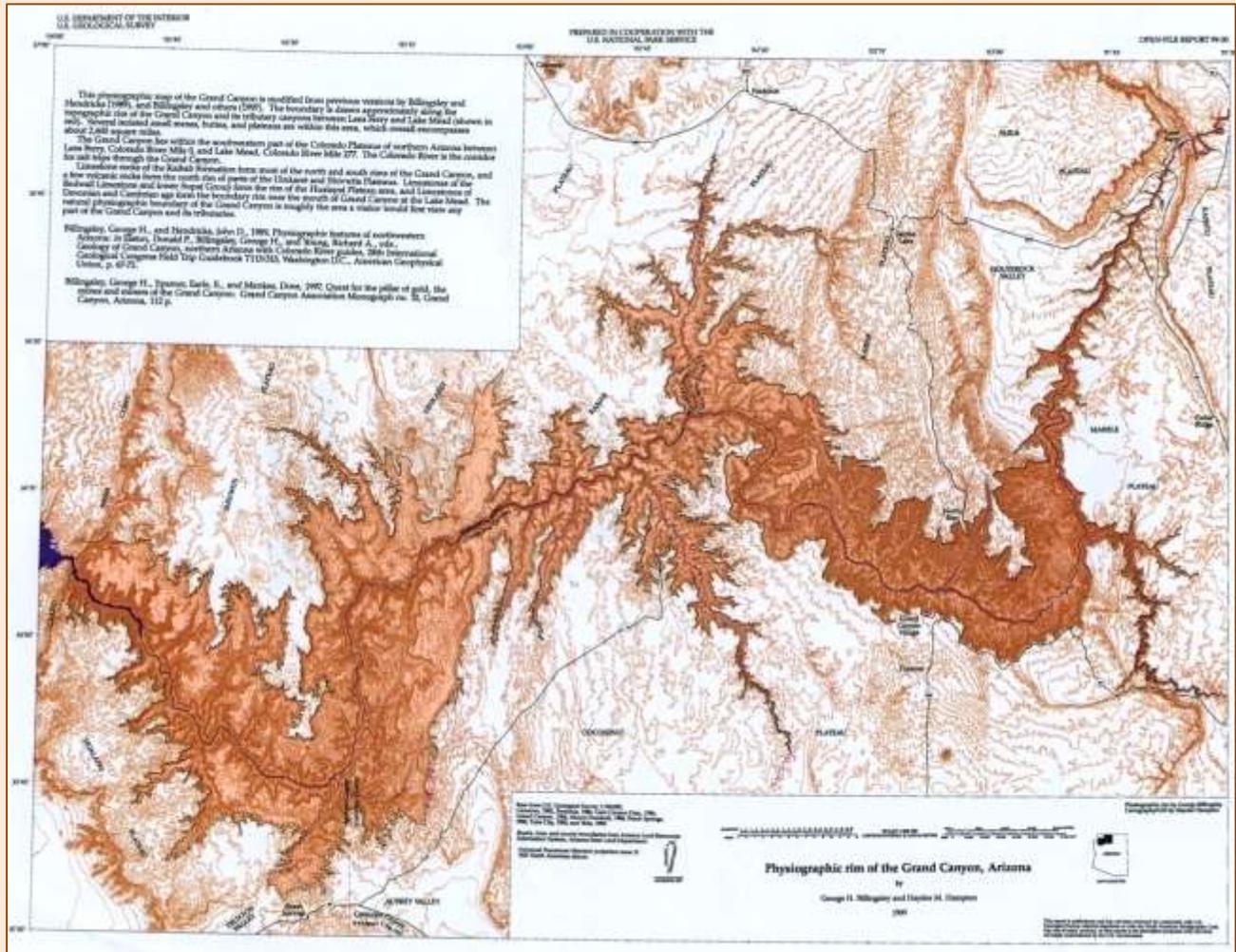
As part of extensive field mapping in the region, George H. Billingsley (U.S. Geological Survey) delineated the approximate physiographic rim of Grand Canyon for a Survey map recreated digitally with Haydee M. Hampton and distributed in 1999 (*illustrated below*). While the interpretation of the rim is subjective in some parts, and is not in any case a legal definition of the rim, it provides a first look at the true figure of the physiographic canyon. On examining the map one may be struck by the beauty of its general symmetry. A closer look brings to attention the incredible number of convolutions seen even at the scale of the map; and most notably, the different shapes and crenulation styles of the rims, with Kanab Creek noticeably entering from the north and, opposite it, Havasu Creek entering from the south; and as well the Little Colorado River, which has a huge drainage basin, entering from the east. One may suppose that the two rims, measured along the very extenuated line marking the edges on the north and south sides, must be of very different lengths, especially when one takes note of the much more highly crenulated north side, a function of the geological lay of the land, as well as the interruptions of significant tributaries, the Little Colorado River, Kanab Creek, and Havasu Creek. The mappers, though, had not indicated the lengths of the two rims as drawn on the map. These were measured by Susan S. Priest (U.S. Geological Survey) using ArcInfo data points from Billingsley and Hampton's data set. The crenulated north side measures 1,384 miles along the rim contour. Despite the great asymmetry between the two sides, the south side is astonishingly a nearly identical 1,373 miles.²⁸

As for the peculiar appendage of the Salton Sea region, as also covered in this bibliography (*illustrated below*), were it not for natural breakouts of the Colorado River to the Salton Sink, the natural history of the lower Colorado River region would not be attached to this bibliography. The Salton Sink (and its historical ancient Lake Cahuilla) is as much a part of the Colorado River delta as that which sinks actually into the Gulf of California. Then, with the anthropogenic breakout of the river during 1905–1907, the whole Salton Sea region—and eventually the Imperial and Mexicali valleys—opened itself in every other respect to the coverage of this bibliography, in terms of geography, geology, and all aspects of human affairs, like engineering,

²⁸ Data were first sent from Billingsley to Spamer in 2010. These figures were included in a publication by E. E. Spamer, "What Lies Behind the Grand Canyon?", *Annals of Improbable Research*, Vol. 16, no. 5 (September/October 2010), cover, 1, 6-10 (ITEM NO. 2.14635). Even though the physiographic boundary is subject to interpretation in some places, the data used to create this map are nevertheless reproducible and thus open to objective reevaluation.

• THE GRAND CANYON •

COVERAGE AND FORMAT



"Physiographic rim of the Grand Canyon, Arizona"

The physiographic rim is interpreted along both sides of the canyon, from Lees Ferry (on the Northeast) to the Grand Wash Cliffs (on the West), embracing Marble Canyon (from Lees Ferry nearly to the Little Colorado River that enters from the Southeast) and Grand Canyon. The rim is plotted not along lines of equal elevation as like topographic contours but along what can be construed as the "edge" of the canyon. While the precise "edge" may be subjectively defined in some areas, this map nonetheless for the first time displays the true figure of the canyon without respect to definitions of political geography or to stylistic generalities that cause imprecision. By convention, the two sides of the canyon, separated by the Colorado River, are called the North Rim and the South Rim. Note that the physiographic rim also runs along the rims of significant tributaries, the most prominent ones of which are Kanab Creek (on the North), the Little Colorado River (on the East), and Cataract/Havasu Creek (on the South).

George H. Billingsley and Haydee M. Hampton, *Physiographic Rim of the Grand Canyon, Arizona*, U.S. Geological Survey Open-File Report 99-30 (1999). Produced in cooperation with the U.S. National Park Service. [ITEM NO. 24.39]

agriculture, culture, and tourism. Thus while a periodic hydrogeologic event let this bibliography embrace the physical Salton Sink, an accident by hapless water managers also forced it to embrace lasting environmental effects and human activities in this region.

NOTE ON TOPOGRAPHIC MAPS. THE GRAND CANON, through its Volume 2, *Cartobibliography* (access through <https://ravensperch.org>), includes guides to the topographic map quadrangles produced by the U.S. Geological Survey and Mexico's Instituto Nacional de Estadística y Geografía. (For more information, see [Part 25](#) herein.)

NOMENCLATURAL CLARIFICATIONS

RÍO COLORADO AND COLORADO RIVER²⁹ Historical, bibliographical, and cartographical research in the region covered by this bibliography and cartobibliography can be confusing given the number of names by which the Colorado River has been known since its European discovery 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 world.

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. The names pertain to the originally named stretch of the river, from the confluence of the Grand and Green Rivers in 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
 Boñaguia R[ivière] [*in French*]
 Caramara flu[vius] [*in Latin*] [*see Rio Coromara*]
 Collerado river [*sic*]
 Colorado de los Martyres
 Colorado del Oeste
 Colorado Grande
 Colorado River
 Colorado River of California
 Colorado River of Mexico
 Colorado River of Sonora
 Colorado River of the Gulf of California

²⁹ Names in this list include those from manuscript and published materials, and misspellings. Some, particularly those from the 19th or 20th centuries, may be mixtures of Spanish and other languages. A few names are misapplied from, or confused with, other (usually presumed) rivers.

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 [*in German, sic*]
 Fl[uvius]. boni præsidi [*in Latin*]
 Good Hope River [*in English; as a tributary to Tison R.*]
 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*]
 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
 Red River of California
 Red River of the West
 Río Buena Esperanza
 Rio Colorabro [*sic*]
 Río Colorado [*and as Rio Colorada*]
 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
 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 on 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*]
 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", "Tisan", "Tison", "Toucan"*]
 [RIO GRAN DE COLORADO *may only be due to awkward 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 Totontec [*also as Rio Totontec and Rio Tontontec*] ³⁰
 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*]
 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"*]
 Tontontech f[iume]. [*in Italian*] [*see also Río Totontec*]
 Totontec fluvius [*in Latin*] [*see also Río Totontec*]
 Western Colorado

³⁰ 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 and thus is not otherwise cited in this bibliography), p. 149.

The Colorado had also been referred to as the “Seedskeeter”, “Seedskadee”, and variant spellings, which are corruptions of an Indigenous American pronunciation actually meant for the Green River (in the upper basin area). The Little Colorado River has been given comparably overlapping names, including a redundant “Río Colorado”.

PUERTO DE BUCARELI. Notable among many maps and in other literature is the note of a place name, usually by the confluence of the Colorado and Little Colorado Rivers, which originates from padre Franciscan friar 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”, honoring then-Viceroy of New Spain, Antonio María de Bucareli y Ursúa. When Alexander von Humboldt passed through New Spain in 1803, he examined some of the extant manuscript maps of the territory and took up the name on his sketch copy of a map drawn in 1777 by Bernardo de Miera y Pacheco, who had incorporated Garcés’s honorific; and Humbolt was the first to mutilate the name, as “Puerto de Bucarelli”, appearing on his remarkable 1811 map of New Spain. Various copyists in America and Europe continued to come up with imaginative misspellings. All variants that appear on maps (published and manuscript, cited in the *Cartobibliography*, Volume 2 of THE GRAND CANON), occasionally in other printed matter, are:

- Bucuretti
- [llamó] de Bucareli
- P. Bacarelli
- P. Bucarette
- P. Bucaretti
- Puerto Bucarelli
- Puerto Bucarello
- Puerto de Bucareli
- Puerto de Bucarelli
- Puerto del Bacorelli
- Puerto del Bacorilli

S. Bacarelli [perhaps thought to have been a mission, or a name from one of the numerous campsites of the Domínguez-Escalante expedition of 1776, which Miera accompanied]

BOULDER DAM AND HOOVER DAM The Boulder Canyon Project received its name through legislation of the U.S. Congress. When engineering studies finally identified Black Canyon as the site for the Colorado River dam, the project name was retained and the dam was referred to as Boulder Dam. The project is still administratively the Boulder Canyon Project. In 1930, while laying a ceremonial spike in the rail line from Las Vegas to the Boulder City site, Secretary of the Interior Ray L. Wilbur announced that the name of the dam would be Hoover Dam, to honor Herbert Hoover. After the election of Franklin D. Roosevelt, Secretary of the Interior Harold Ickes in 1933

announced a change back to Boulder Dam. In 1947, President Harry Truman requested Congress to finally, formally name the dam Hoover Dam. In this bibliography, when in English-language titles the name “Boulder Dam” is spelled out, no conscientious attempt has been made in the citation to parenthetically identify it also as “[Hoover Dam]”. It will be understood herein, as it is historically, that the two names are synonymous, and that the appearance of one or the other in a citation or quotation is as originally published. Readers should search for both names.

NOTES ABOUT THE EARLIEST WORKS (MID-16TH CENTURY)

THE HISTORY of the American Southwest is rich, exhaustively studied, rife with political and economic contention and cultural ambivalence. That history necessarily embraces the published records of European and, later, American institutions and writers. Native Americans had as well lived in and journeyed through the Southwest for uncounted centuries before the first European forays into this part of North America in the sixteenth century. But, it is the publishing tradition of Europe that begins documenting the corroborative, citable, and obtainable records of reportable activities and observations carried out in this region at specific times; and so this is our bibliographical starting point.

By far the earliest item cited in THE GRAND CANON is from *circa* 1535. Of course, this predates the earliest European records of contact with the region of interest here—1539 for the Colorado River, and 1540 for the Grand Canyon. My selection of two pre-dating items closest to 1539, from *circa* 1535 and from 1536, is purposeful; both are map products (see more fully THE GRAND CANON Volume 2, *Cartobibliography*).³¹ Since maps (including gores for globes) were the first printed materials to convey information about the region, for the sake of comparison I have cited maps that were *recently available* at the close of the 1530s, so as to provide a graphic idea of the European understanding of this part of the world on the verge of the geographical discoveries just noted.

The set of gores for a lost globe, printed without attribution perhaps in Nuremberg *circa* 1535, imaginatively present the west coast of America running westward north of the equator, merging directly with “India” without an intervening ocean.³²

³¹ General maps had been relegated to Part 25 of this bibliography, but now are in Volume 2 of THE GRAND CANON, *Cartobibliography of the Grand Canyon and Lower Colorado River Regions in the United States and Mexico*. In this Volume 1 (Introduction and Bibliography), readers may refer to [Part 25](#) for information that introduces Volume 2 within the context of Volume 1.

³² Anonymous. [Set of printed gores for a lost globe.] Nuremberg[?] [ca. 1535], 12 gores. (CARTOBIBLIOGRAPHY ITEM NO. 25.373).

Similarly, gores by Caspar Vopell, printed in Cologne in 1536, depict the same arrangement, with “Hispania Nova” immediately south of and on the same land mass as “Asia Orientalis”.³³ This gives some perspective of the knowledge of southwestern North America in the 1530s. To offer citations in this bibliography for printed maps earlier than those just mentioned would be superfluous.³⁴

The first of the world maps by Sebastian Münster, “Typus Orbis Universalis” (Basle, 1540) portrays “Terra florida” at longitude 260° (contemporary Spanish reckoning) on the western edge of the map; on the eastern edge it continues as “Temistitan”, the west coast of which is simply crenulated north–south along the 250° meridian. Correctly it is ignorant of the explorations then underway in the regions of New Spain. At least the American and Asian continents are separated in the northern latitudes by “Oceanvs Orientalis”.³⁵

The second edition (1542) of Sebastian Münster’s geographical work³⁶, in which appears a map that depicts the western coast of North America, demonstrates the practical and intentional slowness of communication in that day. The map is still devoid of anything that we would recognize as having come from the Spanish expeditions. In

³³ Caspar Vopell, *Nova & Integra Universi Orbis. Descriptio*. (Cologne, 1536). [Three sections only of gores for a globe.] (CARTOBIBLIOGRAPHY ITEM NO. 25.374).

³⁴ As a matter of historical interest, the great map by Martin Waldseemüller, *Universalis Cosmographia Secundum Ptholomaei Traditionem Et Americi Vespuicii Aliorüque Lustrationes* (Strassburg, 1507) — on which “America” appears for the first time — presumptuously depicts a mountainous land beyond the eastern edge of North America, labeled, “TERRA VLTERI⁹ INCOGNITA” (A Further Unknown). On this map these (then-imagined) mountains line the entire west coast of North America. The portrayal is, in fact, more than which was usually shown by mapmakers of the day; the expanses beyond the eastern coast often were conveniently replaced by ornamentation or simply passed off the map sheet altogether. (I am tempted to include this 1507 work in this bibliography since it does figuratively, even if imaginatively, portray the region beyond its horizon that includes the area covered by this bibliography. However, I would also have to include regionally uninformative and superfluous publications between 1507 and 1535, which is not useful.) [Also take note that the Waldseemüller map was copied to create gores for a globe, by Johann Schöner (1517), which are illustrated online by the Library of Congress at <https://www.loc.gov/item/2016586441/>. Although these gores are fragments, America is distinctly shown among them, whereon the North American continent is like that of Waldseemüller’s, including the modified notation, “Vlterius incognita terra”; but it omits the montane ornamentation that abuts Waldseemüller’s map edge and substitutes an actual, though imaginative, western coastline on the Pacific.]

³⁵ Sebastian Münster, *Geographia universalis vetus et nova . . . Claudii Ptolemaei Alexandrini . . .* Basiliae: Apud Henricum Petrum (1540). (CARTOBIBLIOGRAPHY ITEM NO. 25.375.) [Cartobibliography is THE GRAND CANON Volume 2.]

³⁶ Münster, *Novae insvlae, XVII nova tabvla. In: Münster, Geographia universalis, vetus et nova complectens Claudii Ptolemaei Alexandrini enarrationis libros VIII*. Basileae: apud Henricum Petrum, [2nd ed.] (1542). (CARTOBIBLIOGRAPHY ITEM NO. 25.307.) [Cartobibliography is THE GRAND CANON Volume 2.]

1542 there was perhaps time enough after the encounters with the Colorado River and Grand Canyon when something *could* have been published, even if only from leaked information or hearsay; but cartography in that day was embedded in the political secrecy of nations and not readily shared, and just as likely the goings-on at the far end of a remote arm of the sea may not have inspired inquiry. So there is nothing known today from that earliest part of the incursionary period.

The “Ulpius Globe” [WHEAT I:4], made in 1542 by Euphrosynus Ulpius probably in Rome, may in effect be seen as a manuscript, in that it is unique. The 15½-inch globe, mounted on a wooden stand, is fashioned in copper with mostly Latin inscriptions, including “REGIONES ORBIS TERRAR QVAE AVT AVETERIBTRADITAE, AVT NOSTRA PATPVQ MEMORIA COMPERTÆ SINT EVPHROSYNVS VLPIVS DESCRIBE BAT ANNO SALVTIS M.D. XLII” (Regions of the terrestrial globe handed down by ancients, or discovered in our memory or that of our fathers delineated by Euphrosynus Ulpius 1542), with the dedication, “MARCELLO CERVINO S.R.E. PRESBITERO CARDINALI D.D. ROME” (Marcello Cervino, Cardinal Presbyter, Sancta Romana Ecclesia, Doctor Divinitatis, Rome). It is well known for its inclusion of the east American explorations that included what today is New York harbor, in 1524, by Giovanni de Verrazano, whose 1529 map was likely used for this globe. As for the southwestern portion of North America, it features today’s Mexico as “Nova Hispania” and “Nova Galetia”, with no figure of the Gulf of California. Northwest of that region there is undefined openness—plain copper—that likely represents the supposed great western sea, which on this globe is intimated to occupy virtually the whole of the center of North America; its northern boundary is lightly implied but there is no southern boundary. The region would have been effectively unknown to Verrazano, of course, but neither did Ulpius have the information that had recently been acquired from the more recent Spanish explorations.³⁷

It was, then, Sebastian Cabot who was the first to produce a map depicting something in the region around the head of the Gulf of California, in 1544. It included information gleaned from the expeditions of Ulloa in 1539 and Coronado in 1540–1542 and thus is the earliest published map known to portray any detail in the region of interest to this bibliography.³⁸ Following on this, in 1548 there are two publications that further acknowledge the Colorado River region based on the Spanish explorations; one

³⁷ The Ulpius Globe is today in the New-York Historical Society (<https://www.nyhistory.org/ulpius-terrestrial-globe>, <https://www.nyhistory.org/exhibit/terrestrial-globe>). See also <http://myoldmaps.com/renaissance-maps-1490-1800/367-the-ulpius-globe/367-ulpiusglobe.pdf> (accessed 22 September 2020).

³⁸ Sebastian Cabot, [No title], (Antwerp, 1544). (CARTOBIBLIOGRAPHY ITEM NO. 25.377). [Cartobibliography is THE GRAND CANON Volume 2.]

is dated (yet another edition of Ptolemy's *Geography*), the second is attributed to that year (a map also by Münster).³⁹

First-person reports about the Colorado River and the Grand Canyon originate in events of 1539 and 1540, respectively. The seminal event was with Francisco de Ulloa (died 1540), the navigator who in 1539 with ships of the fleet of Hernán Cortés (1485–1547) reached the mouth of the Colorado River at the head of the Gulf of California. His report appeared publicly two decades later in Venice, in 1556, translated into Italian in Volume 3 of Giavanni Battista Ramusio's *Della Navigazioni et Viaggi*.⁴⁰ Its first English translation was published by Richard Hakluyt in 1600.⁴¹ There is, further, a subjective indication that news of the existence of the Colorado River may have been known as early as 1526, when Hernando Cortes wrote to Charles V that while exploring the western coast of California he dispatched a captain whose explorations “penetrat[ed] one hundred and thirty leagues inland”, who “described a very large river, which the natives told him was ten days’ march from its source, and about which, and the people inhabiting its banks, they told me many strange things.”⁴²

Europeans’ arrival at the Grand Canyon came a year after the Colorado River was encountered, but by land. During 1539–1542 an incursionary army led by Francisco Vázquez de Coronado (1510–1554) infiltrated the American Indian lands on the northern frontier of New Spain in what today is Arizona and New Mexico, venturing even onto the vast Great Plains farther east. As is well recorded historically, they had set out from today’s Mexico to rifle Cibola of its riches, which as the Spanish learned soon enough was only the stuff of mis- and disinformation about the Indian pueblos.

³⁹ Gastaldi, *La Geografia di Clavdio Ptolemeo Alessandrino* Gioã. Baptista Pedrezana (Venetia, 1548) (CARTOBIBLIOGRAPHY ITEM NO. 25.378). Münster, *Die neuwe Iselen so zu inserten seiten durch die kunig von Hispania im grossen oceano fefunder sindt* [Henricus Petri (Basle, 1548?)] (CARTOBIBLIOGRAPHY ITEM NO. 25.247). [Cartobibliography is THE GRAND CANON Volume 2.]

⁴⁰ Francisco de Ulloa, *Relatione dello scoprimiento che . . . va à far l’armata dell’ illustrissimo Fernando Cortese, . . . della quale armata fu Capitano il molto magnifico Caualliero Francesco di Ulloa* *In:* Ramusio, Giovanni Battista, *Terzo volvme della navigazioni et viaggi;* Nella stamperio de Givnti (Venetia, 1556) leaves 339-354. (ITEM NO. 2.6438.)

⁴¹ Richard Hakluyt, *The principal navigations, voyages, traffiqves and discoveries of the English nation, made by sea or ouer-land, to the remote and farthest distant quarters of the earth, at any time within the compasse of these 1600 yeeres, deuided into three seuerall volumes, according to the positions of the regions, whereunto they were directed.* G. Bishop, R. Newberie and R. Barker (London, 1598). (ITEM NO. 2.3117.)

⁴² Francis Augustus MacNutt (translator, ed.), *Letters of Cortes : the five letters of relation from Fernando Cortes to the Emperor Charles V : Volume Two.* G. P. Putnam’s Sons (The Knickerbocker Press) (New York and London, 1908), p. 354 (ITEM NO. 2.28006). For an earlier edited printing in Spanish see Enrique de Vedia, *Biblioteca de autores españoles [Volume 22]. Historiadores primitivos de Indias. Tomo primero.* M. Rivadeneyra (Madrid, 1858), p. 152 (ITEM NO. 2.6582): “. . . trajo me dió noticia de un muy gran rio, que los naturales le dijeron que habia diez jornadas de done él llegó, del cual y de los pobladores dél le dijeron muchas cosas extrañas.”

In 1540, an expeditionary party under Pedro de Tovar traveled from the main army westward to the Hopi mesas in today's Arizona. There they learned about a large river even farther to the west. This was of interest to them as a means to connect with the Gulf of California; the original plans of the expedition included resupply of the armed force by ship on the lower Colorado River, although that never happened. Tovar reported this news and another party, about thirteen men under García López de Cárdenas, was dispatched to investigate. According to an account drawn up decades later, they journeyed twenty days,⁴³ their Hopi guides leading them to the rim of the Grand Canyon at a point described cursorily as a place where the Colorado River was visible and where low pines grew. This area is believed by many historians to have been at the eastern end of the canyon at or near the area now called Desert View. Others consider it may have been farther west, given the reported length of the journey and other evidence. This would have been closer to where in the early 20th century William Wallace Bass conducted tourists into the canyon on his mining trails near the Grand Scenic Divide.⁴⁴ The Spanish party was likely led along Native Americans' long-established routes through this area; and apparently the guides purposely veered away from culturally significant areas such as the route that led to salt deposits near the confluence of the Little Colorado River. Grossly underestimating distances in the canyon, Capt. Pablo de Melgosa, Juan Galeros, and a third man whose name was not remembered by the chronicler, tried to descend to the river. They did not make it very far and swore that rock features down there were taller than the Tower of Seville, a landmark familiar to them back home that stood next to the city's cathedral.⁴⁵ Without further record of the canyon, at least so far that is known to us today, the party returned to the main force in today's New Mexico.

⁴³ Flint and Flint have suggested that 20 days was written in error for 20 leagues. (Richard Flint and Shirley Cushing Flint, eds., translators, annotators, *Documents of the Coronado expedition, 1539-1542* : "they were not familiar with His Majesty, nor did they wish to be his subjects". Southern Methodist University Press (Dallas, Texas, 2005, [ITEM NO. 2.21426](#).)

⁴⁴ See items by [Ray Kenny](#) in [Part 16](#) of this bibliography. See also Earle Spamer, "'...bigger than the great tower of Seville': Sizing up the 1540 encounter in Grand Canyon", *The Ol' Pioneer* (Journal of the Grand Canyon Historical Society), Vol. 30, no. 3 (Summer 2019), pp. 11-12 ([ITEM NO. 2.28399](#) in Volume 1).

⁴⁵ The tower, *La Giralda*, still stands as part of the cathedral of Seville, Spain. Originally commissioned in 1184 as a mosque, it was completed in 1198. In Casteñeda's day the tower was some three and a half centuries old but still lacked the upper portion of the present structure. A modest belfry was installed after its original ornamental top was felled in an earthquake in 1356. The present belfry, as well as the upper tower and the statue, "Faith", were emplaced in 1558, eighteen years after Coronado's men attempted to reach the bottom of the Grand Canyon. In 1540 the tower was about 300 feet tall. [See also Earle Spamer, "'... bigger than the great tower of Seville': Sizing up the 1540 encounter in Grand Canyon", *The Ol' Pioneer* (Grand Canyon Historical Society), Volume 30, no. 3 (Summer 2019), pp. 11-12 ([ITEM NO. 2.28399](#)).]

Not until the 1560s was an account written down about the events of 1539–1542. It appeared in the manuscript “Relación de la Jornada de Cibola” by Pedro de Castañeda de Nagera, who drafted it while in Culiacán, New Spain. However, the original manuscript is missing; the manuscript that survives today is a copy of it, made in Seville in 1596.⁴⁶ In turn the *Relación* did not appear in print for nearly three centuries after the events it records, when in 1838 Henri Ternaux-Compans published a translation in French.⁴⁷ An English translation did not appear until three and a half centuries after the events, when in 1896 George Parker Winship published the *Relación* for the first time in both Spanish and English, based of course on the 1596 copy.⁴⁸ As one might expect, memory, cultural conventions, translators’ liberties, and modern re-readings produce somewhat different perspectives.

After the Cárdenas party left the Grand Canyon no European is known to have gone there for more than two centuries. In 1776 the Franciscan friar Francisco Tomás Garcés (1738-1781) journeyed from the lower Colorado River region to the lands of the Hualapai, Havasupai and Hopi people. He, fortunately, wrote his own record, though it, too, took a long time to see publication, in 1900.⁴⁹

After all this, there are no surviving maps, save one in manuscript, that document the first European forays into the lower Colorado River and Grand Canyon regions—and that only figures the Gulf of California, hence also the mouth of the Colorado. Perhaps the first document relating to the region considered here contains the instructions from Viceroy Antonio de Mendoza to Hernando Alarcón, regarding logistical support for Coronado’s *entrada* into the northern reaches of New Spain. This document, dated May 31, 1541, was not, however, available in print for centuries, thus it cannot be

⁴⁶ Pedro de Castañeda, *Relación de la Jornada de Cibola* (manuscript). This 1596 manuscript transcription of a lost original written in the 1560s is in the Obadiah Rich Collection of the New York Public Library. Sample pages of it have been published in facsimile during the 20th century. (See Castañeda, 1596, [ITEM NO. 2.1909](#).) There is also another, brief account referred to as the *Relación del Suceso*, from another person who had accompanied the Coronado *entrada* in 1540; it, too, is known only from a 16th century copy (see the transcription and translation in Flint and Flint [Anonymous, 2005, [ITEM NO. 2.21428](#)]).

⁴⁷ Henri Ternaux-Compans, *Voyages, relations et mémoires originaux pour servir a l’histoire de la découverte de l’Amérique, publiés pour la première fois, en français, par H. Ternaux-Compans. [Volume 9.] Relation du voyage de Cibola, entrepris en 1540. Inédit.* Arthus Bertrand (Paris, 1838). ([ITEM NO. 2.6265](#).)

⁴⁸ George Parker Winship, The Coronado expedition, 1540-1542. *U.S. Bureau of Ethnology, 14th Annual Report* (1896), Part 1, pp. 329-613. ([ITEM NO. 2.6973](#).)

⁴⁹ Elliott Coues (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.* Francis P. Harper (New York, 1900). ([ITEM NO. 2.2132](#).)

scored as an early “publication”. (A particularly reliable transcription and translation of these instructions was published by Richard and Shirley Cushing Flint in 2005.⁵⁰

A map of the Gulf of California was drawn in 1541 by Domingo del Castillo, a pilot in the second expedition that sailed to the mouth of the Colorado River, in 1540. It was found among papers of the descendants of Cortés. Copied and engraved in 1769, it was published in 1770 by Francisco Antonio Lorenzana in *Historia de Nueva-España*.⁵¹ Castillo’s is the earliest authentic delineation of the Gulf of California and the Colorado River delta region even though it depicts what may be the Gila River as a remarkable extension of the sea that would wrap around the north of Mexico. There are earlier 16th-century maps of the Pacific coast of North America, of course, but none even fully resolve the gulf, let alone the Colorado delta region.⁵²

A few users of THE GRAND CANON may point to Chinese accounts that putatively record even earlier visits to the Southwest and the Grand Canyon, reached from the West in the 15th century,⁵³ but such interpretive claims have not held up to historical corroboration by scholars of either the American Southwest or the Orient. In any case, the material on which such claims are based are manuscripts, which would not appear in this bibliography anyway. What *are* cited are the modern publications that include piecemeal translations from, or comments on, those manuscripts.

⁵⁰ Antonio de Mendoza, The Viceroy’s instructions to Hernando Alarcón, May 31, 1541; Biblioteca del Escorial, Códice &-II-7, doc. no. LXVII. *In*: Flint, Richard, and Flint, Shirley Cushing (eds., translators, annotators), *Documents of the Coronado expedition, 1539-1542* : “they were not familiar with His Majesty, nor did they wish to be his subjects”. Southern Methodist University Press (Dallas, Texas, 2005), pp. 223-232. (ITEM NO. 2.3117.)

⁵¹ Hernán Cortés and Francisco Antonio Lorenzana, *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*. Imprenta del Superior Gobierno, del Br. D. Joseph Antonio de Hogal (México). (ITEM NO. 2.14602.) See also this map reproduced in the illustrations in Volume 2 of THE GRAND CANON, *Cartobibliography* (refer to [Part 25](#)).

⁵² A richly illustrated historical discussion of early portrayals of the region of interest here is Dora Beale Polk’s *The Island of California: A history of the myth*, University of Nebraska Press (Lincoln, 1991, item NO. 2.5096), although the citations for the numerous manuscript and published maps are imperfect (they are not listed in Polk’s bibliography nor identified in detail in the text). The early cartography of the west coast of North America is also very well reviewed and amply (though selectively) illustrated by Justin Winsor, “Discoveries on the Pacific coast of North America”, in Justin Winsor (ed.), *Narrative and critical history of America. Volume II. Spanish explorations and settlements in America from the fifteenth to the seventeenth century*. Houghton, Mifflin and Co. (Boston, 1886 [ITEM NO. 2.6991]). As Winsor astutely opined, such maps represent “shadowy and unstable surmise long continued” (p. 431).

⁵³ See for example items by Jack Anderson, John Fryer, Hendon Mason Harris, Alexander McAllan, Henriette Mertz, and Charles Hippolyte Paravey, all cited in [Part 2](#) of the bibliography.

The 16th-century dates noted herein are known with certainty; they establish the beginning of a published history, based on known documents, with which historians and aficionados of the Grand Canyon and the Colorado River are familiar. Might earlier published works yet be found, or more works from the 1540s at least? Perhaps; one may never know what may lay hidden or unrecognized even in the most well-known of collections, or in materials as yet unrecognized by historians and bibliographers.

EPHEMERA, “UNPUBLISHED” AND WEB-BASED MATERIAL

EPHEMERA, such as commercially produced brochures, rack cards, postcards and calendars are not included in this bibliography (with rare exception). While such material is generally widely distributed in numerous copies, thus technically “published”, these items are not usually a matter of bibliographical acquisition in public collections. Some special collections do contain these kinds of material as a process of historical gatherings, either by the institution or organization which keeps them, or in individuals’ collections that are subsequently acquired by institutions or organizations. (However, see the [Appendices to Part 26](#), which provide general guides to 3-D commercial and governmental photographic publications that may be construed to be ephemera.)

Brochures that *are* cited in this bibliography include widely distributed travel-agency literature of the late-19th and early- and mid-20th century (most notably those of the Santa Fe Railway and Fred Harvey), and informational literature produced by government agencies and chambers of commerce. Many of these items are almost like periodicals, frequently and often regularly updated.

“**UNPUBLISHED**” **MATERIAL** is defined here as that body of work that has been produced as unique copies. This includes *manuscripts* and unique papers on file in administrative records. None of this material is included in this bibliography (although a couple of special exceptions are noted).

Some professional considerations hold that limited-distribution materials also are “unpublished”; for example, documents that are in the “gray literature” genre reports. However, such items may be available in widely dispersed fashion even if in a limited number of copies, and may be frequently cited, thus it is imperative to cite them herein. Similarly, theses and dissertations written as part of an individual’s work toward an academic degree or acknowledgment of professional proficiency are cited herein. They too are technically “unpublished”, yet they are important contributions to their subjects and to the history of research. They are cited in the literature and are as well available digitally online, through microform, or in hard copy through

University Microfilms. (Also, in earlier days, sometimes even today in Europe, it was customary to formally print a dissertation through a contracted, commercial, or university printing house, even though it was for very limited distribution.) Further, theses written for bachelor's degree programs, and abstracts from undergraduate or other school-limited symposia may also be considered to be "unpublished", although the event programs may have been distributed in multiple copies. All of these materials mentioned here are nonetheless records of interests in professional activities or programmatic influences in education; thus they are of value to historical researchers. In this bibliography I refer to the theses and dissertations only by their primary degrees—Master's and Doctorates. Many are in specialized areas beyond the usual Master of Arts, Master of Science, and the all-embracing (and frankly antiquarian) Doctor of Philosophy; for example, degrees "of Education", "of Music", "of Literature", "of Art", and so forth. I have thought it more prudent to identify a product for an advanced degree as "Master's thesis" or "Doctoral dissertation", followed by the name of the school or institution that granted the degree.

Some fields of study do not consider abstracts printed for organizational meetings and colloquia to be "formally" published, while other fields do consider them as bona fide contributions to the work of ongoing research. For example, the abstracts for the American Ornithologists' Union's 123rd Meeting in 2005 notes, "The abstracts in this work are not issued for the permanent scientific record", and Richard A. Young's 2000 compiled volume, *Abstracts for a working conference on the Cenozoic geologic evolution of the Colorado River system and the erosional chronology of the Grand Canyon region : June 7-9, 2000, Grand Canyon National Park, Arizona*, includes the note, "Many of the abstracts contained in this volume are preliminary, *unreviewed* working documents and should not be cited as formal references in other research papers." Whereas some notices are meant to insulate authors from the "slips" of changed results and opinions, all abstracts are an important historical record, which preserve the evidence of ongoing research, the individuals doing that work, and where they communicated their findings; and thereby their citations belong in this bibliography.

ARCHAEOLOGICAL DOCUMENTS from during and after the later-20th century may be available to the public only in redacted versions, where culturally sensitive or specific geographical data are removed or physically blacked out. Unredacted versions will be in files accessible to qualified researchers and administrators. If no note regarding redacted parts appears with the document or its citation here, it does not necessarily mean that the document, as seen or as available, does not have data redacted. One may assume that modern publications in scholarly serials already have been written

in such a fashion that sensitive or restricted data are left out. Documents or citations that may have been seen by the compilers, but which are not available publicly at all, are not cited in this bibliography. While thus not properly compiling the body of work of individuals and agencies within the scope of this bibliography, a blanket public unavailability of a document leaves it no merit for inclusion within a work such as this one, which identifies publicly accessible materials.

WEB-BASED RESOURCES that are provided in PDF [Portable Document Format], and which items are designed as if they are printed publications (they may also be available in print format) are cited in this bibliography. This is to accommodate numerous kinds of newsletters and various kinds of magazines, as well as scientific and technical journals that employ “doi” (Digital Object Identifier) links, or are otherwise exclusively online but in PDF format. The determining criteria are that they are formatted in uniquely citeable issues, and that copies printed from the PDF will be uniform regardless of where and when they are printed (and thus information cited by page can be reliably found). An assumption is also made that printed or digitally stored copies might be available somewhere in future times, regardless of the medium. When a publisher has produced a publication in both print and digital versions, this bibliography continues to cite information from the print version, if only because the digital version may not be permanently available. In cases where publications were issued first in digital format, later in print, the print version is deferred to, for the same reason. Some citations will cite only the digital version (usually with a doi identifier) when that was all that was available.

Most web-based material, however, is in HTML (Hypertext Markup Language) or other formats produced for on-screen display, and may be accompanied by animation, sound, and similar embellishments. Printed versions of these displays can vary greatly and may reselect their content. Also at this time, resources that are exclusively web-based cannot be guaranteed to survive indefinitely, in the manner of printed publications. Internet resources can disappear without notice, either by the renaming of a URL [Uniform Resource Locator], by dismounting the item or the entire webpage from the website, or through the switching off of the website altogether. Should anyone believe that this is not a significant issue, consider the fact that the jurists of the Supreme Court of the United States have in recent times incorporated webpage hyperlinks in their decisions, but some links have since failed due to the removal or migration of the linked material.⁵⁴ (This is a significant issue because Supreme Court opinions create legal precedent, and their cited materials contain the evidence that

⁵⁴ Adam Liptak, “In Supreme Court Opinions, Web Links to Nowhere”, *New York Times* (September 24, 2013), p. A13.

has led to those opinions.) Similarly, a bibliographical citation to a webpage conveys a record with a sense of availability; if the webpage disappears, the evidence contained in that original document is no longer available to those who seek it. A bibliography containing such dead links is useless except, ironically, as a documentary accounting of lost materials.

Libraries of course have the prerogative to remove some of their holdings from convenient access (such as storing them in remote locations from which they are retrieved when called for), or they may deaccession them altogether through sale or disposal. This is done in individual cases, though, and copies almost always remain held by other repositories. Also, the records are removed from the library catalogs, unlike the constellation of broken links that populate millions of unupdated pages on the web. The disappearance of a single library book is unlike that of web-mounted material that disappears utterly. For web material there is, generally, only a unique “copy” of an item, accessible to all via a hyperlink until it is moved or removed. It might be worthwhile sometime to compile a webography for the Grand Canyon and Colorado River based on a reliable and unambiguous restoration and perpetuation of old and current URLs, but this is far beyond the scope of the present work.

Among the web-based items that are *excluded* from this bibliography are digital-only books available only as downloads; for example electronic-format books for digital-tablet readers such as the Kindle™ from Amazon or the Nook™ from Barnes and Noble (there are others, the market continually shifts, and product lines are bound to disappear), and audio-streaming services such as Audible and Echo through Amazon.com. This does not pertain to publications that are released in both print and digital formats. Perhaps a separate portion of an even more expanded bibliography would do well to cite such products that have been made available for e-book readers or online services, with or without a list of formats. However, this too is beyond the scope of the present work, and its utility for users far in the future is uncertain.

Also excluded are audio or audio-visual productions that are available only through the internet; for example, downloadable mp3 files and online streaming services such as Amazon’s Prime Video.

Exceptions to the web-exclusion criterion are accorded to very specialized online serials devoted exclusively to the Grand Canyon. These are:

1) The *Canyon Sketches* series from Grand Canyon National Park. These separately authored informational bulletins focus principally on park-related activities and history, which have been saved in PDF format and may be downloaded or printed. Pertinent links are embedded into citations in this bibliography, and I have created a

personal collection of these as printouts. In all, 24 “volumes” (issues) had been posted to the national park’s website, with no additions since 2012.

2) *Grand Canyon River Guides*, an electronic newsletter from the Grand Canyon River Guides organization (Flagstaff), began with the “2010 Winter Issue” (December 2010). (It ambiguously, perhaps accidentally, reintroduced the title of the organization’s original newsletter, *Grand Canyon River Guides*, that later became the serial *Boatman’s Quarterly Review*. For additional information see in the section herein on [Name Changes and Numeration Notes for Selected Periodicals and Serials](#).)

NEWSPAPERS

Newspapers are not generally included in THE GRAND CANON. There are, however, some exceptions. *The New York Times* is accorded its own section in this bibliography (see below), and citations from the earlier years of the *Deseret News* (Salt Lake City) are placed within pertinent parts of the bibliography (also see below). In other instances a newspaper is cited in THE GRAND CANON if an article had been reprinted later in another periodical; the original source is acknowledged in a comment at the end of the citation.

Special-interest newspaper-format periodicals are included in the bibliography; for example, *High Country News*, a mostly biweekly serial. Some weekly newspapers, and weekly magazines included with newspapers, are also cited herein; for example, *Computerworld*, and *Flare* from the *Arizona Daily Sun* (Flagstaff).

[Part 31](#) of THE GRAND CANON (Newspaper Guide) comprises a listing of regional newspapers that some readers may wish to use to begin locating local or (sometimes) online sources of published information.

THE NEW YORK TIMES. From *The New York Times* as many pertinent articles as possible have been cited in so far as they relate to the Grand Canyon and lower Colorado River. This newspaper was published from the beginning of modern excursions into the region, in the mid-19th century. It is as well a well-recognized periodical that is widely available online and through microformed products. The *Times* is relegated to its own section of this bibliography (see [Part 3](#)); one section is arranged chronologically. When this bibliography was started in the 1970s, the only practical way to access back issues of the *Times* was on microfilm, which for this title was widely available and thus a prudent addition to this bibliography. Now the *Times* is wholly accessible online,⁵⁵

⁵⁵ <http://www.nytimes.com>.

although for recent years not always in facsimile presentation or sometimes omitting appropriate pagination. The online records, though, are completely searchable. The online material includes ephemeral, online-only articles (not listed in THE GRAND CANON).

THE DESERET NEWS. A purposeful comparison has been made in this bibliography to include citations from a western regional analog to *The New York Times*, this being the *Deseret News* (Salt Lake City), the oldest continuously published newspaper in Utah, now a daily production. Citations from the *Deseret News* are included as appropriate within the subject-specific sections of the bibliography. The *Deseret News*'s earliest years (1850–1910) are now freely available online.⁵⁶ THE GRAND CANON includes pertinent citations from these years because, like the *Times*, they cover the period beginning with modern explorations of the region. *Deseret News* (originally a weekly, becoming semiweekly in 1865 and daily in 1899—although earlier it was concurrently a weekly and semiweekly as *The Deseret News* and daily as *The Deseret Evening News*) is cited herein as *Deseret News*; mostly from the weekly edition. Its citations to 1910 include many articles and notes that relate to the geographical coverage area of THE GRAND CANON. They are important to include herein because they have a Mormon perspective of concerted efforts of church and individuals to colonize and economically develop the resources of the region beyond the Utah border, from Lees Ferry to deep along the lower Colorado River corridor. As well, the selection of news items reflects *Deseret News*'s editorial slants on activities in neighbor states and the lower Colorado River corridor. Most telling is the newspaper's own Prospectus, which intended the periodicals to be *documents of record* from the start: "A paper that is worth printing, is worth preserving; if worth preserving, it is worth binding; for this purpose we issue in pamphlet form; and if every subscriber shall preserve each copy of the 'News,' and bind it at the close of the volume, their children's children may read the doings of their fathers, which otherwise might have been forgotten; ages to come."⁵⁷ Today, the complementary idea of binding is the searchable digitized page; for the next age.

Since most of the citations from the *Deseret News* have been taken from the online postings of the weekly editions of this newspaper, take note that the pagination reflects the pages as counted in each online issue. This is because the online postings do not usually preserve original pagination. In actuality, the newspaper is paginated, at least in its early years, consecutively through entire volumes. To accommodate this lack of online pagination, notations have been inserted into the citations in this bibliography noting "issue pagination", which begins with page 1 of each issue counted in the online

⁵⁶ Utah Digital Newspapers, <http://digitalnewspapers.org>.

⁵⁷ Prospectus. *Deseret News*. *Deseret News*, Vol. 1, no. 1 (June 15, 1850), p. 1.

postings. Users who refer to an issue will have to count forward from the first page to reach the item in question.

CITATIONS

WHEN I began compiling this bibliography in 1974 I used a simple citation style. It mimicked the format with which I was familiar as a beginning student in geology; specifically, the editorial style of the Geological Society of America, which employed abbreviations, general lack of italics, and citing authors' given names only by their initials. I carried forward with this style for a while before abandoning it in favor of a style contrived to display more information. Not until I prepared sequel typescripts for what became the 1990 second edition of the bibliography (*Grand Canyon Natural History Association Monograph 8*) did I attempt to remedy this situation throughout with more standardized citations. After all, what is in a citation provides the information necessary to find the publication; and the style of citation, frankly, does not matter so long as the item cited can be accurately recognized. Beyond that basic information, a well crafted citation can provide a visual idea of the physical format of the work, and it can provide specific bibliographical or contextual information that may be useful to a researcher. If the citation is elaborated with more information it can record historical information beyond physical and bibliographical parameters.

Informal typewritten supplements followed the 1981 first edition, including one supplement in the late 1980s that was composed of physically cut-and-pasted entries on paper, physically arranged on sheets and photocopied. A few copies of each were distributed. The 1990 second published edition of the bibliography saw the first large-scale re-editing of the bibliography, including rearrangement into new categories. "Supplement 1 (1992)", published in 1993, carried forward in the same format. There were no further supplements.

In the late 1990s, with a move toward a digital edition of the bibliography, I undertook a wholesale re-editing of the bibliography again; its citations as well as the categories represented in it. Originally conceived as for distribution on CD-ROM, this became the Internet Edition, which was a searchable database posted to the Grand Canyon Association website in January 2000, with its own domain name, www.grandcanyonbiblio.org; and to that edition emendations and additions were made frequently until mid-2015, when technological issues precluded updates. It and its website were removed in October 2021.

THE GRAND CANON continues to be improved in its digital manuscript form, with further editing, revisions, and layout changes; this is the product that you have in front

of you now. In the 3rd edition I had made thousands of modifications to citations, including some attempts to gain more uniformity in content and presentation, and now even more in the 4th edition. In 2021 I also reformatted the citations of cartographic products and created *THE GRAND CANON* Volume 2, the Cartobibliography.

Bear in mind that the overall citation style in this bibliography is but one general style for citations; it is not a mandate. One has only to pick up any number of books and journals to see tremendous variations of style. The main, utilitarian purpose of citations is to provide the information necessary for readers to re-locate the item there cited, to provide documentary credit to the item's creators and publishers/distributors, and to provide the kinds of information that may be summarized for administrative uses.

The citations herein are formatted to answer several basic questions: Who created the item? When was it published? What is it about? (which depends upon titles, which may be adequate, inadequate, literarily embellished, or obtuse). Who takes responsibility for publishing it? What is the item's physical extent and format if not in inkprint? Are there any remarks to be made about this publication? These are routine questions, but they document the origin, context and potential value of the item to researchers.

Alphabetization is followed purely, regardless of whether or not a letter has a diacritical mark on it (rather than some non-English orders that alphabetize letters with diacriticals following "z"). And of course, the authors of works whose names are in non-Roman characters are shown alphabetically by their romanized transliterations, usually with their original orthographies appended for precise information.

In compiling a bibliography, some key but arbitrary decisions must be made regarding the structure of the citations. The citations in *THE GRAND CANON* are constructed not so much for the use of bibliophilic collectors as they are for those who usually use library catalogues and online databases when they search for information and references. For example, citations here do not carefully reconstruct the layout of title-pages nor record the physical construction of the product, although any peculiar information that I have deemed important or interesting will be appended to a citation as a note. Data are not usually extrapolated; for example, to fill in within one citation what is otherwise known actually or intuitively from other citations. This omission is done so as to preserve the data present with each particular document, for it is with these data that a document will usually be catalogued and made available in libraries and other repositories (the catalogers having to depend only on what is before them). When further data are in fact known, they may be added within parenthetical notes, as a matter of assistance rather than one of systematic bibliography.

One unsettling kind of encounter with indexed citations gathered from other sources is the contrived title. There the citationist has restated or edited a published title to convey some sense of additional information or perceived utility, sometimes as a matter of editorial prerogative. It is never noted that the title has been altered. This is not advisable. The contrived title, when cited, will cause confusion when others go to look for it, particularly those who may be unaware of the lack of precision or who are mechanically looking for the item and “not finding it”. In some cases, a subtitle or explanatory note added to a title may be rephrased; likewise, this destroys the original information.

Following are a number of examples from this bibliography, where I had originally depended upon a fully collated (and presumably correct) index to publications but which, later, were found to be inaccurate. Most of these examples are from a single serial, but there are numerous others. I have strived to correct all such instances that came to my attention, but in the bibliography there surely are some others. At least, the serial title and other pertinent information like dates and issue numbers needed to locate the item are correct. In these examples (below), THE GRAND CANON’s Item number is also given. In each case, the title as *originally* cited in this bibliography (now known to have been contrived by my original source, when I had not yet seen the actual item) is shown first, in regular print, followed in **bold** by the title as it actually appears and as is **now cited** (some with further corrections).

- 2.111 Needles to Topock, Arizona. *Touring Topics* (Automobile Club of Southern California, Los Angeles), (April): 12.
Oatman, newest gold camp, attracts thousands; steady motor procession traverses eastern California roads to boozeless boom town in Bonanza District of western Arizona. *Touring Topics* (Automobile Club of Southern California, Los Angeles), 8(3) (April): 9-12.
 [In this example, it seems that the revised title had been created to bring notice only to a portion of a sketch map of the region, which showed roads that may be traveled between the two towns of Needles, California, and Topock, Arizona.]
- 2.5349 Canyon music. *Backpacker*, 22(3): 82.
In concert with nature; the music of Beethoven and the canyon wren harmonize when you’re rafting down a river with a string quartet. (Photography by Tom Bean.) *Backpacker*, 22(3)(131) (April): 82-87. [Chiefly about a trip on the Dolores River, but includes the Colorado River in Grand Canyon.]
- 2.14148 Dr. Rusby’s Pacific tour. *American Druggist and Pharmaceutical Record*, 63 (July): 68.
Dr. Rusby off for the Pacific coast. *American Druggist and Pharmaceutical Record*, 55 (July 26): 56.
- 2.18659 “The devil is coming”; paddle-wheelers on the Colorado. *Wild West*, (August): 38-44.
 [This article has also appeared in various websites online in text-only format with the title, “Paddle-wheelers Appeared on the Colorado River in 1852”, and credited to *Wild West*.]

- 2.25793 A report as to Boulder City, Nev. *U.S. 81st Congress, 2nd Session, Senate Document 196.*
Boulder City, Nevada, a federal municipality : a report of a survey made under the direction of the Bureau of Reclamation of problems affecting Boulder City, Nevada. U.S. 81st Congress, 2nd Session, Senate Document 196, 236 pp.
- 11.3668 A predatory drillhole in the lingulid *Glottida palmeri*, Dall (Brachiopoda; Inarticulata) from the Recent tidal flats of the lower Colorado delta, northeastern Baja California, Mexico.
A predatory drillhole in *Glottida palmeri* Dall (Brachiopoda; Lingulidae) from Recent tidal flats of northeastern Baja California, Mexico.
 [The original citationist chose to reword the title to reformulate the taxonomic identification of a lingulid brachiopod species as a member of the Class Inarticulata, and to specify that it occurs in the Colorado River delta.]
- 11.8777 *The geography of the Imperial Valley of California.*
The Imperial Valley of California: An example of geographic instability
- 12.87 Mechanical ditching a failure, Imperial Valley.
Mechanical ditching not always cheapest.
- 12.88 Cost of dredging ditches in Imperial Valley.
Give costs of dredging irrigating ditches.
- 12.89 Danger for Colorado River levees predicted.
Predict danger for Colorado River levees.
- 12.90 Imperial Valley levee breaks, damage slight.
Breaks in Imperial Valley levee cause slight damage.
- 12.91 Laguna Dam to irrigate 200,000 acres more.
Laguna Dam to irrigate 200,000 additional arid acres.
- 12.92 All-American Canal surveys.
Surveys for an all-American Imperial Canal.
- 12.93 Imperial Valley levees raising urged.
Urge raising of Imperial Valley levees.
- 12.94 All-American Canal to Imperial Valley.
All-American canal for Imperial Valley.
- 12.95 Volcano Lake levee to be raised.
Will raise Volcano Lake levee to protect Imperial Valley.
- 12.96 Imperial Valley canal to connect with Laguna Dam.
To connect Imperial Valley canal system with Laguna Dam.
- 12.97 Imperial-Laguna Dam Canal, estimate of cost.
Estimating the cost of the proposed Imperial-Laguna Dam connection.
- 12.98 Imperial Valley-Laguna Dam contract drawn.
Tentative Imperial Valley-Laguna Dam contract drawn.
 [Not only is the indexed title not precise, but the actual title indicates that the contract is tentative, not a completed contract as suggested by the contrived title.]
- 12.135 Colorado River problems being studied actively.
Engineers active in study of Colorado River problems.

- 12.2737 Dam the Colorado River in Grand Canyon.
Dam Colorado River in Grand Cañon.
- 12.1383 [Anonymous] Driving 56-ft. tunnels for Hoover Dam.
[Nelson, Wesley R.] Excavation of diversion tunnels for Hoover Dam.
- { 19.1135 Miscellaneous notes. *Grand Canyon Nature Notes*, 5(5): 53. [Early flowers.]
2.25628 **[Marriage engagement announcement for Patricia Mead and Preston P. Patraw, who proposed to her at the "Abyss of Matrimony".] *Grand Canyon Nature Notes*, 5(5) (March): 53.**
[In this case the indexer for *Grand Canyon Nature Notes*, from whose work citations from this serial were first gathered for this bibliography in the 1970s, misconstrued the various mentions of flowers, field trips, and seed-germination experiments by Miss Mead as being a titleless news item about Mead's continuing work. In fact, the item is a witty, flowery announcement of Mead's marriage engagement (though still titleless). The citation is now revised, removed from Part 19, and renumbered for Part 2, as shown.]
- 19.2178 A new species of *Astragalus* from the south rim of the Grand Canyon. *Leaflets of Western Botany*, 5: 83.
Pugillus Astragalorum IX: Novelties in *Batidophaca* Rydb. *Leaflets of Western Botany*, 5(5): 82-89. [Includes *Astragalus cremnophylax*, new species (pp. 83-85), from ca. 2 miles west of El Tovar, Grand Canyon.] [Sentry milkvetch.]
[In this case the citationist completely contrived a title to take note of another author's description of a single new species, *Astragalus cremnophylax*, citing only the page on which that name first appears. Actually, the entire species description appears on pp. 83-85 and is within a longer paper that includes other material not pertinent to this bibliography.]

The author (or other creator, which may be an organizational entity or branch of government) is the distinguishing and responsible authority for a work. A bibliography should function as an evidentiary record of the work of individuals, organizations, and agencies. Of course, a bibliography does not have to list things by author or creator, but inasmuch as this is a world investigated and manipulated by individuals, including those who populate organizations and agencies, it is sensible to account for their productive activities according to the names of the creators responsible for published works. These people or organizations may not be the actual writers (or creative sources) of items; for example, most official notices in the *Federal Register* are signed by accountable administrators, who have "signed off" on the notices published in that organ, though in that bibliographical sense they are "authors". (Occasionally, *Federal Register* items do specify an author, or a responsible team, for a particular item.)

Second, a title usually must precisely replicate the title as shown in the publication. If it does not carry a title, as is the case of many news notes, a descriptive title contrived for the bibliography is placed within [square brackets]. Authors' and publishers' conventions are retained as printed. Thus they record variances of spelling, misspelling, mispunctuation, and any other particular usage. I have been as faithful as possible to the originals (within some arbitrary bounds of pragmatism) in order to communicate just what was seen when the work was entered into the bibliography. Notations may be added to a citation to assist in identifying more precisely a specific

work or its content, which will aid not only the user who seeks it but the librarian who may be asked to locate a copy. Inasmuch as different cataloging schemes are followed in various libraries (despite the existence of “standard” methods), the librarian may discern from the citations here just how a work may be found employing that librarian’s resources.

Spellings of proper names are likewise cited as they appear in the printed works; most noticeable herein will be the distinction between “Canyon”, “Cañon”, and “Canon” (with initial capital letter). While I might have made it expedient for those who do electronic searches, by standardizing all of these as “Canyon”, it is not faithful to the original. Furthermore, there can be devised technological ways of returning all of these spellings in a generalized search for any one of them, albeit this may tender some expense of programming since this is not now the norm. I am in any case firmly of the belief that future technologies will accommodate these variances with greater ease, and there is no need to forego now the accuracy of precise title quotations. I wholly disagree with decisions that allow the limitations of current technology to determine the structure of a work; such subservience makes the useful life of the work much shorter. (Some users may recall the days—not so long ago—when short or rigorously defined “field lengths” in databases required the invention of contorted abbreviations and other short-cuts for data that are now entered fully.) Present-day users will also have to forgive the cumbersome reliance on ASCII character entities, numerous subsets of which have been devised to accommodate peculiar diacritical marks, non-Roman orthographies, and the special-needs characters of scientific study. Some present-day search engines accommodate the use of diacritical marks seamlessly; they will locate “Société” or “Tíyo” whether spelled thusly or as “Societe” or “Tiyo”. Still, the originals decide the usage herein, and it will be only a matter of time before technology will catch up with the ability to search one for the other using character entities rather than dual-composition characters. For that reason, if not just for the adherence to “original format”, I have avoided including dual typographies in citations because they would be aesthetically unpleasing eventually moot. I have not used dual-composition characters such as are used in some online databases; for example, the diacritical letter é will be composed of “e” and “´” that display together as “é”, such that both “e” and “é” may both be found when “e” is used in a search. However, the technological longevity for retaining the association of dual-composition characters is uncertain, so I exclusively use letters with uniquely assigned character codes, like “e” and “é” (Unicode 0065, 00E9, respectively), to better ensure the longevity of the presentation of names and titles as published. As mentioned, future technology will permit the automatic identification of Unicode 0065 *and/or* 00E9, as needed, rather than the arbitrary “e” or compound “é”.

As a matter of style I have for the most part cited the ampersand “&” as “and” unless there is a specific reason to retain the ampersand (for example, in the names of railroads where convention calls for the ampersand, or similarly, citing information from older maps).

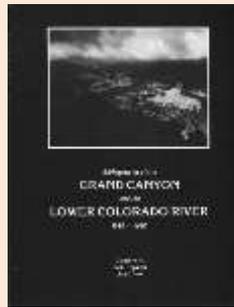
In describing the publications (or in a few special instances, manuscripts) that are composed of enumerated leaves rather than unique pages (that is, one leaf of paper contains one number, with its recto and verso), I have preferred to note them as “leaves” rather than the more usual bibliographical convention, “folios”; this because for many users of this bibliography who are unaware of the distinction, they could confuse the “folio” leaf with the “folio” format of publications that employ very large paper sizes.

And finally, the bibliography is presented in a less myopic type size, and in one column, differently than might have been used in a formally printed book. (See for example the dual-column and much smaller type size used in the original print volumes of this bibliography, from 1981, 1990, and 1993⁵⁸ *(examples appear on the following pages)*). In digital form, there is no added expense to the increased number of pages. All readers with sight limitations may also appreciate the extravagance, and PDFs may be enlarged or diminished at will.

⁵⁸ The first inkprint edition of this bibliography, in 1981, had its citations in an 8-point serif font on 9-point line spacing (“8 on 9”) in two columns. The 1990 2nd edition was produced with a slightly more generous 9 on 10 in two columns. THE GRAND CANON bibliographical citations are displayed in a sans serif font (Verdana), 8 on 11 in a single column, which offers greater legibility and easier browsing; and further, citations under a first-author’s name are grouped between horizontal rules. Anonymously written items are grouped in years separated by rules. Additionally, in its digital format as a PDF document THE GRAND CANON may be scaled to any screen size (larger or smaller, as the reader wishes) without degrading the resolution, and the work may be viewed in side-by-side pages on-screen if desired. Pages may be scaled for printing as the user desires.

Citation style and improvement of citation content in this bibliography from 1981 to 2021

The examples that follow all display the citation for the same publication,
J. C. Ives' well-known, pioneering *Report Upon the Colorado River of the West* (1861)



1981

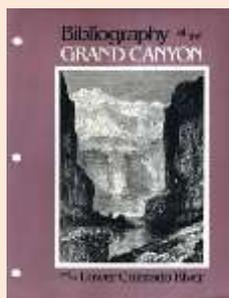
(*Grand Canyon Natural History Association Monograph 2*)

Ives, J. C.

1861 *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.* 30th Congr., 1st Sess., House and Senate Exec. Doc. 90, U.S. Govt. Printing Office, in 5 parts (1 vol.), separate paginations, 131, 14, 154, 30, 31 pp.

• THE GRAND CANON •

COVERAGE AND FORMAT

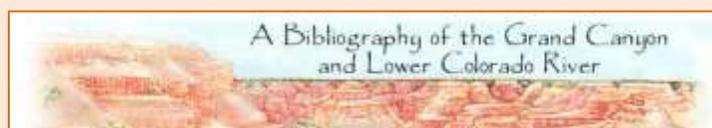


1990

(Grand Canyon Natural History Association Monograph 8)

Ives, Joseph C.

1861 *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.* 30th Congress, 1st Session, House and Senate Exec. Doc. 90. Washington, D.C.: U.S. Govt. Printing Office, 5 parts in 1 vol., each part separately paginated: Pt. 1, General Report, 131 pp.; Pt. 2, Hydrographic report, 14 pp.; Pt. 3, Geological report, by J. S. Newberry, 154 pp.; Pt. 4, Botany, by "Professors Gray, Torrey, Thurber, and Dr. Engelmann," 30 pp.; Pt. 5, Zoology, by S. F. Baird, 31 pp.; App. A, Remarks upon the astronomical observations, by G. P. Bond, pp. 3-4, Remarks upon the barometric observations, pp. 4-5; App. B, List of camps, with distances, latitudes and longitudes, altitudes, etc., pp. 6-8; App. C, Barometric and meteorological observations, pp. 9-31; App. D, Remarks upon the construction of the maps, p. 33; Map No. 1, Rio Colorado of the West, drawn by Frhr. F. W. v. Egloffstein, scale 1:760,320, shaded relief (from mouth of Colorado Rio to head of navigation); Map No. 2, Rio Colorado of the West, drawn by Frhr. F. W. v. Egloffstein, scale 1:760,320, shaded relief (from head of navigation to Fort Defiance). [Maps also cited separately in Special Section 2 herein.]



homepage banner

2000

(Internet Edition, <http://grandcanyonbiblio.org>; discontinued October 2021)

[exact screen capture of text illustrated below, as returned from a database query; layout thus]

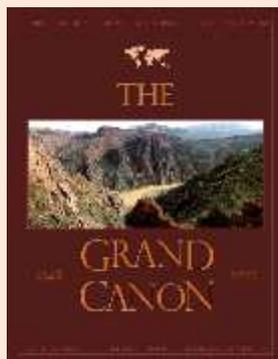
Ives, Joseph C.

- 1861 2.3585 [Variant] 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. *U.S. 30th Congress, 1st Session, Senate Executive Document* [unnumbered]. Washington, D.C.: U.S. Government Printing Office, 5 parts and four appendices in 1 volume, maps loose in front pocket.
- 1861 2.3584 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. *U.S. 30th Congress, 1st Session, House Document 90, Serial 1058*. Washington, D.C.: U.S. Government Printing Office, 5 parts and four appendices in 1 volume, maps loose in front pocket. Parts and appendices paginated as follows: title-page, p. [1]; resolution of the U.S. Senate regarding printing information, attested by Asbury Dickins, Secretary, p. [2]; letter of transmittal from John B. Floyd, Secretary of War, p. [3]; letter of transmittal from Ives, pp. [5]-6; Part 1, "General Report", by Ives, pp. [9]-131; Part 2, "Hydrographic Report", pp. 1-14; Part 3, "Geological Report", by J. S. Newberry, pp. 1-154; Part 4, "Botany", by "Professors [Asa] Gray, [John] Torrey, [George] Thurber, and Dr [George] Engelmann", pp. 1-30; Part 5, "Zoology", by S. F. Baird, pp. 1-31 (specifically only "List of Birds Collected on the Colorado Expedition"); Appendices cover sheet, p. [1]; Appendix A, "Remarks upon the Astronomical Observations", by G. P. Bond, pp. 3-4, "Remarks upon the Barometric Observations", pp. 4-5; Appendix B, "List of Camps, with Distances, Latitudes and Longitudes, Altitudes, etc.", pp. 6-8; Appendix C, "Barometric and Meteorological

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Observations", pp. 9-31; Appendix D, "Remarks upon the Construction of the Maps", p. 33; "Map No. 1, Rio Colorado of the West", drawn by Frhr. F. W. v. Egloffstein, scale 1:760,320, shaded relief (from mouth of Colorado River to head of navigation); "Map No. 2, Rio Colorado of the West", drawn by Frhr. F. W. v. Egloffstein, scale 1:760,320, shaded relief (from head of navigation to Fort Defiance). [Also see Crosby, A. L. (1965).] [The same report was also released as "2.3585 *Senate Executive Document* [unnumbered]; most surviving copies seem to be the unnumbered Senate printing.] >Mon. 8: 1-27 to 1-28< Farquhar 21 FQ8:206 FQ10:180A, 180B FQ11:210A, 210B FQ11A:76 FQ11B:105 FQ12:269A, 269B FQ13:255 FQ15:288 FQ17:216 Guidon 333, 334 Howes I92 Wagner-Camp 375



2012

(THE GRAND CANON, 1st Edition)

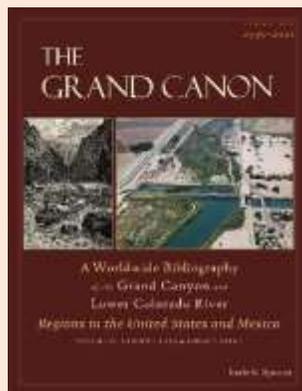
Ives, Joseph C.

1861 2.3584 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. *U.S. 30th Congress, 1st Session, House Document 90, Serial 1058*. Washington, D.C.: U.S. Government Printing Office, 5 parts and four appendices in 1 volume, 2 maps loose in front pocket. • Parts and appendices paginated as follows: title-page, p. [1]; resolution of the U.S. Senate regarding printing information, attested by Asbury Dickins, Secretary, p. [2]; letter of transmittal from John B. Floyd, Secretary of War, p. [3]; letter of transmittal from Ives, pp. [5]-6; Part 1, "General Report", by J. C. Ives, pp. [9]-131; Part 2, "Hydrographic Report", pp. 1-14; Part 3, "Geological Report", by J. S. Newberry, pp. 1-154; Part 4, "Botany", by "Professors [Asa] Gray, [John] Torrey, [George] Thurber, and Dr [George] Engelmann", pp. 1-30; Part 5, "Zoology", by S. F. Baird, pp. 1-31 (specifically only "List of Birds Collected on the Colorado Expedition"); Appendices cover sheet, p. [1]; Appendix A, "Remarks upon the Astronomical Observations", by G. P. Bond, pp. 3-4, "Remarks upon the Barometric Observations", pp. 4-5; Appendix B, "List of Camps, with Distances, Latitudes and Longitudes, Altitudes, etc.", pp. 6-8; Appendix C, "Barometric and

		<p>Meteorological Observations”, pp. 9-31; Appendix D, “Remarks upon the Construction of the Maps”, p. 33; “Map No. 1, Rio Colorado of the West”, drawn by Frhr. F. W. v. Egloffstein, scale 1:760,320, shaded relief (from mouth of Colorado River to head of navigation); “Map No. 2, Rio Colorado of the West”, drawn by Frhr. F. W. v. Egloffstein, scale 1:760,320, shaded relief (from head of navigation to Fort Defiance).] [The same report was also released as <i>Senate Executive Document</i> [unnumbered]; see Item no. 2.3585. <i>N.B.</i>: <i>Two geological maps, based upon the topographical maps with geology by Newberry overprinted, appear only with the Senate Executive Document variant</i> (<i>fide</i> WAGNER-CAMP 375, p. 648).] [cited»GCNHA Monograph 2: pages 36 [in part], 61] [cited»GCNHA Monograph 8: page 1-27 to 1-28 [in part]] FARQUHAR 21 [<i>N.B.</i>: FQ: All Five Quail Books listings specify the offerings as the Senate Executive Document variant, cross-listing it as “Farquhar 21”. Farquhar, however, does not mention the Senate variant.] HOWES I92 THOMAS 160 WAGNER-CAMP 375</p>
1861	2.3585	<p>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. <i>U.S. 30th Congress, 1st Session, Senate Executive Document</i> [unnumbered]. Washington, D.C.: U.S. Government Printing Office, 5 parts and four appendices in 1 volume, 4 maps loose in front pocket. • Parts and appendices paginated as follows: title-page, p. [1]; resolution of the U.S. Senate regarding printing information, attested by Asbury Dickins, Secretary, p. [2]; letter of transmittal from John B. Floyd, Secretary of War, p. [3]; letter of transmittal from Ives, pp. [5]-6; Part 1, “General Report”, by J. C. Ives, pp. [9]-131; Part 2, “Hydrographic Report”, pp. 1-14; Part 3, “Geological Report”, by J. S. Newberry, pp. 1-154; Part 4, “Botany”, by “Professors [Asa] Gray, [John] Torrey, [George] Thurber, and Dr [George] Engelmann”, pp. 1-30; Part 5, “Zoology”, by S. F. Baird, pp. 1-31 (specifically only “List of Birds Collected on the Colorado Expedition”); Appendices cover sheet, p. [1]; Appendix A, “Remarks upon the Astronomical Observations”, by G. P. Bond, pp. 3-4, “Remarks upon the Barometric Observations”, pp. 4-5; Appendix B, “List of Camps, with Distances, Latitudes and Longitudes, Altitudes, etc.”, pp. 6-8; Appendix C, “Barometric and Meteorological Observations”, pp. 9-31; Appendix D, “Remarks upon the Construction of the Maps”, p. 33; “Map No. 1, Rio Colorado of the West”, drawn by Frhr. F. W. v. Egloffstein, scale 1:760,320, shaded relief (from mouth of Colorado River to head of navigation); “Map No. 2, Rio Colorado of the West”, drawn by Frhr. F. W. v. Egloffstein, scale 1:760,320, shaded relief (from head of navigation to Fort Defiance) [two maps bound in at front of volume]; <i>Geological map no. 1; Prepared by J. S. Newberry M.D. Geologist to the Expedition</i> [and] <i>Geological map no. 2; Prepared by J. S. Newberry M.D. Geologist to the Expedition</i>, scale 1:760,320 (base maps are those of Egloffstein) [geologic maps bound in at end of Part III, Geological Report. (<i>N.B.</i>: <i>The two geological maps, based upon the topographical maps with geology by Newberry overprinted, appear only with the Senate Executive Document variant</i> (<i>fide</i> WAGNER-CAMP 375, p. 648); further corroborated by FARQUHAR 21, which notes only two maps.] [The same report was also released as <i>House Executive Document 90</i>; see Item no. 2.3584.] [cited»GCNHA Monograph 2: page 36 [in part]] [cited»GCNHA Monograph 8: pages 1-27 to 1-28 [in part]] [<i>N.B.</i>: All Five Quail Books listings specify the offerings as the Senate Executive Document variant, cross-listing it as “Farquhar 21”. Farquhar, however, does not mention the Senate variant, and it seems that the Five Quail citations may refer at one time or another to either a copy of the House or the Senate variants.] FQ8:206 FQ10:180A, 180B FQ11:210A, 210B FQ11A:76 FQ11B:105 FQ12:269A, 269B FQ13:255 FQ15:288 FQ17:216 FQ18:212A FQ19:288 FQ19A:39 FQ20:216A FQ21:135A FQ22:175A FQ22B:57A FQ23:179A, 179B FQ24/1:381A–C FQ25:38, 39 FQ30:135 FQ31:28A [four maps], [?]28B [two maps] GUIDON 333, 334 HOWES I92 WAGNER-CAMP 375</p>

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COVERAGE AND FORMAT



2022

(THE GRAND CANON, Volume 1 [4th Edition])

Ives, Joseph C.

1861 2.3584

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, 5 parts and four appendices in 1 volume, 2 maps. (Volume: *U.S. 30th Congress, 1st Session, House Document 90.*) (*Serial 1058, Volume 14.*) [HOUSE OF REPRESENTATIVES VARIANT.] [The same report was also released as *Senate Executive Document [no number]*; see ITEM NO. [2.3585](#).] [Sabin (citation follows) cites this publication only with the imprint, "Washington. 1861.", without notice of either the House or Senate variants that exist. Other than the inclusion of two extra maps in the Senate variant, and the banner on the title-page, there is no difference between the printings. In addition, Sabin indicates only "Map." (Joseph Sabin, *A Dictionary of Books Relating to America, from Its Discovery to the Present Time. Volume IX.* (J. Sabin and Son, New York, 1877), p. 167.)] [Poore (citation follows) likewise, but by design (p. iii), does not differentiate between the two Congressional variants, although it is listed as "Ex. docs., No. 90 36th Cong., 1st sess., Vol. XIV" (p. 780). Poore gives the pagination as 333 pp., with "map", and a publication date of June 5, 1860, which likely is the date ordered to be printed. (Poore, Benjamin Perley, *A Descriptive Catalogue of the Government Publications of the United States, September 5, 1774-March 4, 1881* (Washington, D.C.: U.S. Government Printing Office, 1885. U.S. 48th Congress, 2nd Session, Senate Miscellaneous Document 67.))] • HOUSE OF REPRESENTATIVES VARIANT. Parts and appendices paginated as follows: title-page, p. [1]; resolution of the U.S. Senate regarding printing information, attested by Asbury Dickins, Secretary, p. [2]; letter of transmittal from John B. Floyd, Secretary of War, p. [3]; letter of transmittal from Ives, pp. [5]-6; Part I, "General Report", by J. C. Ives, pp. [9]-131; Part II, "Hydrographic Report", pp. 1-14 (NOTE: hydrographical work was conducted by Casimir Bielawski); Part III, "Geological Report", by J. S. Newberry, pp. 1-154; Part IV, "Botany", by "Professors Gray, Torrey, Thurber, and Dr Engelmann", pp. 1-30 (Asa Gray, John Torrey, George Thurber, George Engelmann); Part V, "Zoology", by S. F. Baird, pp. 1-31 (specifically only "List of Birds Collected on the Colorado Expedition"); Appendices cover sheet, p. [1]; Appendix A, "Remarks upon the Astronomical Observations", by G. P. Bond, pp. 3-4 (NOTE: astronomical work was conducted by Paul H. Taylor); "Remarks upon the Barometric Observations", pp. 4-5; Appendix B, "List of Camps, with Distances, Latitudes and Longitudes, Altitudes, etc.", pp. 6-8; Appendix C, "Barometric and Meteorological Observations",

pp. 9-31 (*NOTE*: meteorological work was conducted by C. K. Booker); **Appendix D**, “Remarks upon the Construction of the Maps”, p. 33. With two maps: “Map No. 1. Rio Colorado of the West”, drawn by Frhr. F. W. v. Egloffstein, scale 1:380,160, shaded relief (from mouth of Colorado River to head of navigation); “Map No. 2. Rio Colorado of the West”, drawn by Frhr. F. W. v. Egloffstein, scale 1:760,320, shaded relief (from head of navigation to Fort Defiance, including Grand Canyon).] • [For citations of the topographic maps see Egloffstein (1861, [CARTOBIBLIOGRAPHY ITEM NOS. 25.493, 25.494](#)). Cartobibliography is [THE GRAND CANON Volume 2](#).] [*NOTE*: Two geologic maps, which are the Egloffstein topographic maps with overprinted geology portrayed by Newberry, accompany only the Senate Executive Document variant (*fide* [WAGNER-CAMP 375](#), p. 648), for a total of four maps with the Senate variant ([ITEM NO. 2.3585](#)).]

≡ **CROSS-LISTINGS HOUSE OF REPRESENTATIVES VARIANT:** [CITED» GCNHA Monograph 2: pages 36 [in part], 61] [CITED» GCNHA Monograph 8: page 1-27 to 1-28 [in part]] **FARQUHAR 21** [*NOTE FOR FQ CROSS-LISTINGS:* All listings by Five Quail Books prior to FQ32 specify the offerings as the Senate Executive Document variant, cross-listing it as “Farquhar 21”. Farquhar, however, does not mention the Senate variant. Accordingly, individual FQ listings may be either the House or the Senate variant, except for FQ32.] FQ8:206 FQ10:180A, 180B FQ11:210A, 210B FQ11A:76 FQ11B:105 FQ12:269A, 269B FQ13:255 FQ15:288 FQ17:216 FQ18:212A FQ19:288 FQ19A:39 FQ20:216A FQ21:135A FQ22:175A FQ22B:57A FQ23:179A, 179B FQ24/1:381A-C FQ25:38, 39 FQ30:135 FQ31:28A [four maps], [?]28B [two maps] FQ32:131A [the House of Representatives variant] HOWES 192 THOMAS 160 WAGNER-CAMP 375 WHEAT IV:947, 948 [maps; with illustrations between pp. 98/99]

≡ **REVIEWS AND NOTICES** [*NOTE*: Cross-listings for reviews and notices do not distinguish between House and Senate variants] Kohl, 1864, [ITEM NO. 30.658](#); “L-w”, 1861, [ITEM NO. 30.622](#)

1861 2.3585 *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, 5 parts and four appendices in 1 volume, 4 maps [see note on collation of maps, below]. (Volume: *U.S. 30th Congress, 1st Session, Senate Executive Document [no number]*.) [**SENATE VARIANT.**] [The same report, accompanied only by the two topographic maps, was also released as *House Executive Document 90*; see [ITEM NO. 2.3584](#).] [Sabin (citation follows) cites this publication only with the imprint, “Washington. 1861.”, without notice of either the House or Senate variants. Other than the inclusion of two extra (geological) maps in the Senate variant, and the banner on the title-page, there is no difference between the printings. In addition, Sabin indicates only “Map.” (Joseph Sabin, *A Dictionary of Books Relating to America, from Its Discovery to the Present Time. Volume IX.* (J. Sabin and Son, New York, 1877), p. 167.)] [Poore (citation follows) likewise, but by design (p. iii), does not differentiate between the two Congressional variants, although it is listed as “Ex. docs., No. 90 36th Cong., 1st sess., Vol. XIV” (p. 780). Poore gives the pagination as 333 pp., with “map”, and a publication date of June 5, 1860, which likely is the date ordered to be printed. (Poore, Benjamin Perley, *A Descriptive Catalogue of the Government Publications of the United States, September 5, 1774-March 4, 1881* (Washington, D.C.: U.S. Government Printing Office, 1885. U.S. 48th Congress, 2nd Session, Senate Miscellaneous Document 67.))] • **SENATE VARIANT.** Parts and appendices paginated as follows: two shaded-relief maps (fold-out) [see below]; title-page, p. [1]; resolution of the U.S. Senate regarding printing information, attested by Asbury Dickens, Secretary, p. [2]; letter of transmittal from John B. Floyd, Secretary of War, p. [3]; letter of transmittal from Ives, pp. [5]-6; **Part I, “General Report”,** by **J. C. Ives**, pp. [9]-131; **Part II, “Hydrographic Report”,** pp. 1-14 (*NOTE*:

hydrographical work was conducted by Casimir Bielawski); **Part III, "Geological Report"**, by J. S. Newberry, pp. 1-154; two geologic maps (fold-out) [see below]; **Part IV, "Botany"**, by "Professors Gray, Torrey, Thurber, and Dr Engelmann", pp. 1-30 (Asa Gray, John Torrey, George Thurber, George Engelmann); **Part V, "Zoology"**, by S. F. Baird, pp. 1-31 (specifically only "List of Birds Collected on the Colorado Expedition"); Appendices cover sheet, p. [1]; **Appendix A, "Remarks upon the Astronomical Observations"**, by G. P. Bond, pp. 3-4 (*NOTE*: astronomical work was conducted by Paul H. Taylor); "Remarks upon the Barometric Observations", pp. 4-5; **Appendix B, "List of Camps, with Distances, Latitudes and Longitudes, Altitudes, etc."**, pp. 6-8; **Appendix C, "Barometric and Meteorological Observations"**, pp. 9-31 (*NOTE*: meteorological work was conducted by C. K. Booker); **Appendix D, "Remarks upon the Construction of the Maps"**, p. 33. The four maps are: "**Map No. 1. Rio Colorado of the West**", drawn by Frhr. F. W. v. Egloffstein, scale 1:380,160, shaded relief (from mouth of Colorado River to head of navigation); "**Map No. 2. Rio Colorado of the West**", drawn by Frhr. F. W. v. Egloffstein, scale 1:760,320, shaded relief (from head of navigation to Fort Defiance, including Grand Canyon); "**Geological map no. 1.**", by J. S. Newberry, scale 1:760,320; "**Geological map no. 2.**", by J. S. Newberry, scale 1:760,320 (the base maps of the geologic maps are the Egloffstein shaded relief maps).] • [*NOTE on collation of maps.* Although some sources may indicate that the maps are laid in loose, the copy of the Senate variant held in the American Philosophical Society, presented by J. S. Newberry, is in its original binding, wherein the two Egloffstein topographic maps are fold-outs following the second free leaf of the volume, preceding the plate titled "General Report; Profile" and the frontispiece. The two Newberry geologic maps are fold-outs following Part III of the volume.] • [For citations of the topographic maps see Egloffstein (1861, [CARTOBIBLIOGRAPHY ITEM NOS. 25.493, 25.494](#)).] [For citations of the geologic maps see Newberry (1861, [ITEM NOS. 24.146, 24.378](#)), which are also cited in the Cartobibliography.]

Cartobibliography is THE GRAND CANON Volume 2. The two geologic maps are the Egloffstein topographic maps with overprinted geology portrayed by Newberry. They accompany only the Senate variant (*fide* [WAGNER-CAMP 375](#), p. 648), thus four maps accompany the Senate variant; further corroborated by Farquhar's citation of the House Executive Document variant ([FARQUHAR 21](#)) that notes only two maps (see [ITEM NO. 2.3584](#)). (Farquhar does not cite the Senate variant.)] • [*NOTE on binding.* The original binding of the Senate variant has a unique spine, embossed and stamped as follows (gilt): [ornamental rule] / SENATE. / [ornamental rule] / COLORADO / EXPLORING / EXPEDITION / [rule] / J. C. IVES, / TOP^L. ENGINEER. / [rule] / 1857-8. / [ornamental rule] / [ornament, 8-pointed star in symmetrical design] / [ornamental rule] / WAR / DEPARTMENT. / [ornamental rule].]

≡ **CROSS-LISTINGS** **SENATE VARIANT:** [CITED» GCNHA Monograph 2: page 36 [in part]] [CITED» GCNHA Monograph 8: pages 1-27 to 1-28 [in part]] [*NOTE FOR FQ CROSS-LISTINGS:* All listings by Five Quail Books prior to FQ32 specify the offerings as this Senate Executive Document variant, cross-listing it as "Farquhar 21". Farquhar, however, does not mention the Senate variant. Accordingly, individual FQ listings may be either the House or the Senate variant.] FQ8:206 FQ10:180A, 180B FQ11:210A, 210B FQ11A:76 FQ11B:105 FQ12:269A, 269B FQ13:255 FQ15:288 FQ17:216 FQ18:212A FQ19:288 FQ19A:39 FQ20:216A FQ21:135A FQ22:175A FQ22B:57A FQ23:179A, 179B FQ24/1:381A-C FQ25:38, 39 FQ30:135 FQ31:28A [four maps], [?]28B [two maps] FQ32:131B [Senate variant, listed separately but still noted as Farquhar 21] GUIDON 333, 334 HOWES I92 WAGNER-CAMP 375 WHEAT IV:947, 948 [topographic maps; with illustrations between pp. 98/99]

≡ **REVIEWS AND NOTICES** [*NOTE:* Cross-listings for reviews and notices do not distinguish between House and Senate variants] Kohl, 1864, [ITEM NO. 30.658](#); "L-w", 1861, [ITEM NO. 30.622](#)

ABBREVIATIONS AND ACRONYMS : One of the more noticeable edits that I have made to the citations since the 1981 edition is the elimination of all but the most standard abbreviations. The abbreviations “ed.” or “eds.” remain for editors, and likewise “ed.” remains for “edition”. In context there is no confusion. Spelling out these particular abbreviations seems very peculiar anyway. All other abbreviations are spelled out so as to ensure they are unambiguous, especially for users who may not be familiar with the conventions; for new users such as students who have not yet encountered the often-problematical proliferation of abbreviations in bibliographical citations (*see next section*); and for administrative and casual users who may not know any of these things.

I do not use the librarians’ conventional use of “s.l.” and “s.n.” for information relating to absent places and names of publishers in the imprint information. Many modern users no longer know the meanings—“s.l.” is an abbreviation of the Latin *sine loco*, or “without a place”, specifying that the place of publication is not indicated in the publication or that it is otherwise is undetermined; “s.n.” is an abbreviation of the Latin *sine nomine*, or “without a name”, specifying that the publisher is not indicated in the publication or that it is otherwise undetermined. While these Latin abbreviations are used widely in the library community, they can be ambiguous to those who do not know what they mean, among whom will be those who may not usually encounter these terms, and new generations of researchers who for various reasons are no longer being routinely exposed to the usages employed by professionals in other fields. As like my avoidance of abbreviated citations (*see next section*) to aid readers who may not understand the abbreviations, in THE GRAND CANON I use “[no place]” instead of s.l., and “[no imprint]” instead of s.n. I also use “[no imprint]” to designate the absence of both place and publisher; the distinction is clear in context. Many sources today employ “n.p.” for “no place”; and similarly, “n.d.” for “no date”. For the latter, I spell out “NO DATE” in the date field of the citation. Again, I stand on the side of modern and unacquainted-user convenience.

I retain the use of “[sic]” for designating some precisely quoted information, by convention, because there is nothing shorter nor devoid of ambiguity. Many writers, even casual users, still rely on *sic*, although sometimes mistakenly with a period, “*sic.*” (it is not an abbreviation); but *sic* is Latin for “thus”, to mean “exactly as used”, or it might be used to acknowledge “yes”, as a corroborative note that the information is as shown. Many users believe that it is used just to indicate an error; however, *sic* is also used to signal a feature in a citation that may be misconstrued for something else. For example, one citation of a book in German includes this note: See “Southern pacific of California” [*sic*], pp. 93-95; “Atlantic und Pacific” (pp. 96-100). Using “*sic*” corroborates the lack of capitalization of “Pacific” and its English-language phrase in odd juxtaposition with the German translation of “Atlantic and Pacific”). I also sometimes use a terminal “thus”

when it has seemed more appropriate in context; for example, the citation for an article published in Thai but which with its serial has a title only in English includes the note, “[In Thai, with article and serial titles only in English, thus.]”.

I often continue to use “*e.g.*” and “*i.e.*” as appropriate because these abbreviations remain in wide usage, usually without ambiguity even if readers do not know the derivation of these abbreviations. (These are Latin usages; “*e.g.*” abbreviates *exemplia gratia*, or “for example . . .” that is followed by one or more examples of what has just been noted or described; and “*i.e.*” abbreviates *id est*, or “that is . . .” that is followed by an explanation or revised description of what has just been noted. Mnemonic assists for these (in English) can be *e.g.*, “example given”, and *i.e.*, “in effect”.) I also continue to use “*et al.*” (*et alia* in the inferred neutral gender, meaning “and others”) in conjunction with an author’s name, when additional authors’ names are not recorded, which is a phrase still regularly in use and is convenient and distinctive. Also used is “*ca.*” for *circa*, or “about”, when used with dates; another convention still widely used and not ambiguous. However, I have discontinued the use of the long-traditional “*N.B.*” (the Latin abbreviation for *nota bene*, or “note well”) to introduce interjected notes. Such notes now begin with an unambiguous “**NOTE:**”.

In citations of botanical nomenclature, abbreviations of taxonomic authorities are retained when they are used (for example, “*L.*” pertains to Linnaeus and “*Rydb.*” to Rydberg). These are uses by convention within proper botanical work.

When an **acronym** appears within a title, without otherwise spelling out its meaning, it is whenever possible spelled out in a note appended to the citation. This will be added benefit for future users who encounter the acronym long after it passes from use.

In some cases of publishers’ credits, the name is presented as an acronym, particularly if it can be sounded out as like a word; for example, UNESCO. For the sake of unambiguous attribution, these names are usually fully spelled out herein (in this case, United Nations Educational, Scientific and Cultural Organization). In Mexico, many governmental entities and non-governmental organizations employ a profusion of soundable acronyms; for example, CONAGUA (Comisión Nacional del Agua) and SEMARNAT (Secretaría de Medio Ambiente y Recursos Naturales).

ABBREVIATIONS OF PERIODICAL AND SERIAL TITLES : Virtually all abbreviations have been eliminated. The problems attending abbreviated citations in bibliography are well-known; I have discussed some in a different venue⁵⁹, but I

⁵⁹ Earle E. Spamer, Edward Daeschler, and L. Gay Vostreys-Shapiro, “A Study of Fossil Vertebrate Types in the Academy of Natural Sciences of Philadelphia: Taxonomic, Systematic, and Historical

revalidate those points here. Basically, for centuries the abbreviated citation was a convenience of typesetting economy, often to save space on the printed page; for example, see herein H. Berg (1907, *ITEM NO.* 11.3518) who made reference to “Österr. Z. f. B. u. H.”, which is *Österreichisch Zeitschrift für Berg- und Hüttenwesen* (Austrian Journal of Mining and Metallurgy), or one might be hard pressed to figure that “HRU Muh Der” stands for “Harran Üniversitesi Mühendislik Dergisi” (Harran University Journal of Engineering, from Şanlıurfa, Turkey). Abbreviations also saved labor at times when type was hand-set and redistributed to its boxes after the job was printed. In electronic media such economy is superfluous.

The abbreviated citation became a needless *caché* of scholastic prowess, too, at a time when it was understood that most readers would know how to decipher it. But today readers cannot know of, much less be conversant in, the mnemonics of abbreviated citations in fields about which they are less experienced or which they are just entering, nor can all readers (or librarians) be expected to easily understand the abbreviations especially from foreign languages. Although some guides to abbreviated citations had been published during the “heyday” of abbreviated citations, they were not all-encompassing nor did they take into account incidentally contrived abbreviations; and few workers had convenient access to these guides anyway. All titles are spelled out in this bibliography.

AUTHORS : In *THE GRAND CANON*, the author credit is the determining index. The arrangement of citations by authors in *THE GRAND CANON* is not precisely alphabetical by full author-name strings in by-lines; an arbitrary decision. The format followed (shown below) is: single-authors first, dual-authors second, and third, all multiple (more than two) author citations in strictly alphabetical order regardless of the number of authors. This scheme is followed for the reason that sometimes a reader must reverse-identify the authorship of an item without knowing all of the names. The reader may have in hand a citation only for “Author Name *et al.*”, which usually indicates three or more authors for the cited publication; thus the complete list of authors is not in hand. The citationist’s own full list of references cited may not be available, or the editorial style of a journal may systematically omit all multiple-authors’ names from citations (for example, in the mainstream journal *Science*, only the lead author’s name is cited, with “*et al.*” appended, and which also inconveniently omits the titles of papers that are cited from serials. With such a citation style it saves on publishing space but it makes it more difficult for the reader to gauge the information conveyed by these omitted data.

Perspectives.” *Academy of Natural Sciences of Philadelphia, Special Publication 16* (1995); see “Bibliographical Criteria”, pp. 313-318.

Authorship listed as “Anonymous” indicates that the item is not signed. When in the rare circumstance that an item is actually signed “Anonymous”, that fact is indicated in a note to the citation. All “Anonymous” items within each part of the bibliography are listed first, preceding “A”. Within the listings for “Anonymous” citations are in chronological order, with those of uncertain precise date within a year listed after those that have more precise dates.

MAY BE CITED IN TEXTS AS

Single authors are listed first:

1. **Smith, A. B.**

Smith

Dual authors are listed second:

2. **Smith, A. B., and Anderson, J. L.**
3. **Smith, A. B., and Zimmerman, J. M.**

Smith and Anderson
Smith and Zimmerman

All multiple-author citations then follow in alphabetical order:

4. **Smith, A. B.; Anderson, J. L.; Jones, C. D.; Smythe, M. N.; and Betson, A.**
5. **Smith, A. B.; Jones, C. D.; Smythe, M. N.; and Anderson, J. L.**
6. **Smith, A. B.; Jones, C. D.; Zimmerman, J. M.; and Betson, A.**
7. **Smith, A. B.; Smythe, M. N.; Zimmerman, J. M., and Jones, C. D.**
8. **Smith, A. B.; Zimmerman, J. M.; and Jones, C. D.**

Smith et al.
"
"
"
"

In a strictly alphabetical sequence—**not used in this bibliography**—the citations shown above would be ordered as follows (retaining the enumeration shown above):

1. **Smith, A. B.** [1 author]
2. **Smith, A. B., and Anderson, J. L.** [2 authors]
3. **Smith, A. B., and Zimmerman, J. M.** [2 authors]
4. **Smith, A. B.; Anderson, J. L.; Jones, C. D.; Smythe, M. N.; and Betson, A.** [5 authors]
5. **Smith, A. B.; Jones, C. D.; Smythe, M. N.; and Anderson, J. L.** [4 authors]
6. **Smith, A. B.; Jones, C. D.; Zimmerman, J. M.; and Betson, A.** [4 authors]
7. **Smith, A. B.; Smythe, M. N.; Zimmerman, J. M., and Jones, C. D.** [4 authors]
8. **Smith, A. B.; Zimmerman, J. M.; and Jones, C. D.** [3 authors]

Note that were one to have in hand a second-hand citation for “Smith *et al.* 1947”, not knowing the names of the other authors, in a strictly alphabetical list one would have to search the entirety of the alphabetically ordered Smith citations for a 1947 citation rather than just the alphabetically ordered multiple-authored items that would follow “Smith and Zimmerman”. In a very long list of a prolific primary author’s publications, a strictly alphabetical organization would be unnecessarily tedious; for example see the ichthyological publications of [Richard A. Valdez](#) in Part 19.

Many, if not now most, lists of references cited in a publication follow the style by which only the first author is listed by surname first, with the coauthors listed in conventional style; for example, “Anderson, L. B., A. G. Smith, and O. P. Lerner”. The reason that this bibliography lists all authors surname first is to facilitate easier location of authors when searching in the digital environment (particularly if this work is ever

used to re-create the database version of the bibliography). Otherwise, the method of citation is not as important. For the same reason, the authors of edited volumes (when embedded within a citation) are likewise listed surname first.

Citations throughout this bibliography are also grouped between horizontal rules, separating the names of primary authors. An example sequence in the bibliography:

Author, A. 1900 <i>Citation.</i> 1905 <i>Citation.</i>	Single author (A. Author)
<hr/>	
Author, B. 1960 <i>Citation.</i>	Single author (B. Author)
Author, B., AND Author, P. 1955 <i>Citation.</i>	Two authors (B. Author and . . .)
Author, B.; Author, M.; Author, C.; Author, Z.; AND Author, Y. 1970 <i>Citation 1.</i> 1970 <i>Citation 2.</i>	Multiple authors (B. Author <i>et al.</i>)
Author, B.; Author, P.; Author, G.; AND Author, A. 1965 <i>Citation.</i>	"
<hr/>	
Author, C., AND Author, B. NO DATE <i>Citation.</i> 2014 <i>Citation 1.</i> 2014 <i>Citation 2.</i>	Two authors (C. Author and . . .)
Author, C.; Author, P.; AND Author, D. 2014 <i>Citation.</i>	Multiple authors (C. Author <i>et al.</i>)
<hr/>	
Author, D.; Author, C.; AND Author, G. 2011 <i>Citation.</i>	Multiple authors (D. Author <i>et al.</i>)
<hr/>	
Author, E. 1899 <i>Citation.</i>	Single author (E. Author)
<hr/>	

The separating horizontal rules on the page assist to segregate very similar names. To see an example, go to "[García](#)" in Part 11, Section 2.

I do not employ the classical card-file, phonetic but arbitrary, alphabetization of "Mac-" and "Mc-" that once was in general practice. This scheme listed the names as if all were spelled "Mac-" and placed them preceding all of the "M's". Where appropriate, cross-references are included in this bibliography to redirect users to the pertinent place.

• THE GRAND CANON •

COVERAGE AND FORMAT

Order herein

Mabrey
 Mac Nally
 MacAllen
 MacClure
 MacDougal
 Machen
 Machette
 MacIntosh
 Mack
 Maclure
 MacNally
 MacPherson
 McAllen
 McClure
 McDougal
 McNally
 McPherson
 Mellon

Antiquated order, not used herein

MacAllen	McAllen	as if both were spelled “MacAllen”
MacClure	McClure	as if both were spelled “MacClure”
MacDougal	McDougal	as if both were spelled “MacDougal”
MacIntosh		
MacNally	Mac Nally	McNally
		as if all were spelled “MacNally”
McPherson	MacPherson	as if both were spelled “MacPherson”
Mabrey		
Machen		
Machette		
Mack		
Maclure		
McAllen		
McClure		
McDougal		
McNally		
McPherson		
Mellon		

The scheme that I follow is hardly an eternal system. I provide this explanation in order to clarify the method, fully cognizant of the indelible process of change. I know not when in the future someone may refer to this work. Alphabetization in some cases herein does follow traditional bibliographical (or “library” or “filing”) schemes. For example, surnames beginning with “St.” are alphabetically positioned as if they were spelled in full, “Saint”. In the cases of “Van” versus “van”, and “Von” versus “von”, the capitalized form is alphabetized as “Van” or “Von”, while the lower-case form is made a suffix. For example, C. E. Van Gundy is “Van Gundy, C. E.”, and “Ernst von Seydlitz” is “Seydlitz, Ernst von”; similarly for others. (In texts, “von” is often, though inconsistently, included in the surname, such that both “von Seydlitz” and “Seydlitz” may be accepted, though the proper formulation in alphabetized listings such as catalogs uses the form noticed above.) Further, “vom” is always lower-case, as in “Gerhard vom Rath” (“Rath, Gerhard vom”), or similarly “ten” in “Herman F. C. ten Kate, Jr.” (“Kate, Herman F. C. ten, Jr.”). When a surname begins with a lower-case letter for a prefix that is not separate from the full name, it is alphabetized on the lower-case initial letter; for example, “deSaussure”. In some instances in this bibliography, inconsistent usages in the literature for the same individual are noted, as with “Le Conte” and “LeConte”, or “La Rue” and “LaRue”, and when possible the author’s own preferred or otherwise documented usage is followed. (See more, farther below.)

An author may publish under formal and informal names; an example is the ecologist Lawrence E. Stevens, who also has published as Larry Stevens. An author who publishes under both names is generally listed in THE GRAND CANON by their formal name, with the informal name also given in square brackets. Exceptions are made when when an author has published only or most often under their informal name; in such cases their formal name, if known, is given in square brackets to provided that information.

When I began compiling this bibliography in 1974, I had begun with the mistaken impression that the conventional citation style was to use only the initials for authors' given names. I had gotten this impression from the house styles of some of the technical journals I was then reading. I continued this process for some time before realizing that it was not only unnecessary, but defeated bibliographical precision and contributed to confusion. One notable case as an illustration is where "Sykes, G. G." could indicate either Godfrey Glenton Sykes or his son, Glenton Godfrey Sykes, both of whom wrote about similar topics and both of whom are cited in THE GRAND CANON. Eventually, I retrocited most authors' names in the bibliography, but there may be occasional instances where I am not aware that an author cited with initials had a more fully spelled name in the publication.

Care must be taken by the user in knowing, or making assumptions for, an author's name that may be spelled in slightly different ways. The alphabetization schemes of citation, when precise, may be unforgiving. Once, a user of the bibliography was dismayed to find that I had not cited any of the important works by the early Colorado River hydrologist E. C. La Rue; but the user had not found the citations because the search was for "LaRue" (with no space). Even though a general literature search beyond this bibliography may find both "LaRue" and "La Rue" in citations, as well as published by-lines similarly spelled, I have adopted the author's own preferred usage, "La Rue", with the space; and similarly "LeConte" versus the author's own "Le Conte" (which incidentally is correctly shown in most contemporary literature as "Le Conte" but erroneously transformed in later literature to "LeConte" and "Leconte").

I have thus used *spellings* as they appear according to authors' usages, and from title-pages, rather than usages standardized by catalogers. This is because I trust that the author's own usage is authoritative and intentional, which conveys biographical information as well as bibliographical. In the rare occasions where an author's name is in fact misspelled on a title-page or in a by-line, I have cited it correctly, with a notation of the incorrect spelling appended to the citation.

In instances where an item was written by one person, and illustrated by another, I list both names (or as many as which occur) in the author field so as to attribute

the creative work of all contributors. If, however, an illustrator's name is typographically separate and diminutive, or noticeably separated from the principal by-line (that is, not of "equal billing"), only the principal author is cited in the author field; then the illustrator(s) will be added parenthetically within the citation. Again, the author's or publisher's intent is followed in order to convey bibliographical information, rather than applying an arbitrary rule of conformity that hides that information.

The names of Spanish authors who use their paternal and maternal surnames both are alphabetized by that formal order. Hyphens, which are sometimes used to keep together the surnames (as is seen most often in non-Spanish publications or citations), are omitted as a matter of format herein; it is clear in the citation that both names are together, preceding the comma that separates them from the author's given names. When these authors have occasionally omitted the use of one surname, or perhaps using just an initial for one of them, the alternate format is displayed in square brackets herein.

An occasional, special circumstance arises whereby authors' names are arranged according to cultural specifics. Usually, Chinese and some other Asian names (such as Vietnamese) are written with surnames first, followed by given names; in the bibliography, a comma is interjected as appropriate to separate the surname from the given name to follow bibliographical convention only. For example, "Li Hongzhi" is bibliographically listed as "Li, Hongzhi". Since Li is the surname, "Hongzhi, Li", is an error. Occasionally, editorial discretion in a serial or book will have listed a name properly (Li Hongzhi), though no special notice will be made of this, and it will be up to the reader (or bibliographer) to ascertain how it is presented. Spanish names, when maternal and paternal familial surnames are used, remain together, usually without hyphens, and are alphabetized thus. In Portuguese names, however, by bibliographical and alphabetical conventions the maternal and paternal familial surnames are not kept together. In the case of Icelandic names, proper bibliographical convention calls for the full name without a comma, such that the name reflects the familial relationships indicated by cultural usage. For example, the citation for the two-author item by "Ragnheiður Ólafsdóttir, AND Halldóra Hreggviðsdóttir" displays these names in correct combinations. On the other hand, speakers, or bibliographers, of the closely related Faroese language principally of the Faroe Islands no longer follow that convention. In Indonesian, authors may be attributed either by western style given and surnames, but also in traditional single names. In Burmese (Myanmar), there are no surnames; and names, originally monosyllabic, began to be bisyllabic in the 20th century, sometimes with an added honorific. In the case of Dutch names, those containing the digraph "ij", sometimes made equivalent to "y", are *alphabetized* following wider usage as if spelled as the separate letters, "ij"; and following more recent convention the separate letters are

used here. In eastern Europe, variations in the order of given and surnames may be noted in bylines, sometimes with the surname first or *vice versa*; sometimes additional research might have to be made in order to determine which form is followed in the publication. Helpfully, some publications place the author’s surname in capital letters.

DATES : Only stated publication dates are used in THE GRAND CANON; that is, only years that are indicated on the title-page, or elsewhere in or on the publication in such a way that unambiguously records that date. For example, a communication dated 1862, compiled into a collection of communications for the year 1862 but not published until 1870, carries the date 1870.

If a date is not so indicated, “NO DATE” is inserted in the date field of this bibliography. If a date is subsequently ascertained, or if one is interpreted or approximated, the information is included in a comment appended to the citation; “NO DATE” remains in the date field and a note of the determined or estimated date is included in the citation in **dark red** (for example, “[1960]” or “[2004?]”). (The use of color is only for visual attention and convenience.) In this bibliography items with “NO DATE” are listed prior to dated items; and among multiple items of “NO DATE” they are listed chronologically among those that have attributed dates.

A publication that has been released first online, prior to a publication in print, is usually indicated by URL (Uniform Resource Locator) or doi: (digital object identifier) number. The date is given for the online publication. However, when the print document is found later, the proper pagination and date for it replace the online date and information.

“Winter” in terms of publication date can be given for publications that were released either in the latest part of a calendar year, *or* in the earliest part of a year. This can lead to ambiguous chronological listings if the timing is not known. When the timing is not known, the listing defaults to the early part of the year.

“Western” years are used in dates. When a document adheres to a culturally different calendar, the date is converted to a Western date (if it is not also provided), and the culturally established date is included in a comment (as in a 2009 Persian example that was dated 27-28 Mehr 1388 [see Sybney *et al.*, 2009; [ITEM NO. 11.2038](#)]; or a 2012 Chinese example that was dated 101 in the Minguo calendar of the Republic of China (Taiwan) [see Huang and Yin, 2012; [ITEM NO. 13.3918](#)]).

TITLES : In every instance, the title of an article or book is authoritative. They are cited in THE GRAND CANON exactly as they appear in the published works, including misspellings and punctuation; for the most part this pertains also to the inclusion or

absence of diacritical marks. For individual volumes that have main and subtitles not separated by the use of punctuation, the conventional librarian's style of inserting a "floating" colon is used (for example, *Main title : subtitle*). If a colon is used in the document, it is retained (thus *Main title: subtitle*).

Capitalization in article or book titles is not fully capitalized even where the typeset title has every main word capitalized. This citational style employing mostly lower-case letters, almost universally used, makes for a more easily read citation. (Some historical or purely bibliographical venues will preserve all capitalization, a style not used herein.) The only concession to this rule is the retention of capitalized nouns in German, and the use of capital letters when quoting the titles of specific sections within a work. Full initial capitalization is retained for subsections, and for use in quoting a section of a publication whose heading is quoted. In the separate *Cartobibliography*, by convention the older maps are cited with precise capitalizations throughout.

Capitalization of words in serial titles is done according to English or American styles for proper names, not usually in the styles of the original languages that sometimes employ lowercase initials for various principal words (for example, in French, the adjective *belge* that in English is Belgian). Although the style adopted herein goes against some styles recommended by manuals of style, I usually use the initial-capital style because it is familiar to most users who will visit this bibliography, not all of whom are steeped in the specifics of technical bibliography. Occasional citations that display the conventional French capitalizations will be found, but no particular significance should be seen in them; only that they may have been cited at different times when such consideration of reformatting was not adhered to.

In foreign-language titles, diacritical marks are usually displayed as printed. Sometimes the marks are omitted, as shown, or in some house printing styles diacritical marks are omitted from capital letters. In other cases they have been placed correctly, thus contributing to some inconsistency in this bibliography. (Regarding diacritical marks in THE GRAND CANON more generally, see the section on [diacritical marks](#).) British spellings are not Americanized (for example, "Palaeontology" is not made "Paleontology"). On the other hand, traditional spellings of "archaeology" even in American English are retained, but where more recent publications use the newer form, "archeology", it too is retained; similarly, "aeolian" and "eolian".

Italics convey the information under which the publication is most likely to be found in a library. Full, complex titles are cited unless special circumstances call for the use of an ellipsis (. . .), usually to omit lengthy lists of extraneous information on the title-page, such as the author's academic credentials or affiliations. (THE GRAND

CANON does not strive to perfectly reproduce the bibliographical content of title-pages, but rather it conveys the *citational* data contained on title-pages, usually verbatim.) In some instances where the citations were received through another authority who used an ellipsis, and I have been unable to examine the original work myself, I retain the ellipsis without remark. Where an ellipsis is actually a part of the title, I so indicate with an annotation to that effect, appended to the citation. Typographical errors are denoted by the interjection or suffix “[sic]”.

Where I have had to contrive a title, such as when an item is not headed by one, I devised a descriptive title enclosed within [square brackets].

In some cases a title may be ambiguous, uninformative, or seemingly not pertinent to the Grand Canyon–lower Colorado River region. In these instances I appended to the citation a square-bracketed comment that briefly explains the pertinent content.

I distinguish between periodicals (regularly issued publications) and serials (irregularly issued publications usually as separate volumes in a series of one name). Generally speaking (take note also of the italicization scheme in these examples), a periodical will be cited as like:

Title of article. *Periodical Title*, volume(number) (date/time of year): pagination.

while a serial will be cited as like:

Title of work. *Serial Title*, number, pagination.

In the case of books that have been issued as part of a series, the series title is usually placed within parentheses at the end of the bibliographical citation, thus:

Title of book. Place of Publication: Publisher, pagination. (Series Title.)

For a complete guide to the titles of periodicals and serials cited herein, see the section, [Periodicals and Serials Cited in the Bibliography](#).

The pagination of books generally omits Roman-numeraled prefatory pages for two reasons: 1) these pages were not recorded when this bibliography began nearly 50 years ago, and 2) to start recording them at a later time would have offered an awkward dichotomy to the citation style throughout the bibliography. Only in some special circumstances will these pagintions be seen. Of course, separate citations of forewords and other introductory material will include the Roman-numeral pagination when it occurs.

Ornithological style conventions call for the accepted common names of birds to be capitalized; for example, the Southwestern Willow Flycatcher and the Yuma Clapper Rail. Such usage is meant to convey the idea that the bird in question is one with a single, established taxonomic (scientific) name. This convention is not followed in this

bibliography, in so far as no other animal or plant species is capitalized by practitioners in those fields, and to accordingly single out birds is awkward. Only in the case of direct quotations (within quotation marks) are bird common names shown herein with capital letters.

EDITIONS : Citations of books that have gone through more than one edition attempt to be comprehensive, insofar as only editions that contain material relating to Grand Canyon or the Colorado River are cited. However, not all editions of some publications have been examined; so, for example, if only a 3rd edition is cited, one should not automatically suppose that the 1st and 2nd editions omit coverage of the region of interest. In other instances, various editions have been prepared by different authors. In such cases, when possible a notation is included with the various editions that will point the user to the authors of the earlier or later editions, as appropriate.

PUBLICATIONS PRINTED ON DEMAND : Since the latest part of the 20th century a broad effort to print publications on demand, rather than distributed from a warehoused stock, has made the production of publications more economical. In some cases this is an effort of certain smaller presses to conserve resources while making some of their titles available to the public, titles that would normally have gone completely out of print.

In more recent times, publications on demand are produced in this fashion right from the start, usually by commercial printers who make these services available to everyone. Such products are similar to those of “vanity presses”, which publish works paid for by the authors. The “vanity presses” publish in the conventional sense, printing a set number of copies and selling them from stock, sometimes offering advertising services. Now, with “publish on your own” services, anyone, for a fee, can produce a book and sell it online through distribution services; no middlemen, and regretfully usually with no editors, with varied quality. For a while in the late 20th century this was called “desktop publishing”, though now the ease of production is offered through the self-publishing services just noted.

Numerous more titles are those that are out of print. It is this material that is very attractive to numerous distributors. Works are reproduced at the cost only of immediate production and replication from digital copies, on an individually ordered basis. These may be either in facsimile or reproduced through optical-character recognition methods, or even through an outright resetting of text; some may include the original illustrations, many omit them (and often without removing references to such illustrations). Some are very well done; others are embarrassingly sloppy. The

modern print-on-demand market has become widespread even if not widely used by readers; yet another reason that its economy is sensible to its distributors. And as may be expected, a large number of such publications are culled from the Public Domain, whose copyrights have lapsed, simply because they are “ripe for the picking”. One good example of the diversity of both conventionally printed and on-demand publications may be found in Harold Bell Wright’s novel of the irrigation empire of the lower Colorado River, *[The Winning of Barbara Worth](#)* (in Part 7 herein).

In THE GRAND CANON, titles that are published on demand are cited, but there has been no effort made to purposely find all such available titles; only those that have been found during other routine searches or serendipitously are included here. Print-on-demand items can usually be identified by the presence on the verso of the last leaf a barcode and a notation regarding CPSIA information available online, which pertains to compliance with the federal Consumer Product Safety Improvement Act of 2008 (CPSIA). The webpage of IGC Testing (www.IGCtesting.com, accessed June 11, 2021) explains:

Tracking label information includes the city, state and date of manufacture of your particular copy and is required by the CPSC for the purposes of product recall.

It is easy to ascertain the city, state and date of manufacture of your copy if your copy contains the following information on the last page of your book:

If your book contains a code beginning with LV, BV, ED, FF, or FS it was printed in the following city and state:

LV: Lavergne, TN

BV: Breinigsville, PA

ED: Edison, NJ

FF: Fairfield, OH

FS: Fresno, CA

The date can be determined by locating the last 6 digits of that code and are in this format dd/mm/yy. Thus, EDOW031246220113 means this book was printed in Edison, NJ on January 22, 2013.

Of course, the examples are bound to change as facilities are dropped or added.

In some cases, one-off publications, often even without imprint, have been offered in multiple, deceiving formats: whether with variant covers or even different titles, they contain identical content, even though sometimes the descriptions indicate different authors! Similarly selfish marketing gimmicks have been encountered, too, and I may cite herein one example, rather than all of those seen for sale online.

UNITED STATES GOVERNMENT AGENCIES : National agencies that employ the term “United States” are cited with the U.S. prefix. “U.S.” is also used in titles that are from federal government agencies of the United States of America, whether or not “U.S.” or “United States” is part of that agency’s name; for example, the Government Printing Office in Washington, D.C. is cited as “U.S. Government Printing Office”. In some cases, for standardization “U.S.” is used as a contraction in a serial title or agency name where “United States” is actually spelled out; for example, “U.S. National Academy of Sciences”. Another variant is the “Supreme Court of the United States”, which in THE GRAND CANON is alphabetized under “U.S. Supreme Court”. In book and article titles, typographical variants of “U.S.” are cited as they appear in the title; for example, “U.S.” (or, in some older literature, “U. S.”), “US”, “U.S.A.”, and “USA”; similarly, “United States of America” is spelled out if that appears as such.

Within the scope of THE GRAND CANON the *commonly encountered* bureaus within U.S. governmental departments are attributed by the *bureau names* alone rather than as a section of the department. This is done solely for the sake of the convenience of users of this bibliography, who will readily identify with these units, knowing the departments under which the units are administered. For example, the U.S. Department of the Interior’s Bureau of Reclamation is listed herein just as U.S. Bureau of Reclamation. *See additional examples in the box on the next page.* Some less commonly encountered agencies (for example, “U.S. Department of Energy, Western Area Power Administration”), and agencies with outdated administrative affiliations (for example, “U.S. Department of Commerce and Labor, Bureau of the Census”), are for administrative clarity cited with their departmental affiliations at the time of publication.

PLACES OF PUBLICATION : American city names in the place of publication are usually listed with the state in which they occur (for example, “St. George, Utah”) even if the state information does not appear on the title-page or with publisher’s information. This is done to facilitate more ease of use among those who may be less well informed about American geographic locations. Exceptions are major world cities (for example, New York, London, and Paris) and certain major American cities cited in this bibliography, such as Chicago [Illinois], Denver [Colorado], Las Vegas [Nevada], Los Angeles [California], Philadelphia [Pennsylvania], Phoenix [Arizona], Salt Lake City [Utah], San Francisco [California], and Tucson [Arizona]; these all are cited without the state names. “Washington, D.C.” is used for the District of Columbia, “City of Washington”, or “Washington” by itself, although for bibliographical reasons older usages, such as “Washington City”, may be cited in their original form.

EXAMPLES OF UNITED STATES GOVERNMENT AGENCIES COMMONLY CITED IN
FORESHORTENED FORM IN THIS BIBLIOGRAPHY

Administrative Entity

Cited Herein As

U.S. Department of Agriculture

Forest Service **U.S. Forest Service**

U.S. Department of Commerce

National Oceanographic and Atmospheric **U.S. National Oceanographic and
Administration Atmospheric Administration**

National Weather Service..... **U.S. National Oceanic and Atmospheric
Administration, National Weather Service**

Weather Bureau..... **U.S. Weather Bureau**

[The Weather Bureau has also been under the Department of Commerce's Environmental Science Services Administration]

U.S. Department of the Interior

Bureau of Indian Affairs **U.S. Bureau of Indian Affairs**

Bureau of Land Management **U.S. Bureau of Land Management**

Bureau of Mines..... **U.S. Bureau of Mines**

Bureau of Reclamation **U.S. Bureau of Reclamation**

Fish and Wildlife Service **U.S. Fish and Wildlife Service**

Geological Survey..... **U.S. Geological Survey**

National Park Service **U.S. National Park Service**

U.S. Department of Transportation

Federal Aviation Administration **U.S. Federal Aviation Administration**

Federal Highway Administration..... **U.S. Federal Highway Administration**

U.S. Environmental Protection Agency and **U.S. National Aeronautics and Space Administration** are independent agencies within the Executive Branch of the federal government. Likewise also the one-time **U.S. Federal Security Agency**.

Military branches of the government are listed specifically by their names unless there is a bibliographical reason to cite them under a governmental department (*e.g.*, **U.S. Air Force**, **U.S. Army**, **U.S. Coast Guard**, **U.S. Marine Corps**, **U.S. Navy**).

No abbreviations for state or province names are used, except in direct quotations. Readers from elsewhere than the U.S. or Canada should not be expected to understand, or to try to find out the meanings of, the two-letter postal-code abbreviations commonly used for U.S. states and Canadian provinces (for example, "ME" for Maine, "MN" for Minnesota, "NJ" for New Jersey, "OH" for Ohio, "PA" for Pennsylvania, or "QC" for Québec) nor their older forms of contraction (for these examples they are "Me.", "Minn.", "N.J.", "O.", "Pa." or "Penna.", and "Que.").

Places of publication outside of the United States, with the exception of most major world cities, are listed as given in the imprint itself, even where names were published in another language; thus the same city may appear in variously spelled forms.

DIACRITICAL MARKS : In THE GRAND CANON diacritical marks are usually reproduced faithfully; accordingly they are omitted when *not* so printed even when the language properly uses them. This inconsistency is a consequence of typography, usually expressed when all-capital letters are used, such as in a title. While such uses are often replicated in this bibliography, it is regrettably not consistent. The differences reflect varied methods of citation that have been used over five decades of compiling THE GRAND CANON. Diacritical marks are reproduced in authors' names, too, when so used. Characters with diacritical marks are alphabetized as if they do not have these marks; for example, O, Ó, Ò, Ö, Ø all are alphabetized as like "O".

Diacritical marks (or their absence) are usually shown as they are printed in the original citation. The same principle applies for digraphs, like æ and œ [Latin] or ij [Dutch], which sometimes have been retyped as double-letter ae, oe and ij, respectively. I have sometimes preserved the use of digraphs in citations, but in the case of ij I have followed modern Dutch conformity to present this as the double-letter ij. However, given the fact that I am now beginning the fifth decade of compiling this bibliography, consistency in the use of digraphs is not perfect; the inconsistencies lie with the older citations that do not reproduce digraphs. Still, I have preferred to preserve original uses as much as possible because I believe that eventually the technological means will be available to conduct searches that will always return in one search the diacritical equivalents to plain-letter characters, without the need for combining devices in the digital text. In the meantime, users might consider using a shorter or modified search string; or, if diacritical characters are known in their proper places, by using wildcards in the search string.

FOREIGN, INDIGENOUS AND AUXILIARY LANGUAGES⁶⁰ : The bibliography includes citations for works written in 113 languages other than English (accounting for 9.9 percent of the bibliography); among them are several Indigenous American languages and the auxiliary ("artificial" or "planned") languages Esperanto and Ido. Pertinent notations are appended to citations to identify all non-English languages;

⁶⁰ This section (in its original PDF presentation) includes many hyperlinks to various examples in the bibliography. While this is helpful to illustrate examples of items noted here, the links are not important to the use of the bibliography should one be working with a printed copy or a digital version with non-functioning hyperlinks.

they are displayed in **dark red** text to aid users who are reading this in its original PDF or in a color printout.⁶¹

While some languages are represented by a large number of citations, such as French, German, and Spanish, others are represented by few citations, sometimes by just one. This does not mean that *only* one or few items in some way about the Grand Canyon or Colorado River have been published in those languages; it means only that few such publications have thus far been found for THE GRAND CANON. Further discoveries will be either serendipitous or as the result of a concerted program of bibliographical research. The citations in this bibliography should of course not be construed to be “everything”—only everything that I and contributors have thus far found. Similarly, there are likely to be some languages not yet represented herein that have pertinent publications about or mentioning the Grand Canyon or the Colorado River. (A complete list of foreign, Indigenous and auxiliary languages cited in the bibliography follows farther below.)

Foreign-language citations herein usually are cited as they appear in the originals. Languages that use non-Roman orthography (there are 31 of them in THE GRAND CANON) are cited in transliteration or parenthetical English translation, or both; and when possible, information in the original orthographies are in the citations.⁶² In most cases when non-Roman orthographies are supplied in a citation, the characters were derived from digital sources online; for example, PDF documents posted online, WorldCat citations, or publisher’s information. In this bibliography these orthographies are Arabic, Amharic, Armenian, Belarusian, Bengali, Bulgarian, Chinese, Georgian, Greek, Hebrew, Hindi, Japanese, Kannada, Khmer, Kyrgyz, Gujarati, Korean, Macedonian, Malayalam, Marathi, Mongolian, Persian, Russian, Serbian,⁶³ Sinhala, Tajik, Tartar, Telugu, Thai, Ukrainian, and Yiddish. (Burmese, or Myanmar, another language using non-Roman orthography, is also cited in this bibliography, but the citation has not been seen in its original Burmese orthography and relies only on a transliteration, as documented by a library catalog entry. Citations in Mongolian are

⁶¹ The **dark red font** is used for visual convenience only, for those working with the original digital version of this bibliography, so that the information is more noticeable. Text in the dark red font may be somewhat distinguishable even when a black-and-white printout is referred to. Colors have no special significance to the data presented in this bibliography.

⁶² For a remarkable summary of the very rich and involved nuances of orthographic representations of languages, one needs only to browse—and be enthusiastically lost in—*The World’s Writing Systems* (Peter D. Daniels and William Bright, eds., Oxford University Press, New York and Oxford, 1996).

⁶³ Serbian may employ either Cyrillic or Roman orthographies; both have been encountered in compiling this bibliography. Similarly, Bosnian may employ either orthographic system, although only the Roman form has thus far been encountered for this bibliography.

BREAKDOWN OF NON-ENGLISH LANGUAGES CITED IN
THE GRAND CANON

[See also pp. 144–147 for breakdown by language]

No. of
Different
Non-English
Languages
in Part

No. of
Non-English
Items Cited

Percent of
Numbered
Part of
Bibliography

Lower Colorado
River Region
Separate-
Coverage Group

		No. of Different Non-English Languages in Part	No. of Non-English Items Cited	Percent of Numbered Part of Bibliography
1	Bibliographies and Indices	1	16	3.7%
2	General Publications	71	3,652	12.2%
3	<i>New York Times</i>			
4	Memorials	3	16	2.4%
5	Publications for People with Impairments	11	24	5.9%
6	Youth and Young Adults	54	269	16.6%
7	Fiction	38	296	28.7%
8	Verse	23	52	5.6%
9	Travel and Trail Guides	10	150	8.7%
10	Colorado River Guides			
11	LCR – Natural History, Environment, and Cultural Issues	42	2,567	13.9%
12	LCR – Water Supply, Management, and Policy	50	1,090	11.2%
13	Administration and Management	18	95	2.0%
14	Sociology, Recreation, Education, Economics, etc.	30	86	5.1%
15	Health and Safety	15	41	3.3%
16	Archaeology and Cultural Preservation	11	27	1.9%
17	Native Americans	52	259	7.6%
18	Physical Environment	21	79	3.5%
19	Biology and Ecology	27	194	2.9%
20	Glen Canyon Environmental Studies			
21	Geology and Paleontology	35	561	6.9%
22	Hydrogeology of Colorado River	11	25	2.1%
23	Geological Guides			
24	Geologic and Topographic Maps	1	1	0.1%
25	General Maps in Cartobibliography*	19	674	36.5%
26	Audio-Visual	14	66	4.8%
27	Audio Works and Musical Scores	9	18	5.5%
28	Separate Imagery	16	48	3.1%
29	Computer and Interactive Media	3	5	4.1%
30	Reviews and Notices	19	179	11.4%
31	Newspaper Guide	7	17	6.1%
32	Marginalia	5	12	9.5%

* See [Part 25](#) for more information

all from the 20th century era after which the Cyrillic orthography was introduced by the Soviets.)

Information in Arabic, Hebrew, Persian, and Yiddish appear properly in the right-to-left format. (Variances that may have appeared in earlier editions of THE GRAND CANON have been corrected.) This introduces some awkward reading orders within a citation, where left-to-right order is followed until a right-to-left insertion is met. Then, the reader must go to the right-hand end of the string and read to the left, then jump to the right to read the continuation of left-to-right information.

An example is shown by this citation from the bibliography that includes Arabic orthography (see under “Translating and Transliterating” below for notes regarding the use of colors in a citation). The description here is for the benefit of readers who are unfamiliar with the mechanics of reading right-to-left orthographies, especially as such may appear in mixed directional writing.

Mohamed, Emad Osman Mustafa [عماد عثمان مصطفى محمد]

NO DATE 17.2528 الأمانات السياحية غري التقليدية ودورها يف تنمية الاستثمار السياحي باملناطق اجلبالية [aialimanat alsyahiat ghariy altaqlidiat wadawruha yf tanmiat aalstithmar alsyahii bamlnatq ajlbaly] [Unconventional tourism patterns and their role in developing tourism investment in mountainous areas]. *In*: منظمة المدن العربية, المعهد العربي للنماء المدن [munazamat almudun alearabia, almaehad alearabiu 'iilnma' almudun] [Arab Towns Organization, Arab Urban Development Institute], ملتقى: العمران السياحي يف املناطق اجلبالية. ملتقى: العمران السياحي يف املناطق اجلبالية. [multaqaa : aleumran alsyahiu yf amlnatq ajlbali. mihwar albaht : aalsithmar alsyahi] [Forum : Urbanism in mountainous areas. Research focus : Tourism investment]. [No imprint] [?] [جامعة الأزهر] [Al-Azhar University, Cairo], 17 pp. [See pp. 6-7, “ن ارند ج ممشى” (Grand Canyon Skywalk); and see pp. 13, 15.] [Grand Canyon Skywalk, Hualapai Indian Reservation.] [In Arabic, with section title in mixed Arabic and Roman orthography, thus.]

The Arabic in lines 6-7 of the citation block does read correctly from right to left—

ملتقى: العمران السياحي يف املناطق اجلبالية. محور البحث: الاستثمار السياحي

—even though it awkwardly straddles two lines in the midst of left-to-right text. That is, these two lines read as follows (directional arrows are added here)

↔ ملتقى: العمران السياحي يف املناطق اجلبالية. Organization, Arab Urban Development Institute], ↔
↔ [multaqaa : aleumran alsyahiu yf amlnatq ajlbali] [Forum . . .

—the user reads left to right: “Organization, Arab Urban Development Institute,” then right to left ملتقى: العمران السياحي يف املناطق اجلبالية then on the second line continues to read right to left محور البحث: الاستثمار السياحي then reads the complete transliteration (multaqaa . . . ajlbali) left to right.⁶⁴ This is due to the word-processed formatting used to produce this bibliography, which correctly displays the Arabic order in the midst of correctly-displayed Roman order, though line breaks are determined by the margin settings.

⁶⁴ See a comparative explanation of an example in Hebrew in the *Chicago Manual of Style* (17th ed., University of Chicago Press, 2017), §11.96.)

Awkward as it is, readers of Arabic will recognize this. Similarly, in this bibliography other non-Roman orthographies that read right to left follow the same principle.

Translating and Transliterating. I had considered including approximate, if not precise, **translations** in *all* of the non-English citations in this bibliography, to assist users who do not know these languages. However, I do not provide universal translations for the reason that many of them would not be at all satisfactory, peculiar if not erroneous, due to linguistic nuances and contextual variances that might not be recognized except by readers fluent in those languages, particularly with older dialects and spellings of centuries past. I could have included translations for some, and not others, but in the end I feel that such an arbitrary selection would detract from the overall dependability meant to be conveyed by THE GRAND CANON. Nonetheless, in a bibliography that is principally in English, information that is presented in a NON-ROMAN ORTHOGRAPHY is decidedly “foreign” to users who are not familiar with those orthographies, and further, that transliterations alone are not likely to be as helpful as they seem to be. So, *for citations in non-Roman orthographies I do usually provide both a transliteration and a translation in English.* This is, of course, to facilitate reading by users who could not otherwise even mouth the words, but with the original orthography in hand it will help if one digitally copies to use in searches, or presents the information to someone who can help find the item.

Sometimes, publications whose titles are in non-Roman orthographies are also accompanied bilingually by titles in Roman orthography, often as a translation into English. These are cited herein accordingly, using all of the *published* information. I cite these items as printed in the original items. However, since I do not read the non-Roman orthographies, and inasmuch as they are effectively unintelligible to many users like me who are familiar only with Roman orthographies, I provide transliterations for them even if they are accompanied in the original by a translation. The non-Roman information has been extracted digitally, usually from the publications themselves, sometimes from web sources, particularly WorldCat and specific library catalogs that have recorded the non-Roman information. Occasionally I resorted to digitally scanning a publication or title-page, or I have printed a page from a digitized copy, then used optical-character recognition (OCR) technology to render the texts in digital format that were copied into the bibliography.

Most translations herein have been obtained through the use of Google Translate online. Admittedly, Google Translate is imperfect, insofar that it is a so-called “neural machine translation service” that translates a sentence at a time, which over time has “learned” to construct better and more grammatically correct sentence structure and word selections. In some cases, I have taken texts and reconstructed

some sentences, phrases or words (sometimes back and forth between English and the non-English language as checks) to provide more sensible information, then tested the reformatted translation again as a whole. I have not often been disappointed in the result, though in a few instances I discarded a translation that was obviously amiss in favor of one that is simply adequate.

I make this note here so that users of this bibliography can take into consideration any perceived negative aspects, beyond those currently recognized, of Google's programming interface during the timeframe when the interpretations were made, during the late 2010s and after. Still, the translations obtained for this bibliography are reasonably good, if not accurate, often because many items are technical in nature and not subject to more erudite or "literary" nuances. And of course, the use of the original non-Roman orthographies do make the cited items accessible to those who can read them, or who seek the help of librarians and others who can read them.

This note also applies to the corresponding **transliterations** that appear in this bibliography. In many bibliographies, titles and other information in non-Roman orthographies are usually cited in transliteration only, often because the non-Roman character set is not available to the printer (or the author of the bibliography), or offering such information is deemed to be of little use to readers. While transliteration is somewhat helpful, in that the information can be "sounded out", variant transliteration schemes for some languages render a citation less precise, less intelligible, to users who may follow other schemes. For the non-Roman orthographies I have had to rely on Google Translate's transliterations exactly. Again, note of this is given in the event of future recognition of issues with Google Translate's methodologies in the late 2010s and later, the period during which I have used it. Particular schemes of transliteration are not indicated in this bibliography because the sources referred to rarely provide such information, even when I have obtained the information from a library's catalog.

The transliterations that appear in this bibliography do reflect various schemes, depending on when the citation was created, and by whom. For example, Arabic has no uniform scheme of transliteration. Google Translate provided transliterations for this language, but that scheme has been variously revised and, at times, was removed from the service. Thus, the Arabic transliterations cited herein may reflect these versions, depending upon when the citation was created. In any case, the use of the Arabic orthography itself should allow readers of that language to follow the information needed to re-cite or locate the items in question.

In Google Translate's transliterations, specifically, there is no immediate way by which to ascertain, for a particular language, the specific form of transliteration that

was adopted (for example, the IKE standard or the Library of Congress scheme). Nonetheless, by accepting Google's form (among those transliterations quoted herein from that source) the form is acknowledged as a source herein and can accordingly be queried or emended to meet future alterations or respond to objections in methodology. Similarly, there is no indication as to which dialects of a language, that might be represented in a publication cited herein, are relied upon for a given transliteration and translation.

Traditional and simplified character forms of Chinese both appear throughout THE GRAND CANON. For transliterations, the pinyin system of romanization was usually followed for Chinese text, again based on the sources. These will be recognized by the inclusion of diacritical marks in the pinyin texts. However, some older citations may be represented in other transliteration systems as used by the sources seen. Further, Chinese monosyllabic and polysyllabic transliterations are as taken from online catalogues or from automated translations, without regard to linguistic precision in the language itself. These may be displayed either as a "solid" or compound transliteration, which forms a series of long, single "words", or conversely as a string of single-syllable sounds; again, as used by the sources consulted. Similarly, Japanese and Korean mono- and polysyllabic transliterations appear in various forms in this bibliography. These are only guides, and no attempt has been made at standardization.

Compounding the difficulty of automated transliterations and translations that rely upon unstated systems of romanization is the fact that Japanese and Korean sometimes rely upon Chinese orthography, even in the midst of an otherwise Japanese or Korean text.⁶⁵ Occasionally, an automated translation is not able to accommodate these; when such occur herein a workaround was provided or an adequate transliteration and translation are contrived from the available evidence. Bear in mind these caveats when relying upon translations and transliterations herein.

Serbian may employ either Cyrillic or Roman orthographies; both appear in this bibliography. Similarly, Bosnian may employ either orthographic system, although in this bibliography only the Roman form has thus far been encountered.

In THE GRAND CANON, citations that have long, compacted passages of non-Roman orthography, transliteration, and English translation are difficult to visually tease apart. I have devised a method of "colorizing" some of this information to make specific portions stand out more clearly. The original title, being the key bibliographical component, is printed in black as usual; it may be followed by a

⁶⁵ See for example the "Comparative Table of Sinitic Characters", pp. 252-258 in Peter T. Daniels and William Bright (eds.), *The World's Writing Systems* (Oxford University press, New York and Oxford, 1996).

transliteration [in gray font between brackets], then an English translation [in light red font between brackets].⁶⁶ (See the example below.) In any case, I believe that if a person cannot read a foreign language—and does not have the opportunity to obtain a translation—further access to that item may be moot, particularly in the case of maps when a user’s specific interest goes beyond just the graphical presentations.

Even if a transliteration or translation is flawed, it does not eliminate the cited work from existence. Hopefully, enough information is provided herein to allow users to locate the item or cite it again.

Comparison of a citation in Russian—first uniformly in all-black text, followed by colorized text *as used herein*. In the colorized format a reader may jump between comparable parts of a citation, whether in original orthography, transliteration, or translation to English, with notes

Alimbaev, Azmata [Алимбаева, Азамата]

2016	2.28989	Путешествие от океана до океана: национальные парки дикого запада [Puteshestviye ot okeana do okeana: natsional’nyye parki dikogo zapada] [Ocean to ocean travel: Wild West national parks]. Салаватский Нефтехимик (Корпоративная газета ОАО «Газпром нефтехим Салават») [Salavatskiy Neftekhimik (Korporativnaya gazeta ОАО «Gazprom neftekhim Salavat»)] [Salavat Petrochemist (Corporate newspaper of OJSC “Gazprom Neftekhim Salavat”)] (Салават, Республика Башкортостан [Salavat, Republic of Bashkortostan, Russia]), 2016(32)(5211) (August 20): 6. [Part of a series. This part includes “Гранд-Каньон” [Grand Canyon] and “Подкова на счастье” [Podkova na schast’ye] [Good-luck horseshoe, which pertains to Horseshoe Bend, Glen Canyon, Arizona].] [ОАО: Открытое акционерное общество (Otkrytoye aktsionernoye obshchestvo) (Public Corporation).] [In Russian.]
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Alimbaev, Azmata [Алимбаева, Азамата]

2016	2.28989	Путешествие от океана до океана: национальные парки дикого запада [Puteshestviye ot okeana do okeana: natsional’nyye parki dikogo zapada] [Ocean to ocean travel: Wild West national parks]. Салаватский Нефтехимик (Корпоративная газета ОАО «Газпром нефтехим Салават») [Salavatskiy Neftekhimik (Korporativnaya gazeta ОАО «Gazprom neftekhim Salavat»)] [Salavat Petrochemist (Corporate newspaper of OJSC “Gazprom Neftekhim Salavat”)] (Салават, Республика Башкортостан [Salavat, Republic of Bashkortostan, Russia]), 2016(32)(5211) (August 20): 6. [Part of a series. This part includes “Гранд-Каньон” [Grand Canyon] and “Подкова на счастье” [Podkova na schast’ye] [Good-luck horseshoe, which pertains to Horseshoe Bend, Glen Canyon, Arizona].] [ОАО: Открытое акционерное общество (Otkrytoye aktsionernoye obshchestvo) (Public Corporation).] [In Russian.]
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(continued)

⁶⁶ The gray and light red fonts are used for visual convenience only, for those working with the original digital version of this bibliography, so that the transliteration and the translation in English are more noticeable amidst the original data and notational texts. (If a title is provided also in English in the published document, it does not appear in light red font, nor between brackets, and a note appended to the citation brings attention to the fact that the title appears in both languages.) Text in supplemental colors may yet be distinguishable even when a black-and-white printout from this bibliography is referred to. Colors have no special significance to the data presented in this bibliography.

If a non-color printout is produced from the colorized text, the citation may display as follows:

Alimbaev, Azmata [Алимбаева, Азамата]

2016 2.28989 Путешествие от океана до океана: национальные парки дикого запада [Puteshestviye ot okeana do okeana: natsional'nyye parki dikogo zapada] [Ocean to ocean travel: Wild West national parks]. *Салаватский Нефтехимик* (Корпоративная газета ОАО «Газпром нефтехим Салават») [Salavatskiy Neftekhimik (Korporativnaya gazeta ОАО «Gazprom neftekhim Salavat»)] [Salavat Petrochemist (Corporate newspaper of OJSC "Gazprom Neftekhim Salavat")] (Салават, Республика Башкортостан [Salavat, Republic of Bashkortostan, Russia]), 2016(32)(5211) (August 20): 6. [Part of a series. This part includes "Гранд-Каньон" [Grand Canyon] and "Подкова на счастье" [Podkova na schast'ye] [Good-luck horseshoe, which pertains to Horseshoe Bend, Glen Canyon, Arizona].] [ОАО: Открытое акционерное общество (Otkrytoye aktsionernoye obshchestvo) (Public Corporation).] [In Russian.]

In the paragraphs that follow, hyperlinks are included in the text that will direct the reader to specific examples in the bibliography. These are of course for those who are using the bibliography in PDF format with functioning hyperlinks.

The user is at an advantage if he or she is attuned to the orthographical appearances of different languages. One might suppose that it is superfluous to indicate in a citation that it is—for example, “[In Spanish]”—but I have heeded the remarks made by users of this bibliography who defend those who may not be expected to determine any foreign language, even a “more common” Western language like [French](#), [German](#), [Italian](#), or [Spanish](#). Specifying the language of a publication is further useful, too, for languages that are orthographically similar (at least to many who may be confused by general appearances; for example, [Danish/Swedish](#), or [Bosnian/Czech/Slovenian](#), or [Bulgarian/Kyrgyz/Macedonian/Mongolian/Russian/Tajik/Ukrainian](#)).

In THE GRAND CANON, non-Roman scripts have been included in many pertinent citations, but these have been opportunistic inclusions only. (The references here to “Roman” refer to the characters otherwise referred to as “Latin”, although various items (mostly older maps cited in the *Cartobibliography*) are noted herein as being written in the [Latin](#) language, a reminder that Latin once had been a language of international scholarly communication. And even today, the descriptions of new taxa of plants may by convention be published in unembellished botanical Latin.) There are many examples in this bibliography of citations that supply some information in one of 31 non-Roman orthographies, with transliterations and translations, in [Arabic](#), [Amharic](#), [Armenian](#), [Belarusian](#), [Bengali](#), [Bulgarian](#), [Chinese](#), [Georgian](#), [Gujarati](#), [Greek](#), [Hebrew](#), [Hindi](#), [Japanese](#), [Kannada](#), [Khmer](#), [Korean](#), [Kyrgyz](#), [Macedonian](#), [Malayalam](#), [Marathi](#), [Mongolian](#), [Persian](#), [Russian](#), [Serbian](#), [Sinhala](#), [Tajik](#), [Tartar](#), [Telugu](#), [Thai](#), [Ukrainian](#), and [Yiddish](#) (also see the table beginning on next page). There are also Roman-

character sets that also contain characters not used in most alphabetic sets (see examples in [Azerbaijani](#), [Faroese](#), and [Icelandic](#)). Other written languages are wholly contrived alphabetic sets based on Latin letters with diacritical marks, sometimes mixed with other symbolic characters (see examples in [Navajo](#), [Southern Paiute](#), and [Vietnamese](#)).

Occasionally, an English-language title may also be printed in a source that is otherwise in a foreign language; in this bibliography both are cited as published (see examples from [Czech](#), [Japanese](#) and [Hungarian](#)). Occasionally I have had to clarify a translated title (see example in [Korean](#)). In some cases where a non-Roman title has not been captured for the citation, only a translation within square brackets serves in the citation (see an example in [Japanese](#)).

Listed below are the 113 languages, other than English, represented by 10,519 citations in THE GRAND CANON (or 9.9 percent of the bibliography, which includes the separate *Cartobibliography*). While for most of these languages only a few citations are listed (sometimes just one), they still represent broad attention to the Grand Canyon and the Colorado River in publications worldwide. Surely more references may be found for those languages, and for languages that are not yet included here.

For those using hyperlinks in this document, clicking on a language name in the list below will take the user to the example citation in that language

LANGUAGE	TOTAL NO. OF CITATIONS	example ITEM NO.	AUTHOR (OR FIRST AUTHOR) OF THE EXAMPLE CITATION
[See also p. 137 for breakdown by part of bibliography.]			
<i>italics</i> = Indigenous American language in the region embraced by THE GRAND CANON;			
<u>underline</u> = non-Roman orthography			
Afrikaans	6	2.27056	Zyl (2006)
Albanian	3	2.21073	Kyçyku (2010)
Amharic	1	12.8888	Ethiopian People’s Revolutionary Party (Democratic) [የካሊፎርኒያና ሊላካባቢው ቀጠና የጎረቤታዎች (ዴሞክራሲያዊ) ሊባላትና ደጋፊዎች የጥናት ክብብ] (2002)
Arabic	27	2.13165	Muḥammad ‘Alī Bāshā [محمد علي باشا] (2004)
Armenian	3	7.950	Steinbeck (2017)
Azerbaijani	6	6.1164	Alizada [Əlizadə] (2016)
“Aztec” see Nahuatl			
Basque	10	11.13902	Altonaga (1999)
Belarusian	2	2.28166	Shavel [Шавель] (2017)
Bengali	2	2.30747	Dattagupta [দত্তগুপ্ত] (2020)

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Bosnian ⁶⁷	17	12.6574	Gaković (2008)
Bulgarian	11	11.11727	Dimitrov [Димитров] (2008)
Burmese (Myanmar) ⁶⁸	1	12.2670	Win Kyaw [Vañ' Kyo'] (2010)
Catalan	57	2.18793	Anonymous (1998)
Cebuano	1	2.27038	Branham (2018)
Chichewa	1	2.27505	Branham (1995)
Chinese	205	2.25098	Hong [洪] (2015)
Chitonga	1	2.27520	Branham (2015)
<i>Cocopa</i>	3	11.13979	Cocopa Christians (1967)
Corsican	1	17.2507	Walters (2017)
Croatian	27	2.13376	Tresić Pavičić (1907)
Czech	82	6.456	Grey (1932)
Danish	96	2.12061	Gehee (1891)
Dutch	217	6.475	Klei (1955)
Esperanto*	11	17.769	Anonymous (2007)
Estonian	17	12.2079	Virola (2005)
Faroese	1	2.29694	Jacobsen (1982)
Filipino (Tagalog)	3	7.432	Guzman (2000)
Finnish	51	12.2086	Virola (2005)
Flemish	1	6.332	Piroton (1981)
French	1341	21.4305	Margerie (1883)
Frisian	3	6.605	Schotanus (2010)
Galician	2	2.29868	Anonymous (2020)
Georgian	6	14.662	Khomeriki [ხომერკი] (2008)
German	1707	2.13128	Mühlenpsordt (1844)
Greek	33	21.5637	Kalathaki [Καλαθάκη] (2006)
Gujarati	2	2.27538	Dave [દેવ] (2011)
Haitian Creole	1	2.16741	McDougal Littell [firm] (2008)
<i>Havasupai</i>	11	17.708	Havasupai School (1985)
Hawaiian	3	2.25076	Hua'ōlelo (2003)
Hebrew	19	21.4982	Shoval [שׁוֹבַל] (2006)
Hindi	4	18.1398	Anonymous (2010)
Hmong	1	17.2509	Walters (2017)
<i>Hopi</i>	5	17.1928	Sekaquaptewa (2015)
<i>Hualapai</i>	18	17.1203	Mapatis (1984)
Hungarian	88	19.2887	Lengyel (1998)
Icelandic	15	12.6389	Hörður Kristjánsson (2014)
Ido*	1	2.29430	Srinivasan (2012)

⁶⁷ Bosnian may employ either Cyrillic or Roman orthographies, although only the Roman form has thus far been encountered for this bibliography.

⁶⁸ Burmese, or Myanmar, employs a non-Roman orthography, but the single citation in this bibliography has not been seen in its original Burmese and relies only on a transliteration, as documented by a library catalog entry.

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Igbo	2	12.2505	CCIDESOR (no date)
Indonesian	18	2.14640	Sapanti (2009)
Irish	1	6.1083	United Kingdom, Council for the Curriculum Examinations and Assessment (2011)
Italian	406	2.13106	Martinori (1888)
Japanese	390	2.30092	Fujita [藤田] (2013)
Kalaallisut (West Greenlandic)	1	2.28321	Curie (1963)
Kaqchikel (Mayan)	1	12.3308	Melville (2000)
Kannada	1	6.1427	Dhwani Educational Resource Centre [ದ್ವನಿ ಶೈಕ್ಷಣಿಕ ಸಂಪನ್ಮೂಲ ಕೇಂದ್ರ] (2017)
Kazakh	5	2.20970	Stevenson (1995)
Khmer	1	17.2511	Walters (2017)
Korean	94	8.746	Ho [호] (2006)
Kyrgyz	1	12.9874	Strikeleva [Стрикелева] (2014)
Kurdish	1	17.2512	Walters (2017)
Kwichan	see	Quechan	
Latin	204	2.17376	Hyblensi (1670)
Botanical Latin ⁶⁹	2	19.4656	Gandoger (1908)
Latvian	8	2.15369	Jērāns (1985)
Lithuanian	40	21.4489	Vėjelytė (2006)
Macedonian	6	6.1198	Velickovska [Величковска] (2007)
Malagasy	1	17.2513	Walters (2017)
Malay	2	12.2586	Anonymous (2009)
Malayalam	1	7.940	Steinbeck (2011)
Maori	2	6.1319	Ngaruawahia High School (1998)
Mapuzugun (Mapuche)	1	12.3308	Melville (2000)
Marathi	1	2.25071	Shah [Śahā] [शहा] (2016)
<i>Mojave</i>	5	8.807	Nopah (1953)
Mongolian	2	2.20971	Stevenson (1996)
Myanmar	see	Burmese	
Nahuatl ("Aztec")	1	2.16741	McDougal Littell [firm] (2008)
<i>Navajo</i>	6	17.770	Rough Rock Demonstration School (1993)
Norwegian	53	2.12011	Sandall (2002)
<i>O'odham</i>	1	6.1258	Encinas (2016)
<i>Paipai [Pa Ipai]</i>	2	6.1249	González (2016)
Persian	12	11.12684	Rzaman [رزمان] (2016)
Polish	154	2.25118	Anonymous (2014)
Portuguese	139	2.11943	Callixto (1983)
<i>Quechan</i>	13	11.9716	Carr (2014)

⁶⁹ Botanical Latin is an unembellished form of the language, free of grammatical complexity, used in the formal descriptions of new taxa of plants, by convention and as prescribed in the International Code of Botanical Nomenclature. It is usually restricted only to the description of the new taxon, regardless of the language of the remainder of the publication, but sometimes (as in the item cited here) the entire publication is in Botanical Latin. It is not counted as a separate language in this list.

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Romanian	52	17.743	Anonymous (2007)
Russian	150	2.11954	Blok [Блок] (1850)
Samoan	1	17.2515	Walters (2017)
Sardinian	1	12.7950	Matthews (2018)
Scots Gaelic	2	2.25077	Mac Leòid (1900)
Serbian ⁷⁰	17	2.29883	Petrovij (2014)
Shona	1	17.2517	Walters (2017)
Sinhala	1	2.27507	Anonymous (2014)
Slovak	27	2.15057	Maciak (2001)
Slovenian	33	2.12055	Senegačnik (2007)
Somali	1	17.2518	Walters (2017)
<i>Southern Paiute</i>	1	17.1152	Sapir (1931)
Spanish	4162	2.23209	Alonso del Val (1999)
Sundanese	1	17.2519	Walters (2017)
Swahili	3	2.27516	Branham (2015)
Swedish	140	2.11962	Ahrén (1938)
Tagalog see Filipino			
Tajik	2	12.7893	Strikeleva [Стрикелева] (2014)
Tamil	1	2.23990	Grigulevich (1976)
Tartar	1	2.30746	Khusainov [Хөсәенов] (2013)
Telugu	1	2.27037	Branham (NO DATE)
Thai	16	2.14962	Phungchit Supphamit [ฟังก์จิตต์ สุภมิตร] (1992)
Tonga see Chitonga			
Turkish	134	2.25107	Özdemir (2015)
Turkmen	1	2.29303	Durdykow (2011)
Tz'utujil (Mayan)	1	12.3308	Melville (2000)
Ukrainian	24	11.9581	Lavrik [Лаврик] (2014)
Urdu	2	2.12118	John (2007)
Uzbek	3	21.7688	Abduraximovna (2012)
Vietnamese	27	19.2888	Vietnam, Yok Don National Park (2003)
Welsh	8	2.25166	Anonymous (1993)
<i>Yavapai</i>	1	11.9480	Shaterian (1983)
Yiddish	3	8.190	Weinper [וויינפער] (1947)
Yucatec Maya	1	12.3308	Melville (2000)

*An auxiliary (“artificial” or “planned”) language

In addition to these foreign (non-English), Indigenous and auxiliary languages, items produced with various forms of symbolic notation are also included in this bibliography. For example, [Part 5](#) of the bibliography includes items produced with

⁷⁰ Serbian may employ either Cyrillic or Roman orthographies; both have been encountered in compiling this bibliography. The example shows a Cyrillic citation.

physically raised characters, such as Braille and Moon Type. Other examples include an item that is written in Graham shorthand⁷¹; an item that is in [Eurospelling](#)⁷², which is one attempt to provide consistent spellings for pronunciations; and another publication in English that is in [phonemic characters](#)⁷³ as part of a study of the phonetics of informal speech. There is also an item in which a brief passage is in [Morse code](#).⁷⁴ An audio-visual DVD also was prepared with a narrator using [American Sign Language](#), and a serial is cited whose title is also printed in ASL.⁷⁵

BRIEF CONTENT ENTIRELY QUOTED, AND REFERENCES “*in passing*” AND “*passim*” :

In some cases herein, when a pertinent reference to Grand Canyon or the Colorado River is exceedingly brief within a larger work, I have chosen to quote the passage in full as a square-bracketed note. These remarks are usually indicated with the comment, “(ENTIRE ITEM)” or “(ENTIRE NOTE)”. Generally, “entire item” is used to denote that the entire text is quoted and is not an extract, and that there is nothing more to the cited item; “entire note” is used to indicate that the quotation is the whole pertinent part of a longer item, about which the remainder may not relate to this bibliography. This is done to place the citation in context. It is also a courtesy to the user, who thus may be spared the time (and perhaps expense) of acquiring or gaining access to a copy of the work, only to find there the single, brief remark and nothing more of pertinence. Furthermore, the items often have generalized titles or no title at all, which does not identify the content in the useful context intended by this bibliography. The limit, though, is subjective; occasional short passages in print may not be quoted in their entirety and thus not marked by a comment. Some citations compiled during the early years of work on this bibliography will not have any brief-content notes.

If mention of the Grand Canyon or Colorado River is especially brief and occurs but once, it is so indicated usually with the notation, “*in passing*”, italicized to draw

⁷¹ Anonymous, “Grand Canon”. *The Student’s Journal* (New York), Vol. 33, no. 8 (August 1904), p. 8 [text also transcribed into Graham shorthand]. (ITEM NO. 2.13783)

⁷² F. du Feu, “The Holiday.” *Spelling Progress Bulletin* (North Hollywood, California), Vol. 17, no. 2 (Summer 1977), p. 8. (ITEM NO. 8.608)

⁷³ Edward C. Carterette and Margaret Hubbard Jones, *Informal Speech : Alphabetic and Phonemic Texts with Statistical Analyses and Tables*. Berkeley, Los Angeles, and London: University of California Press (1974). (ITEM NO. 2.21772)

⁷⁴ William O. Plum, “Heavenly in Morse characters”, *The Telegraph Age* (New York), Vol. 19, no. 2 (January 16, 1902), p. 29. (ITEM NO. 2.26493).

⁷⁵ Deaf Bible School, *Signs of God’s Love : episode nine : in American Sign Language : Esther M. Doss talks about Creation vs. Evolution and God’s incredible world*. Greenbelt, Maryland: Three Angels Deaf Ministries (2016) (ITEM NO. 26.1349 [also as 5.322]). “Jenene Johnson”,    *Middle School News!* (Metro Deaf School, St. Paul, Minnesota), (April 5): 2 (ITEM NO. 14.1714 [also as 5.414]).

attention to it. For example, a writer's passing remembrance of the "vast quiet" of the Grand Canyon, is significant enough to include the reference in THE GRAND CANON (particularly if the comment was made long before modern concerns of preserving the "natural quiet" of the canyon). But if a writer takes note only as a point of reference or comparison—for example, "it reminded me of the colors of the Grand Canyon" or "it is like the Grand Canyon"—the item does *not* warrant a citation in this bibliography. The comment must surely, even if only briefly, embrace some informational context about the canyon or river regions.

The phrase *passim* is used only where it is meant "here and there"; it indicates that there are several or numerous, usually scattered, references to something within the cited work. (The term *passim* is often misused to mean "in passing", implying one instance.) For a few scattered references in a large work, I usually indicate more clearly the situation either by the citation of pertinent page numbers or by special remark, though *passim* is used (correctly) when there are frequent brief references in a work that otherwise is not chiefly about the referred subject.

Occasional notes of the presence of a person or a group of people at the Grand Canyon are included among the citations. These are accompanied by a note as to the name of the person or group, as a means by which to document their presence at Grand Canyon at the time indicated. Most often these references pertain to a part of an itinerary rather than the Grand Canyon as ultimate destination. Usually, if a person was renowned there may be a few additional comments, perhaps even a photograph or two, in the cited item; for example, the visits to Grand Canyon by Albert and Elisabeth, the King and the Queen consort of the Belgians, and by Mme. Marie Curie the twice Nobel laureate (in chemistry and physics).

TAXONOMIC NOMENCLATURE IN BIOLOGY AND PALEONTOLOGY : [Part 11 \(Section 1\)](#) and [Part 19](#) of the bibliography contain a great deal of taxonomic nomenclature of living organisms; the so-called binomial and trinomial nomenclature of genera and species (*Genus species*; *Genus species subspecies*; *Genus species var. variety*, in italics) and capitalized proper names of higher taxonomic groups (like phyla, classes, and families, not italicized). [Part 11 \(Section 2\)](#) and [Part 21](#) likewise contain the taxonomic names for fossil organisms. Although a citation will be exactly as printed, in notes that may follow it I have taken the opportunity to clarify some of the nomenclatural conventions that may not be intuitive to those who do not practice in these fields. I have indicated as best as I have been able the newly introduced taxa in a publication that come from localities within the geographic embrace of this bibliography. To disambiguate variant uses I use spelled-out phrases to bring attention to these new taxa. For example, "new species" is used instead of the nomenclaturally more conven-

tional “n. sp.”, “nov. sp.”, “sp. n.” or “sp. nov.” and similar constructs (which in any case mean the same thing); likewise for “new genus”, “new subgenus”, “new subspecies”, “new ichnospecies”, “new variety”, “new combination”, “new status”, “new name”, or any similar usage with a taxonomic name. In this fashion, too, one may find in this digital bibliography all such cited occurrences simply by searching for the spelled-out “new species” (etc.).

Terminology in botany and zoology follows the respective international codes of nomenclature for these biotic groups. However, THE GRAND CANON is not a work of systematics nor of nomenclatural revision. All references to neological taxa and acts of taxonomic revision are those of the works cited. Abbreviations of authority names in botany follow standard botanical protocol, and citations reflect authors’ particular usages.

Ornithological style conventions call for the accepted common names of birds to be capitalized; for example, the Southwestern Willow Flycatcher and the Yuma Clapper Rail. Such usage is meant to convey the idea that the bird in question is one with a single, established taxonomic (scientific) name. This convention is not followed in this bibliography, in so far as no other animal or plant species is usually capitalized by practitioners in those fields, and to accordingly single out birds is awkward, at least in this bibliography. Only in the case of direct quotations (within quotation marks) are bird common names shown herein with capital letters.

NOTES : Citations may have notes appended to them within square brackets. These can be special bibliographical comments or my comments about the cited work that I deem to be important, explanatory, or in some way disambiguating. For example, as a matter of policy I make every attempt to spell out acronyms that appear in a citation but are not otherwise explained in the citation; the fully spelled phrase will appear within square brackets at the end of the citation, which may be useful for future times when the acronyms are no longer commonplace (in their field) or known to readers.

A special group of notes are those that are “see” notes, which refer the reader to specific pages within the publication that I have identified as pertinent to either the Grand Canyon or the lower Colorado River regions. By default, one may assume that if no special indication is made that the pages referred to pertain to the Grand Canyon, as opposed to the Colorado River corridor below Grand Canyon; although in some instances *both* regions may be embraced by the “see” note, which will usually be so indicated. Given that the earliest known *published* references to the Grand Canyon appear in the 1850s, “see” notes that precede this time will by default refer to the lower Colorado River region.

Occasionally, I have interjected a search-friendly rephrasing of a title so as to make an “expected” phrase locatable in a digital search. For example, Charles Francis Saunder’s *Finding the Worth While in the Southwest* will be missed if one does not know the precise spelling of the title, searching instead for “Finding the Worthwhile in the Southwest”. In the citation I have added the interpretive assist within square brackets.⁷⁶ Similarly, old-fashioned or misspelled words in titles will when necessary be properly spelled within a note so that the user may locate the item when properly spelling it in a search but not knowing of the error.

Appended to pertinent citations are cross-listings to citations in [PART 30](#) (BOOK REVIEWS AND SIMILAR NOTICES) and pertinent notices in other parts of the bibliography, particularly [Part 3](#) (*THE NEW YORK TIMES*). Reviews and notices relate to primary resources cited in this bibliography *and* that take note of the Grand Canyon or Colorado River. They appear in the following format: “ \equiv [REVIEWS AND NOTICES](#) Author, date, [ITEM NO. 00.000](#)”. These ancillary paragraphs are prefixed by the equivalence symbol (\equiv) and displayed in dark blue to unobtrusively denote them and to visually segregate them from the citation should the product be displayed in a monochromatic fashion or printed without color.

UNDETERMINED INFORMATION : In the matter of a disclaimer, this bibliography is always a work in progress. In a few places, informational parts of a citation include an underscore, _____, thus, which indicates missing information. Nevertheless, enough critical information is present, and deemed useful enough, to warrant including the incomplete citation in *THE GRAND CANON*. I was not able to see the complete information either because the document was not available or it was an imperfect copy; and should the information be obtained, the citation will be emended. It is useful in this fashion so as to alert users of potentially useful items that through their own means they may be successful in locating.

Pagination that has not been determined is noticeable by its absence. This may have been the result of mistakenly overlooking this information, or more likely is the result of having seen an imperfect or incomplete copy of the publication. When such omissions appear in the citation of serial items, the format appears as in this example: “102(4) (April):.” (the colon and period in juxtaposition). As “untidy” as this is, requiring a bit more effort to locate the item inside of that issue, it would be unconscionable to omit what otherwise is a useful citation.

⁷⁶ See C. F. Saunders, *Finding the worth while in the Southwest*, Robert M. McBride and Co. (New York, 1918). ([ITEM NO. 2.5652.](#))

ITEM NUMBERS

Every citation is assigned an “Item Number”; for example, 2.4598 is citation no. 4598 in Part 2 of the bibliography (GENERAL PUBLICATIONS). These are only serial numbers contrived to uniquely identify each citation, and they do not appear in order in the lists within each part. These numbers are created when a citation is added to the bibliography. If a citation is removed, the Item number is not reused. When an Item number is referred to in comments in this bibliography, it appears in this format: “ITEM NO. 0.0000”.

Item numbers were created for the Internet Edition of 2000; earlier, print editions of the bibliography did not enumerate individual citations. Citations within each part of the bibliography are enumerated beginning with the suffix “.1”; for example, ITEM NOS. 1.1, 2.1, 19.1, etc., were the first-enumerated items in Parts 1, 2, and 19, respectively. When a citation is for some reason moved to a different part of the bibliography, it is assigned a new Item number and the old Item number is not reused. Similarly, Item numbers are not reused when citations are deleted from the bibliography. The highest Item number within a part thus does *not* represent the total number of citations within that part. (See the [table](#) on Bibliography page 2 to see the current count of citations within each part of this 4th Edition of THE GRAND CANON.)

Item numbers now are not in sequential order in any part of the bibliography. They were sequential when the Internet Edition was created, but all additions since then have been made as inserts; likewise for various citations that have been transferred to other parts of the bibliography or to Volume 2, the *Cartobibliography*. So the numerical order of Item numbers within each part is now random. Further, the Item numbers have been assigned in numeral order, but they do not represent a chronology because some numbers represent a renumbering of an item that has been moved from another part of the bibliography. Regardless, an Item number uniquely identifies a citation.

CROSS-LISTINGS TO PRINT EDITIONS OF THE GRAND CANYON–LOWER COLORADO RIVER BIBLIOGRAPHY

THE GRAND CANON includes cross-listings to its earlier print first and second editions: *Grand Canyon Natural History Association Monograph 2* (1981), and *Grand Canyon Natural History Association Monograph 8* (1990) with its *Supplement 1* (1993). The user who has need to follow cross-listings will notice that corrections to citations have been made (some of them significant), that later emendations have expanded many citations, and that many citations have been reassigned to other topical parts of the bibliography.

These cross-listings are simply a historical tracking within this bibliography, although users who may be investigating the editorial growth of bibliographies in general may find an advantage in these cross-listings.

The cross-listings to *Monograph 2* and *Monograph 8* are incorporated into THE GRAND CANON as a means to indicate citations that had appeared in the first and second print editions, before the bibliography went online in 2000. The different parts of the bibliography have, however, been completely rearranged and expanded from the outline of the printed volumes (see the whole of [Appendix to Part 1](#)). This does not mean that the citations themselves are precisely as they appeared in the print editions; many citations have been edited or corrected since first being published. Some citations even have been corrected to attribute different authorship, and other significant edits.

An unfortunate bit of confusion was met in earlier editions when some librarians mistakenly inferred, in the haste of busy duties, that a citation accompanied by a cross-listing was actually itself a “Monograph” number 2 or 8 (although it seems a bit incongruous that, in the case of a magazine article, as this was, it would also be a “monograph”). The older cross-listing format had noted only (for example), “*Mon. 8* : 1-66” (meaning it was cited in Part 1, page 66 of *Monograph 8*, as explained in the front matter to the publication). In this example the *cited* work was misinterpreted as being also pages 1–66 in an otherwise unstated “Monograph 8”. So for THE GRAND CANON I revised the style of cross-listings. In THE GRAND CANON now, cross-listings to *Monograph 2* are straightforward. They cite listings by page number; for example, [|CITED» GCNHA Monograph 2: page 42|](#). This 1981 edition of the bibliography contained a single range of page numbers. Cross-listings for page numbers from *Monograph 8* reflect the individually numbered (and individually paginated) parts of that monograph; thus for example, a citation on page 53 of Part 1 of *Monograph 8* is cross-listed as [|CITED» GCNHA Monograph 8: page 1-53|](#). Note that the physical pagination on those printed pages embeds the part number, thus “page 1-53”. The pagination *for each part individually* in “Supplement 1” of 1993 continues without interruption from the 1990 edition. See the [Appendix to Part 1](#) herein for the collated pagination sequence and loose-leaf tab placements of the consolidated *Monograph 8* (the 1990 edition and Supplement 1).

When this bibliography’s Internet Edition was prepared in 1999, cross-listings to the print bibliography were added; but those 9,519 instances of cross-references were to *Monograph 8* only. Cross-listings to *Monograph 2* were never included in this bibliography until the creation of THE GRAND CANON; 3,918 instances were counted. These figures for cross-listings to both monographs are only an approximation of the number of citations that appeared in the 1981 and 1991/1993 editions. These numbers,

compared to the 106,000 citations herein, reveal the huge and rapid growth of the bibliography after 2000, largely due to resources being made available through the internet.

CROSS-LISTINGS TO REFERENCE LISTS

In the field of bibliography there are many reference lists to which scholars and booksellers, as well as bibliographers, refer. The most common of these relate to the bibliography of American history, or some part of it; others are more specific to the Grand Canyon and Colorado River. These reference lists usually have the advantage of uniquely enumerating each of the citations, and it is by these numbers that the titles are referred in published literature and correspondence.

THE GRAND CANON (including Volume 2, the *Cartobibliography*) cross-lists its citations to several annotated bibliographies; these are:

Francis P. Farquhar (1953), *The Books of the Colorado River and the Grand Canyon: A Selective Bibliography*

David M. Goodman (1969), *Arizona Odyssey : Bibliographic Adventures in Nineteenth-Century Magazines*

Wright Howes (1962), revised, enlarged edition of *U.S.iana (1650–1950) : a Selective Bibliography in Which Are Described 11,620 Uncommon and Significant Books Relating to the Continental Portion of the United States*

Glen McLaughlin, with Nancy H. Mayo (1995), *The Mapping of California as an Island : an Illustrated Checklist*. California Map Society, Occasional Paper 5

Rodney W. Shirley (1993), 3rd, revised edition of *The mapping of the world : Early Printed World Maps, 1472-1700*

Colton Storm (1968), *A Catalogue of the Everett D. Graff Collection of Western Americana*

Henry R. Wagner and Charles L. Camp (1982) (revised and enlarged by Robert H. Becker), 4th edition of *The Plains and the Rockies : a Critical Bibliography of Exploration, Adventure and Travel in the American West, 1800–1865*

Carl Irving Wheat (1954-1963), *Mapping the Transmississippi West, 1540–1861*
... San Francisco: The Institute of Historical Cartography, 5 volumes in 6.

These titles were selected for their renowned authority and wide use, for the special precise and ancillary bibliographical data they convey, and for their annotations.

This bibliography also includes cross-listings to some booksellers' catalogues, *viz*, Five Quail Books (for 1987–2013), and Guidon Books (1969). The one by Guidon Books is an important early list of publications relating to this region. That the

catalogues also list prices provides some added utility as documents of econometric bibliography.

All cross-listings are appended to citations starting with the notation, “≡ **CROSS-LISTINGS**”. These paragraphs are prefixed by the equivalence symbol (≡) and displayed in dark orange to unobtrusively denote them and to visually segregate them from the citation should the product be displayed in a monochromatic fashion or printed without color. (Color otherwise has no significance to this bibliography.)

These titles were selected for the special bibliographical data they convey, or, in the case of Howes, which is only marginally annotated, because it is a standard list of publications to which scholars, booksellers, and other bibliographical readers and users conveniently refer. Each of these other bibliographies is numerically organized; it is by these numbers that users unambiguously refer to publications in question.

The omission of other notable bibliographies—for example, Yates and Marshall’s *The Lower Colorado River: A Bibliography* (1974) and Powell’s *An Arizona Gathering II, 1950–1969: An Annotated Bibliography* (1973)—is intentional because they are not annotated or have insufficient annotations to make cross-listings to them meaningful as sources of more bibliographical information. This is admittedly a means of expediting a bibliographer’s work, too. The information included in these other publications is nonetheless valuable because they relate to materials or regions not covered by THE GRAND CANON.

Bibliographies and Special Catalogues Cross-listed in THE GRAND CANON

In the bibliography, cross-listed items are appended to the end of individual citations using the shortened forms listed in the left column below. This is followed by the numbered listing in the indicated publication. *For example:*

- | | |
|--------------------|---|
| FARQUAR 17 | No. 17 in Francis P. Farquhar’s <i>The Books of the Colorado River and the Grand Canyon: A Selective Bibliography</i> |
| FORD 190a | No. 190a in Mike S. Ford’s <i>The Books of the Grand Canyon, the Colorado River, the Green River and the Colorado Plateau: A Selective Bibliography</i> |
| FQ4:176 | No. 176 in <i>Five Quail Books Catalogue Four</i> |
| FQ24/1:290A | No. 290A in <i>Five Quail Books Catalogue 24, Volume 1</i> |

As essential Grand Canyon–Colorado River bibliographies, the notices for Farquhar and for Ford are denoted in **bold** to bring attention to them amidst more numerous cross-listings; conveniently, they come first in alphabetical order.

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COVERAGE AND FORMAT

FARQUHAR

Farquhar, Francis P. 1953. *The books of the Colorado River and the Grand Canyon: a selective bibliography*. Los Angeles: Glen Dawson, 75 pp.

To the aficionado of Grand Canyon and Colorado River books, “Farquhar” is a household name. Although his was not the first bibliography of the subject, it was the first to provide some critical evaluation usable by bibliophiles and historians. Book collectors and dealers alike use the enumerated entries as a shorthand for unambiguously communicating to their audiences just which title to which they refer. Indeed, Farquhar’s volume is itself a collectible, one which demands increasingly higher prices. While the book is sought by many, its value as a bibliography is shortened both by its arbitrary, admittedly “selective” content and by the passage of time. It is nevertheless the gem among Grand Canyon-Colorado River bibliographies. A supplement for 1953-2003 was assembled by Mike S. Ford (*see below*).

FORD

Ford, Mike S. 2003. *The books of the Grand Canyon, the Colorado River, the Green River and the Colorado Plateau: a selective bibliography*. Flagstaff: Fretwater Press, 177 pp.

As the half-century sequel to Farquhar (*see above*), Mike Ford’s volume continues the classic in the same vein. Typographically it is identical to the Farquhar volume. Unlike Farquhar, however, there are some citations that are extralimital to those of THE GRAND CANON and thus are not cross-listed herein (for example, items exclusively about the Green River).

FQ

[Catalogues from Five Quail Books and from Five Quail Books—West. *Catalogues 1–9* by Clement David “Dave” Hellyer. *Catalogues 10–32* by Daniel F. Cassidy and Diane Cassidy. Denoted by volume or supplement number as listed below.]

The “Five Quail” series of catalogues are among the most useful overviews on the availability of out-of-print (and some in-print) literature of the Southwest; specifically, the Grand Canyon and the Colorado River. Their purpose as catalogues is both a shortcoming and a strong point with respect to their use as bibliographical resources. They clearly cannot be a comprehensive list of titles because they record only those things that are offered for sale at a given time; but virtually all titles are extensively annotated with the booksellers’ comments—without these the catalogues would not be cross-listed in THE GRAND CANON. The information about pricing is also a useful guide for those interested in aspects of econometric bibliography. Also of interest are the notations for offerings that are association copies, or copies inscribed to notable persons of Colorado River and Grand Canyon history, or copies in extraordinary bindings or other such states that may significantly increase their collector’s value. (In the present bibliography, however, neither pricing, association information, nor exceptional information are repeated.)

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Occasional brief, interim catalogues and price lists were also distributed by Five Quail; these are indicated with alphabetical suffixes (e.g. FQ5A). Only those that contain annotations are included in the cross-listings here; those that are simple price lists are omitted.

- FQ1 1987. *Catalogue One. Grand Canyon of Arizona and the Colorado River*. Spring Grove, Minnesota: Five Quail Books, [60] pp.
- FQ2 1988. *Catalogue Two. Western Americana—Colorado River—Grand Canyon—Explorations—Indians*. Spring Grove, Minnesota: Five Quail Books, 60 pp.
- FQ2A [1988.] *Last-Minute Addendum*. [Spring Grove, Minnesota: Five Quail Books], 1 p. [Addendum to *Catalogue Two*.]
- FQ3 1989. *Catalogue Three. Western Americana—Colorado River—Grand Canyon*. Spring Grove, Minnesota: Five Quail Books, [60] pp.
- FQ4 1990. *Catalogue Four. Western Americana—Colorado River—Grand Canyon*. Spring Grove, Minnesota: Five Quail Books, 60 pp.
- FQ5 1991. *Catalogue Five. Western Americana : the Colorado River, the Grand Canyon of Arizona, the Colorado Plateau*. Spring Grove, Minnesota: Five Quail Books, 60 pp. and covers.
- FQ5A 1991. *Catalogue Five—Addenda. A potpourri of interesting river-canyon titles*. Spring Grove, Minnesota: Five Quail Books, 4 pp.
- FQ5B 1991. *Mini-catalog 5-91: Southwestern Americana*. Spring Grove, Minnesota: Five Quail Books, 16 pp.
- FQ6 1992. *Catalogue Six. Western Americana : the Colorado River, the Grand Canyon, the Colorado Plateau*. Spring Grove, Minnesota: Five Quail Books, 60 pp. and covers.
- FQ7 1993. *Catalogue Seven. Western Americana : the Grand Canyon of Arizona, the Colorado River, the Colorado Plateau*. Spring Grove, Minnesota: Five Quail Books, 60 pp.
- FQ7A 1993. “Catalogue Seven – late arrivals”, 6 pp.
- FQ8 1994. *Catalogue Eight. Western Americana : the Grand Canyon of Arizona, the Colorado River, the Colorado Plateau*. Spring Grove, Minnesota: Five Quail Books, 82 pp.
- FQ8A 1994. “Addenda to Catalogue Eight”, 8 pp.
- FQ9 1995. *Catalogue Nine. Western Americana : the Grand Canyon of Arizona, the Colorado River, the Colorado Plateau*. Spring Grove, Minnesota: Five Quail Books, 84 pp.
- [Dan Cassidy purchased the stock and name of Five Quail Books from Dave Hellyer. During 1995–1999 the business name under Cassidy was Five Quail Books—West.]
- FQ9A 1995. *Western Americana—The Grand Canyon of Arizona, the Colorado River, the Colorado Plateau. October 1995*. Phoenix: Five Quail Books—West, [16] pp. on 4 leaves.

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- FQ10 1996. *Catalogue Ten. The Grand Cañon of the Colorado. Western Americana—Grand Canyon of Arizona—Colorado River—Colorado Plateau*. Phoenix: Five Quail Books—West, 80 pp.
- FQ10A 1996. *Western Americana—The Grand Canyon of Arizona, the Colorado River, the Colorado Plateau. October 1996*. Phoenix: Five Quail Books—West, [16] pp. on 4 leaves.
- FQ11 1997. *Catalogue Eleven. Western Americana—Grand Canyon of Arizona, Colorado River, Colorado Plateau*. Phoenix: Five Quail Books—West, 84 pp.
- FQ11A 1997. *Western Americana—The Grand Canyon of Arizona, the Colorado River, the Colorado Plateau. Summer 1997*. Phoenix: Five Quail Books—West, [16] pp. on 4 leaves.
- FQ11B 1997. *Western Americana—The Grand Canyon of Arizona, the Colorado River, the Colorado Plateau. October 1997*. Phoenix: Five Quail Books—West, [16] pp. on 4 leaves.
- FQ12 1998. *Catalogue Twelve. Western Americana—Grand Canyon of Arizona, Colorado River, Colorado Plateau*. Phoenix: Five Quail Books—West, 84 pp.
- FQ12A 1998. *Western Americana—The Grand Canyon of Arizona, the Colorado River, the Colorado Plateau. Summer 1998*. Phoenix: Five Quail Books—West, [20] pp.
- FQ12B 1998. *Western Americana—The Grand Canyon of Arizona, the Colorado River, the Colorado Plateau. October 1998*. Phoenix: Five Quail Books—West, [20] pp.
- FQ13 1999. *Western Americana—Grand Canyon of Arizona, Colorado River, Colorado Plateau. Catalogue 13*. Phoenix: Five Quail Books—West, 80 pp.
- FQ13A 1999. *Western Americana—The Grand Canyon of Arizona, the Colorado River, the Colorado Plateau. Summer 1999*. Phoenix: Five Quail Books—West, [16] pp.
- [During 1999 the Five Quail business name reverted from Five Quail Books—West to Five Quail Books.]
- FQ14 1999. *Catalogue 14. Western Americana—Grand Canyon of Arizona—Colorado River—Colorado Plateau*. Phoenix: Five Quail Books, 44 pp. [With “Just Released” slip laid in, 1 leaf, trimmed.]
- FQ15 2000. *Catalogue 15. Western Americana—Grand Canyon of Arizona—Colorado River—Colorado Plateau*. Phoenix: Five Quail Books, 80 pp.
- FQ16 2000. *Catalogue 16. Western Americana—Grand Canyon of Arizona—Colorado River—Colorado Plateau*. Phoenix: Five Quail Books, 56 pp.
- FQ17 2001. *Catalogue 17. Western Americana—Grand Canyon of Arizona—Colorado River—Colorado Plateau*. Phoenix: Five Quail Books, 80 pp.
- FQ17A 2001. *Western Americana—Grand Canyon of Arizona—Colorado River—Colorado Plateau. Fall 2001*. Phoenix: Five Quail Books, [16] pp. [Not annotated; not cross-listed in this bibliography except annotated items under “New Releases” and “Coming Soon” on p. [16].] [NOTE: Two releases of this list: 1) business name “Five Quail Books—West”; and 2) corrected to renewed business name, “Five Quail Books”.]

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- FQ18 2002. *Catalogue 18. Western Americana—Grand Canyon of Arizona—Colorado River—Colorado Plateau*. Prescott, Arizona: Five Quail Books, 60 pp.
- FQ19 2003. *Catalogue 19. Western Americana—Grand Canyon of Arizona—Colorado River—Colorado Plateau*. Prescott, Arizona: Five Quail Books, 84 pp.
- FQ19A 2003. *Summer 2003. Five Quail Books*. Phoenix: Five Quail Books, [8] pp.
- FQ20 2004. *Catalogue 20. Western Americana—Grand Canyon of Arizona—Colorado River—Colorado Plateau*. Prescott, Arizona: Five Quail Books, 72 pp.
- FQ21 2004. *Catalogue 21. Western Americana—Grand Canyon of Arizona—Colorado River—Native Colorado Plateau—Native American and archaeology*. Prescott, Arizona: Five Quail Books, 84 pp.
- FQ22 2005. *Catalogue 22. Western Americana—Grand Canyon of Arizona—Colorado River—Colorado Plateau*. Prescott, Arizona: Five Quail Books, 71 pp.
- FQ22A 2005. *Addendum to Catalogue 22*. Prescott, Arizona: Five Quail Books, [4] pp.
- FQ22B 2005. *November 2005 book list*. Prescott, Arizona: Five Quail Books, 8 pp.
- FQ23 2006. *Catalogue 23*. Prescott, Arizona: Five Quail Books, 75 pp.
- FQ24/1 2007. *Catalogue 24—Volume One. Grand Canyon, Colorado River, western Americana, Native American*. Prescott, Arizona: Five Quail Books, 67 pp.
- FQ24/1A 2007. *Catalog 24 supplement : U.S. Geological Survey publications*. Prescott, Arizona: Five Quail Books, 8 pp. [Accompanied *Catalogue 24—Volume One*.]
- FQ24/1B 2007. *Catalog 24 supplement : water-related and USGS Water-Supply Papers*. Prescott, Arizona: Five Quail Books, 4 pp. [Accompanied *Catalogue 24—Volume One*.]
- FQ24/2 2007. *Catalogue 24—Volume Two. Grand Canyon, Colorado River, western Americana, Native American*. Prescott, Arizona: Five Quail Books, 63 pp.
- FQ25 2008. *Catalogue 25. Grand Canyon, Colorado River, western Americana, Native American. (From the Five Quail book collection.)* Prescott, Arizona: Five Quail Books, 16 pp.
- FQ26 2009. *Catalogue 26. Grand Canyon, Colorado River, western Americana, Native American*. Prescott, Arizona: Five Quail Books, 20 pp.
- FQ27 2009. *Catalogue 27. Grand Canyon, Colorado River, western Americana, Native American*. Prescott, Arizona: Five Quail Books, 24 pp.
- FQ28 2010. *Catalogue 28. Grand Canyon, Colorado River, The West, Native American*. Prescott, Arizona: Five Quail Books, 28 pp.
- FQ29 2010. *Catalogue 29. The West, Grand Canyon, Colorado River, Native American*. Prescott, Arizona: Five Quail Books, 28 pp.
- FQ30 2011. *Catalogue 30. Grand Canyon, Colorado River, and the West*. Prescott, Arizona: Five Quail Books, 44 pp. [Accompanied by list for “Trail Guides, River Guides, paperbacks”, prices only, [2] pp.; not cross-listed in this bibliography.]
- FQ31 2011. *Catalogue 31. Grand Canyon, Arizona and the West : from the Five Quail Collection*. Prescott, Arizona: Five Quail Books, 11 pp.

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FQ32 2012. *Catalog 32. Grand Canyon, Arizona and the West : from the Five Quail Collection*. Prescott, Arizona: Five Quail Books, 38 pp.

[*The Cassidys retired from the business of acquisition and regular sales in 2016.*]

GOODMAN

Goodman, David M. 1969. *Arizona odyssey : bibliographic adventures in nineteenth-century magazines*. Tempe, Arizona: Arizona Historical Foundation, 360 pp.

The brief annotations included with many of Goodman's citations provide added value to this volume. Although there are errors, the list is still a worthwhile and the most comprehensive such working reference for all who deal with the subject. As with other enumerated bibliographies, the numbered entries may be referred to in catalogues and bibliographical works.

GUIDON

Guidon Books. 1969. *The Colorado River, people and places : a catalogue of books, pamphlets, maps and manuscripts*. (Introduction by C. Gregory Crampton.) Scottsdale, Arizona: Guidon Books, 84 [85] pp.

The very brief annotations to some titles add marginally more usefulness to this catalogue, but it is among the first such dealer's lists—if it is not the first—dedicated to the literature of the Grand Canyon and the Colorado River, coming on the centennial of the Powell Expedition. The list, as well as the pricing information, makes it a useful companion to the Five Quail catalogues that began in 1987.

HOWES

Howes, Wright (COMPILER). 1962. *U.S.iana (1650-1950) : a selective bibliography in which are described 11,620 uncommon and significant books relating to the continental portion of the United States*. New York: R. R. Bowker Co., for The Newberry Library, revised, enlarged ed., 652 pp.

The title, "U.S.iana", has rightly been looked at with cocked heads since it was first printed in 1954. Wright Howes defended his neological refocusing of "Americana" in his foreword (and he clearly was successful in defending it with his publisher's editors). This is a bibliographical reference work widely used by book dealers; its enumerated citations have become a standard by which dealers and buyers can unambiguously refer to bibliographically well-researched and documented titles. As with other enumerated bibliographies, the numbered entries are often referred to in catalogues and bibliographical works.

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MCLAUGHLIN

McLaughlin, Glen, *with* Nancy H. Mayo. 1995. The mapping of California as an island: an illustrated checklist. *California Map Society, Occasional Paper 5*, 134 [143] pp.

Cross-listings to McLaughlin appear only in the Volume 2 of THE GRAND CANON, *Cartobibliography of the Grand Canyon and Lower Colorado River Regions*. [See notes with [Part 25](#) herein.] The geographical presentation of California variously as a peninsula and an island is well studied. It is not the object of the *Cartobibliography* 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>. That entire collection has been digitized, which includes numerous maps in books, though it largely omits world maps, deferring to the Shirley cartobibliography (see below). See also a complementing catalogue by McLaughlin, to which cross-listings in the *Cartobibliography* are made where pertinent, where we are less concerned as to whether California is peninsular or insular than we are in knowing which rendition is presented in a map. It alerts us to where to look for the Colorado River; that is, how it was accommodated in the North American geography. In the McLaughlin 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.

SHIRLEY

Shirley, Rodney W. 1993. *The mapping of the world : early printed world maps, 1472-1700*. London: New Holland (Publishers) Ltd. [3rd, revised ed.], [i-xxiv], IX-XLVI [XLVII], 1-669 pp.

The prolific accounting of early printed maps assembled by Shirley, each enumerated by number, allows for convenient reference to hundreds of maps that otherwise would be inaccessible to most researchers. The accounting also includes the provenance of examined and additional copies for many of the maps. The resolution of the reduced-scale images (as compared to the originals) may not be entirely satisfactory for some purposes, but for general examination of geographical details they will suffice.⁷⁷

STORM

Storm, Colton (COMPILER). 1968. *A catalogue of the Everett D. Graff collection of western Americana*. Chicago: University of Chicago Press, for The Newberry Library, 854 pp.

This is as much a “selective” list as is Farquhar’s bibliography. It covers only the contents of one collection of books (however exquisitely comprehensive). Its enumerated, extensive bibliographical annotations make this a valuable reference work for those who have not seen the titles cited therein, or who have need to compare the bibliographical information among editions and printings. As with other enumerated

⁷⁷ See also Volume 2, *Cartobibliography*, for more information relating to the citation of early maps herein (refer to [Part 25](#) herein).

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bibliographies, the numbered entries are often referred to in catalogues and bibliographical works.

THOMAS

Thomas, Marcia L. 2004. *John Wesley Powell : an annotated bibliography*. Westport (Connecticut) and London: Praeger Publishing, 256 pp.

This is the definitive Powell bibliography. It includes all of Powell's works and ancillary productions as expected, but goes further by adding manuscript and archival sources, photograph collections, map collections, audio-visual works, and internet resources and digital archives. (In the present bibliography, of course, only those citations that pertain in some fashion to the Grand Canyon–Colorado River region are cross-listed.)

WAGNER-CAMP

Wagner, Henry R., and Camp, Charles L. 1982. *The Plains and the Rockies : a critical bibliography of exploration, adventure and travel in the American West, 1800-1865*. Revised and enlarged by Robert H. Becker. San Francisco: John Howell—Books, 4th ed., 745 pp.

This title has long been a definitive check source on the subject. Its generous type size used throughout this volume makes this a handsome work, though one does question its lack of economy given its original \$150.00 price. The precise bibliographical citations make it the closest substitute for having the title-pages in front of the reader, an approach easily remedied today by digital reproduction. As with other enumerated bibliographies, the numbered entries are often referred to in catalogues and bibliographical works.

WHEAT

Wheat, Carl Irving. 1954–1963. *Mapping the Transmississippi West, 1540–1861 . . .*. San Francisco: The Institute of Historical Cartography, 5 volumes in 6.

This title has long been a definitive check source on the subject. Sometimes it may be awkward to use, given that map numbers do not follow in order within the text (but are ordered in the separate “bibliocartography” in each volume). For a combined index, see Seavey, Charles A. 1992. *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, 210 pp. (Map and Geography Round Table, Occasional Paper no. 3.).

The Wheat cross-listings are added for the first time to the 4th Edition of THE GRAND CANON, subsequently removed to the newly produced *Cartobibliography*. Only those maps that were published (that is, not manuscripts) are cross-listed herein. The format used herein lists items by volume/part number, followed by the *map number* as listed in the cartobibliography, following standard convention. If a map is illustrated, a separate

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notation is appended to the cross-listing, which indicates its page placement in the volume. The separate volumes and their cross-listing headers, are as follows:

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, two volumes, *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.” (Part One, p. xi)]

Given that these volumes are relatively difficult to access outside of specialized libraries, and that they command steep prices in the booksellers’ market, they have also been reprinted in facsimile, in reduced size and without benefit of the few fold-out plates. As a matter of convenience, these special and on-demand reprints are listed here:

NO DATE [1995?]. Storrs-Mansfield, Connecticut: Maurizio Martino, and Parsippany, New Jersey: About Books, 5 volumes in 6. [“This reprint is strictly limited to 350 copies” (title-page verso).]

2004. Mansfield Centre, Connecticut: Martino Publishing. [Two states: 6 volumes in 3, 6 volumes in 2.]

IDEAS FOR CONTINUING WORK

A bibliography, particularly in today’s work environments of enhanced or “value-added” products, should not be a static “list” of items. Accordingly, THE GRAND CANON can provide a foundation for all kinds of ambitious and utilitarian works that expand

upon it. Given the amount of time that I must dedicate to the existing bibliography as well as to other avocations and daily responsibilities, and due also to the limitation of the length of life, few, if any, of these recommendations are likely to be pursued by me.

1. The Internet Edition of this bibliography online, while useful, had departed in significant ways from the “master” version of the bibliography represented in THE GRAND CANON; and in fact, by technical necessity it could no longer be updated after June 2015 and was removed in October 2021. There are numerous typographical nuances, particularly the use of 31 non-Roman orthographies, which will present some difficulties in the construction of a new and improved searchable database online. Still, THE GRAND CANON can serve as the master source for producing a wholly new, and modern, searchable bibliographical database. This is in my view the one most important thing to be done; but it will be as useful as THE GRAND CANON only if it does not in any way diminish the kinds of information conveyed by the citations presented herein. Again, I repeat my insistence that this bibliography should not be subservient to current limitations of technology; it must not be forced to adapt to methods that will be obsolete or unnecessary in the future.

2. One may consider using the citations within THE GRAND CANON to serve as roots for digital links to digitized copies of the works there cited. Whether selections would be made from the citations, or a massively comprehensive digital library were to be assembled, are determined by logistical and financial considerations.

3. There is an absolute need for a database of citations organized in such a way that it is an encyclopedic index to all pertinent *subjects* within every publication. Although such organization would be only as powerful as the competency of those who create it, and the number of usefully indexed entries, its overall value would be immense. THE GRAND CANON can serve as a foundation for such a comprehensive work: the ground-work has been laid through the compilation of the sources, some of them with analytical remarks. One has “only” to peruse them and take the work from there.

4. Compilers of anthologies may do well to use THE GRAND CANON as a source by which to identify works that are refreshingly beyond those that are collected (again and again) for a Grand Canyon or Colorado River anthology.

5. More closely focused bibliographies (simple or complex) can be created by extracting citations from THE GRAND CANON. For example, for the geographical region covered by THE GRAND CANON one may create a bibliography restricted to the science of entomology. Or, one may use Parts 2, 11 and 12 of this work to create a separate bibliography that focuses only on the lower Colorado River below Grand Canyon, but

one more finely subdivided into subject areas in the same fashion as is THE GRAND CANON as a whole.⁷⁸

6. An annotated or a critical bibliography would make THE GRAND CANON even more useful. A comparable work, restricted to one subject area, may also use THE GRAND CANON as a foundation.

7. A thorough examination of some especially pertinent serials is in order. For example, the entire runs of *The Deseret Weekly*⁷⁹, *Arizona Highways*, *High Country News*, *Sunset Magazine*, *Santa Fe Employes' Magazine/Santa Fe Magazine*, and numerous other regional and specialized serials should be examined against this bibliography to list all pertinent items that may relate to the Grand Canyon and lower Colorado River region.⁸⁰ While a great many citations from them are present, a systematic review of every issue will surely find more. Likewise the special exception to the exclusion of newspapers in the citation of items from the *Deseret News* (Salt Lake City) through 1910 would do well to continue the effort to the present, at least for the non-daily component. Specialized serials should likewise be selected and searched consistently; for example, *Engineering News-Record*, *Reclamation Era*, *Mining and Scientific Press*, or various early railroad journals will likely contain far more items pertinent to technical and engineering projects in the lower Colorado River region, specifically mining, dams and irrigation works.⁸¹ Other specialized works, like the annual reports of the Atlantic & Pacific Railroad and the Atchison, Topeka & Santa Fe Railway Company, will have information that has not as yet been looked for to include in this bibliography. In addition, important government serials, most notably the *Federal Register* and *The Congressional Record* should be searched in their entirety.⁸²

⁷⁸ In 2021, Part 25 (General Maps) of THE GRAND CANON was extracted, revised, and enhanced by the inclusion there of all cartographical citations from other parts and appendices of the bibliography. This resulted in what now is Volume 2 of THE GRAND CANON, *Cartobibliography of the Grand Canyon and lower Colorado River regions in the United States and Mexico, 1535–2021*, accessible at <https://ravensperch.org>. See further remarks herein with [Part 25](#).

⁷⁹ Many runs of Utah newspapers are now available online at <http://digitalnewspapers.org>.

⁸⁰ *Desert Magazine*, mentioned in this list in previous editions, was examined in its entirety in 2013–2014.

⁸¹ Issues of *Reclamation Era* have been canvassed for the period 1932–1953 (these were the only years available to me). Note also that this title was suspended June 1933–December 1934 and May 1942–April 1946. The section in most issues, “Notes for Contractors”, do include many brief items—sometimes a sentence or two—that are pertinent to this bibliography; however, they were considered far too numerous to cite individually. The section, “Boulder Canyon Project Notes”, which appeared during part of the time when Hoover Dam was built, is likewise composed of numerous, brief items; but these are cited herein as a collective for each issue.

⁸² With regard to the *Federal Register*, searches of the years since the mid-1990s to date have already been done through the online availability of issues from these years. The *Congressional Record* has not thus far been searched.

At the state level, one example of this sort of serial is the *Arizona Administrative Register*, published by the Arizona Department of State, Office of the Secretary of State (which has not been examined for this bibliography). I have not found everything because, except for a very few titles, I have not been able to examine very many whole runs, contiguously. Many serials would likely benefit from such a conscientious comparison.

8. A complete—or as complete as might be humanly possible—bibliography of *all* newspaper accounts relating to the Grand Canyon would surely be welcome. The Colorado River might be added as well, which would multiply by many times the number of entries. However, even the Grand Canyon alone is likely to be a maddening lifetime’s work, which, frankly, may never be done. I myself would not accept either a selective list or one in any way limited. One would have to select the newspapers to cover, inasmuch as there are thousands published nationwide (and elsewhere) that could contribute interesting items. Considering the scarcity of copies of most titles, whether on paper, filmed, or digitized, the utility of such a compendium would be realized only by tedious journeys both online and in person.

9. This bibliography’s coverage of legislative documents (other than the *Federal Register* just mentioned) is only a fortuitous gathering. There is a huge body of material that can yet be listed from federal and state official records alike, perhaps most richly among the legislative acts and affairs regarding water supply in Arizona and California. Other, more specialized area can be identified; for example, all documents that relate to early government explorations, or Indigenous affairs of all sorts. These items would include legislative bills, hearings, laws, and in fact everything that one may consider a part of legislation—at federal, state, and local levels alike, as well among Native American governing agencies. Judicial documents and contractual records pertaining to activities in this region are scattered widely. Official sources in Mexico, too, must be considered. A comprehensive accounting of all such records will be a Herculean task. (To see an example of the daunting number of sources one has only to examine one publication, now nearly a century behind on the curve, to appreciate the potential bound in these sources. This work is *The Colorado Compact*, by Reuel Leslie Olson, published in 1926, which was his doctoral dissertation in Harvard University that interestingly went into two printings with a sale price of \$8. The profound number of sources that appear in his voluminous footnotes and appendices—even though they are on a single subject and reach only to the early 1920s—leaves one staggering to imagine a correspondingly vital summary across a broader range of topics and a far longer period of time—in fact, plenty of time for politicians, constituents, and interested parties to grow an impenetrable thicket.)

10. Standardizing author names may be worthwhile, even though in some instances the fashion in which an author's name appears will differ from the way in which it is displayed in the publications (for example, full names would substitute for published nicknames). Examples of standardization will be found in the Library of Congress's "Authorities" files.⁸³ Sometimes, an author's given names are spelled with initials, other times spelled out. I have tried at least to standardize those kinds of variations under fully spelled headings; exceptions may be found with some authors who consistently publish their names only with initials and by which they are also generally known (for example, P. T. Reilly, whom few would know as Plez Talmadge Reilly). Occasionally, one will notice that an author's full name is spelled out (usually three names). This is done, of course, when they publish their name as such, but it also appears in a list of productions when the author was encountered for the first time through their academic thesis or dissertation. Then, as they continue to publish and their works are extracted for this bibliography, the completely spelled name is retained as the header even when the author may never have used it in later publications. In THE GRAND CANON overall, I have conscientiously considered that it is the document that arbitrates the citation, less so a derived system of styles; because what I record here is the work of individuals, agencies and institutions as they were presented.

11. The astute reader may gain some sense that the number of citations in THE GRAND CANON lag particularly in the mid-twentieth century; that there must be more, and, of course, there are. I blame in part U.S. copyright law for this, which by its due diligence to protect the intellectual property of others has occluded a very large number of works from being conveniently gathered for this bibliography. Where a bibliography's compiler does not have to do more than see how a work can be cited for the bibliography, a publication has to be seen more fully if it is not obvious from its title or abstract whether it belongs in the bibliography (and in the case of THE GRAND CANON, which part of the bibliography). Thousands of such items under copyright have been digitized and made available on the web, but often they require a user to pay to see them, or be a member of a subscribing institution through which the item may be viewed. Even more are simply under embargo. This makes perfect business sense; yet, if all that is needed by the bibliographer is an indication of whether or not to include a citation, by examining the content, it is discouraging to have to omit a citation because of the cost or inability to look at it without acquiring a copy. Ironically, the exercise of copyright law can preclude a simple examination of a work,

⁸³ There are printed catalogues, too, but the Authorities specifically may be viewed online at <http://authorities.loc.gov>.

leading to the omission of that work in a bibliography. Although this does not happen frequently, it exposes an interesting, but unutilized, benefit to those who own copyrights: By a bibliography's inclusion of citations for works that are under copyright, it serves to alert interested users to the existence of those works, which encourages their acquisition and use under the protections of copyright law.

12. There may be tens of thousands of articles and books wholly and partly about the Grand Canyon and lower Colorado River region that have been written in languages other than English. More than 10,500 non-English citations do presently appear in THE GRAND CANON. Intuitively there must be myriad more that have escaped all manner of public indexing, web-posting, and serendipitous discoveries by me and contributors. Finding foreign-language articles in serials and journals, particularly those products that are elusive in libraries and far from the regions in which they were produced and which are written in non-Roman alphabetic schemes; they will be challenging work. Those that appear in THE GRAND CANON must therefore be considered only a sample.

13. THE GRAND CANON would benefit by providing translations of *all* non-English titles and extracted notes, a process far beyond my capabilities. (See also my remarks in the section here on [“Translating and Transliterating”](#).)

14. Manuscript and archival holdings are unique resources. However, because they exist mostly as single copies in one location (copies of these materials may also exist as a matter of user-copy production policies or microfilming), they are not as conveniently available as are published materials that can be obtained in a number of places or through inter-library loan services. Today, some items may be available through digitized resources online, and many repositories may make copies for researchers, usually for a charge. A separate guide to these resources would be a boon to researchers, though yet another Herculean task.

15. For web material there is, generally, only a unique “copy” of an item, accessible to all via a hyperlink until it is moved (and possibly difficult to relocate) or removed altogether (and thus gone). It might be worthwhile sometime to compile a webography for the Grand Canyon and Colorado River based on a reliable and unambiguous restoration and perpetuation of old (“historic”?) and current URLs, but this is far beyond the scope of the present work. Such a webography can identify “extinct” resources, as well as those that are in some format “archived” and those that still are reliably perpetuated (at least at the time when the list is prepared!).

• THE GRAND CANON •

COVERAGE AND FORMAT



▲ 1861 "Big Cañon."

Lithograph by J. J. Young, from a sketch by F. W. von Egloffstein. 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 (General Report), Plate IX.

▶ 1873 "Canons of the Colorado River."

[Artist not indicated.] In D. M. Warren (revised by A. von Steinwehr), *An Elementary Treatise on Physical Geography, To Which Is Added a Brief Description of the Physical Phenomena of the United States* (Cowperthwait and Co., Philadelphia, 1873), p. 37.

By the time this rendition had been made, the first of John Wesley Powell's exploits on the Colorado River, in 1869, was well known. Thus it was reasonable, if not just for the purposes of staffage, to place a lone boater on this canyon river—though with some uninformed artistic license in showing the boater's reflection on limpid water.

16. This bibliography can further serve as the source material for works that contain early illustrations of the Grand Canyon and Colorado River. A comparative study of illustrations redrawn from earlier ones has yet to be produced. The illustration *at left* is one of F. W. von Egloffstein's problematical scenes from the 1858 Ives expedition, which was imaginatively refigured (*below*) for use in a geography a decade later. The newer view added the river and a lone boater, in the process changing the view from a side canyon to one in the river gorge. Note also the even more greatly exaggerated incision of tributary canyons (wriggling across the plateau and which look like hanging ravines in their canyon wall outlets) and, in both, Egloffstein's improbable spire rises above the adjacent plateau (and made narrower in the 1873 drawing).

