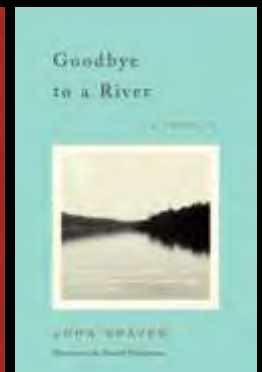
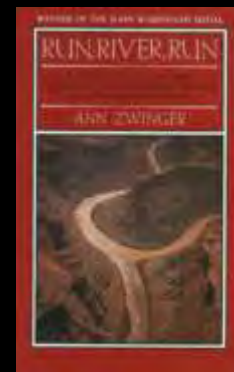
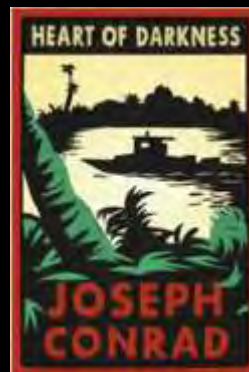
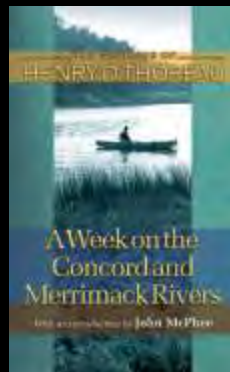


# Riverrun: Language, Art, and Rivers

Kevin M. Anderson, Ph.D.

Austin Water - Center for Environmental Research

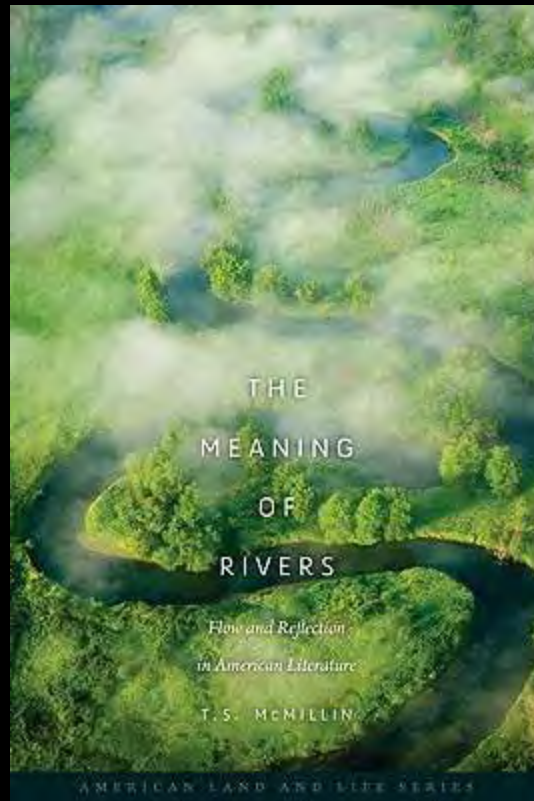


# hauntedbywaters



FLY FISHING IN  
NORTH AMERICAN  
LITERATURE

Mark Browning

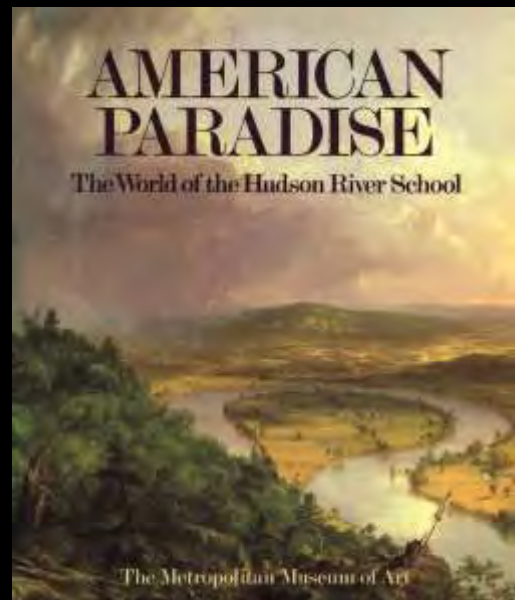


## THE MEANING OF RIVERS

*Flow and Reflection  
in American Literature*

T. S. McMILLIN

AMERICAN LAND AND LIFE SERIES



# AMERICAN PARADISE

The World of the Hudson River School

The Metropolitan Museum of Art

## River Language

### A Linguistic Journey

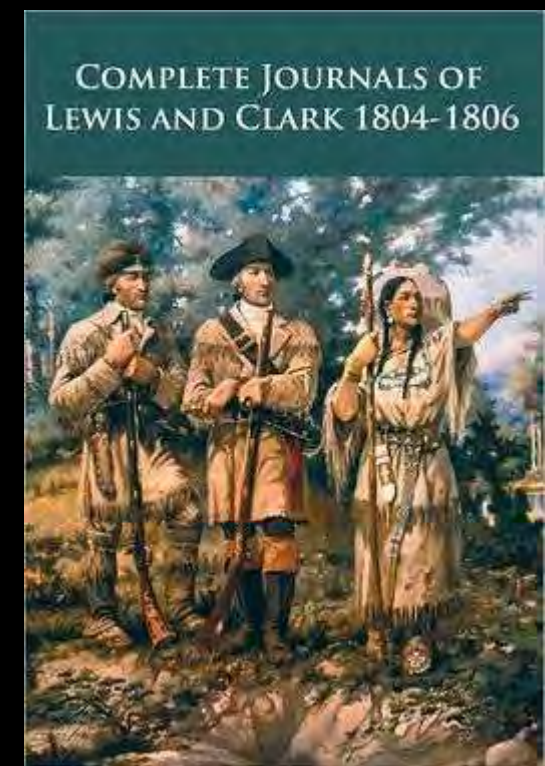


Riverside	Aquifer	Downstream
Riparian	Floodplain	Upstream
Riverine	Erosion	Midstream
Bottomland	Aggrading	Fork
Shoal	Degrading	Hydraulic
Eddy	Downcutting	Terrace
Whirlpool	Reach	Flume
Bar	Channel	Gradient
Rapid	Drainage	Slope
Bank	Watershed	Gravel
Bed	Catchment	Gully
Riffle	Basin	Hydrological
Ripple	Sediment	Hyporheic
Bend	Branch	Thalweg
Pool	Stream	Sweep
Hole	Current	Sinuuous
Bankfull	Surface	Tributary
Snag	Submerge	Inflow
Backwater	Depth	Outflow
Alluvial	Sounding	Headwaters
Fan	Groundwater	Mouth
Braid	Surfacewater	Delta
Oxbow	Discharge	Estuary
Meander	Peak Flow	Flood

## River Exploration

The Lewis and Clark Expedition, also known as the Corps of Discovery Expedition (1804–1806), was the first transcontinental expedition to the Pacific coast undertaken by the United States.

Commissioned by President Thomas Jefferson, it was led by Meriwether Lewis and William Clark.

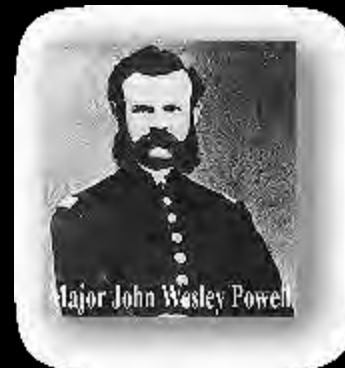
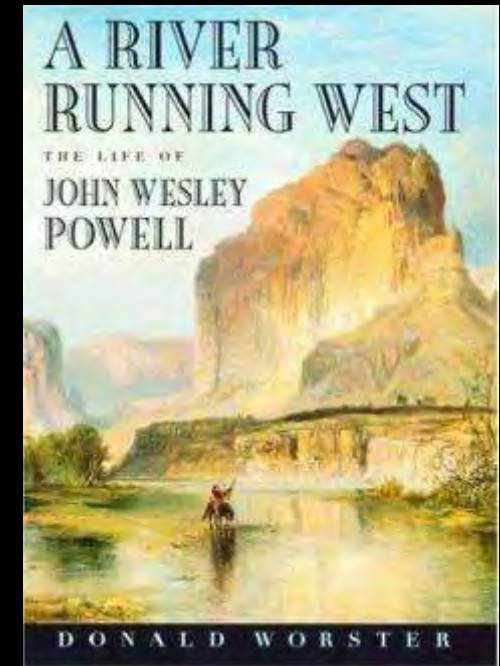
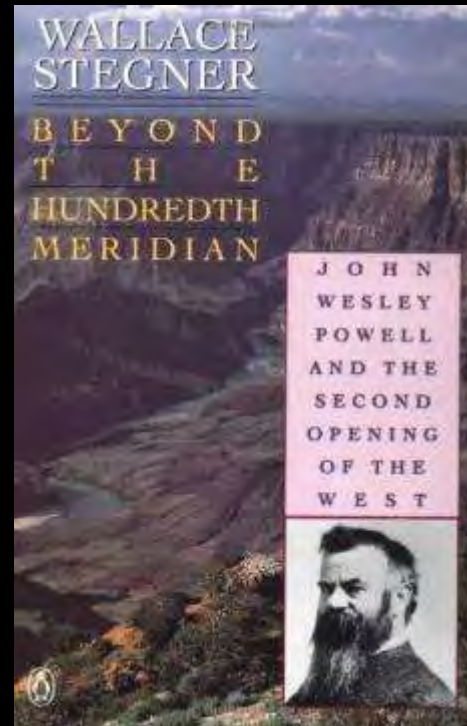
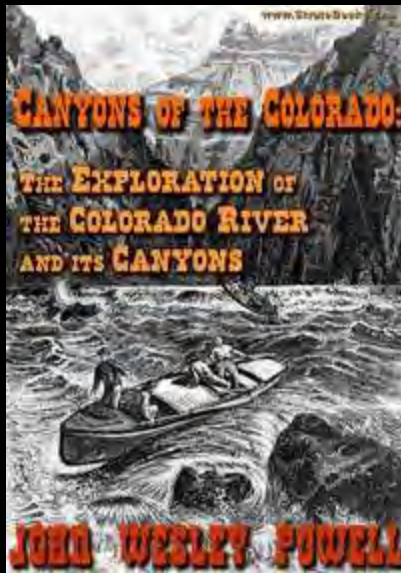




The Journey of the Corps of Discovery  
A Film by Ken Burns  
A GENERAL MOTORS  
MARK OF EXCELLENCE PRESENTATION



The Powell Geographic Expedition was a groundbreaking 19th century U.S. exploratory expedition of the American West, led by John Wesley Powell in 1869, that provided the first-ever thorough investigation of the Green and Colorado rivers, including the first known passage through the Grand Canyon.



John Wesley Powell

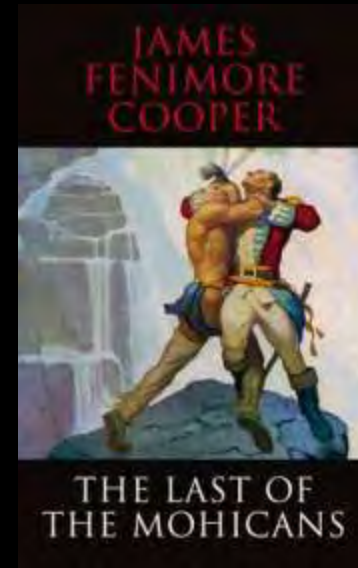
1834-1902

## From Exploration to Imagination - James Fenimore Cooper 1789 – 1851

Cooper was a prolific and popular American writer of the early 19th century. His historical romances of frontier and Indian life in the early American days created a unique form of American literature. He lived most of his life in Cooperstown, New York, established by his father William.

In 1823, he published *The Pioneers*, the first of the Leatherstocking series. The series features Natty Bumppo, a resourceful American woodsman at home with the Delaware Indians and their chief Chingachgook. Bumppo was also the main character of Cooper's most famous novel, *The Last of the Mohicans: A Narrative of 1757* (1826).

Written in New York City, where Cooper and his family lived from 1822 to 1826, the book became one of the most widely read American novels of the 19th century.



Illustrated by N. C. Wyeth. *The Last of the Mohicans: A Narrative of 1757*. New York: C. Scribner's Sons, 1919.

## Riverine Landscapes - Hudson River School

Digital Collections from The Metropolitan Museum of Art Libraries <http://libmma.contentdm.oclc.org/cdm/>

The Hudson River School was a mid-19th century American art movement embodied by a group of landscape painters whose aesthetic vision was influenced by romanticism. The Hudson River School was America's first true artistic fraternity.

Its name was coined to identify a group of New York City-based landscape painters that emerged about 1850 under the influence of the English émigré Thomas Cole and flourished until about the time of the Centennial. Because of the inspiration exerted by his work, Cole is usually regarded as the "father" or "founder" of the school, though he himself played no special organizational or fostering role except that he was the teacher of Frederic Edwin Church. Along with Albert Bierstadt, Church was the most successful painter of the school until its decline.





## Thomas Cole 1801-1848

From the start, Cole's style was marked by dramatic forms and vigorous technique, reflecting the British aesthetic theory of the Sublime, or fearsome, in nature. In the representation of American landscape, really in its infancy in the early nineteenth century, the application of the Sublime was virtually unprecedented, and moreover accorded with a growing appreciation of the wildness of native scenery that had not been seriously addressed by Cole's predecessors.

However, the wilderness theme had earlier gained currency in American literature, especially in the "Leatherstocking" novels of James Fenimore Cooper, which were set in the upstate New York locales that became Cole's earliest subjects, including several pictures illustrating scenes from the novels.



View from Mount Holyoke, Northampton, Massachusetts, after a Thunderstorm  
1836

The Connecticut River Valley

In 1824, a tourist hotel was opened in the Catskill Mountains one hundred miles upriver from New York. Once in New York in late 1825, Cole sailed for the Catskills, making sketches there and elsewhere along the banks of the Hudson. He produced a series of paintings that, when spotted in a bookstore window by three influential artists, gained him widespread commissions and almost instant fame.



View of Fort Ticonderoga from Gelyna

1826

Distant View of Niagara Falls  
1830  
Thomas Cole



Home in the Woods  
1846  
Thomas Cole



The Four Elements – Catskill Mountain House  
1843



The Catskills  
1859



Asher B. Durand 1796–1886

Kindred Spirits  
1849



After Cole's death in 1848, his older contemporary Asher B. Durand became the acknowledged leader of the New York landscape painters; in 1845, he rose to the presidency of the National Academy of Design, the reigning art institution of the period, and, in 1855–56, published a series of "Letters on Landscape Painting" which codified the standard of idealized naturalism that marked the school's production.

## Frederic Edwin Church 1826–1900

Church was stirred by the travel accounts and scientific tracts of the German naturalist Alexander von Humboldt to journey twice to South America in the 1850s and paint large-scale landscapes of the equatorial Andean regions that encompassed torrid to frigid habitats in a single picture—the Earth in microcosm. The ten-foot-wide *Heart of the Andes* (1859) is the most ambitious and acclaimed of these works. It was promoted as a single-picture attraction—i.e., set in a dark, windowlike frame draped with curtains and starkly illuminated in an otherwise darkened room—that drew thousands of paying spectators in New York, London, and eight other American cities.



Church enjoyed the privilege and distinction of being Cole's student (1844–46), but supplanted his teacher's literary and historical conceits with scientific and expeditionary ones. He established his reputation with outsize depictions of North American scenic wonders such as Niagara Falls.



Niagara Falls  
1857  
Frederic Edwin Church



## Albert Bierstadt 1830 – 1902

In the Civil War years, Church's only serious rival was Albert Bierstadt, an émigré who returned to his native Germany to study art at the Düsseldorf Academy. After a stint in Switzerland and Italy, he returned to the U.S. to seize—just as Church had the southern hemisphere—the American West as his artistic frontier.

The six-by-ten-foot Rocky Mountains, Lander's Peak was the chief product of Bierstadt's first journey to the Rockies of Wyoming with the government survey expedition of Colonel Frederick W. Lander. The great painting was placed as a deliberate complement and competitor opposite The Heart of the Andes in the art gallery of the Metropolitan Fair in New York in 1864. In another gallery of the fair, the artist mounted a tableau vivant of real Indians recalling those in the foreground of his picture.



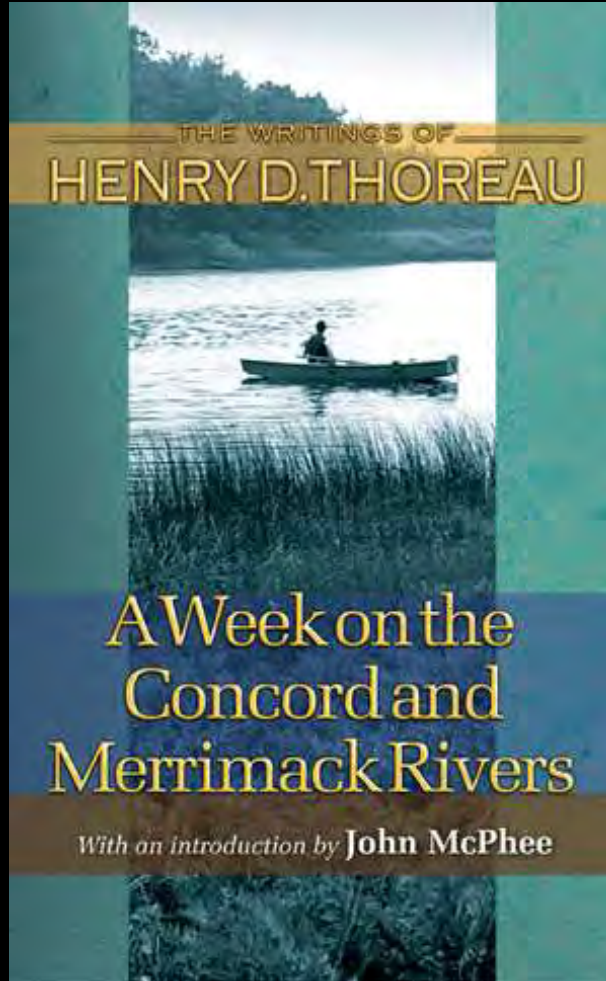


Yosemite Valley, Yosemite Park, c. 1868,



Henry David Thoreau  
1817-1862

Published 1849  
(Walden 1854)



## Transcendental River

*A Week on the Concord and Merrimack Rivers* relates the two-week boating and hiking trip that Thoreau and his brother John took through Massachusetts and New Hampshire in 1839.

As John had died from tetanus in 1842, Thoreau wrote the book as a tribute to his memory.

When the first light dawned on the earth, and the birds awoke, and the brave river was heard rippling confidently seaward, and the nimble early rising wind rustled the oak leaves about our tent, all men, having reinforced their bodies and their souls with sleep, and cast aside doubt and fear, were invited to unattempted adventures...

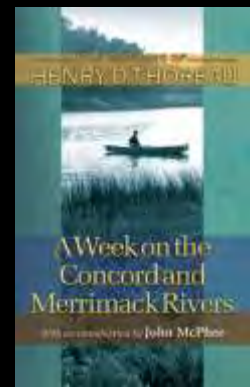
Rivers must have been the guides which conducted the footsteps of the first travelers.

They are the constant lure, when they flow by our doors, to distant enterprise and adventure, and, by a natural impulse, the dwellers on their banks will at length accompany their currents to the lowlands of the globe, or explore at their invitation the interior of continents...

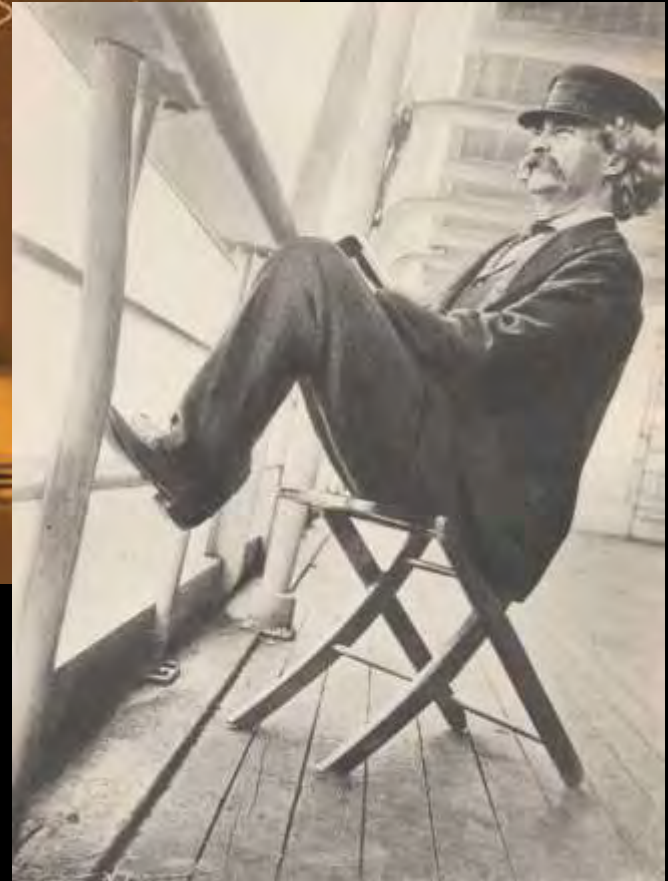
I had often stood on the banks of the Concord, watching the lapse of the current, an emblem of all progress, following the same law with the system, with time, and all that is made;

the weeds at the bottom gently bending down the stream, shaken by the watery wind, still planted where their seeds had sunk, but ere long to die and go down likewise;

the shining pebbles, not yet anxious to better their condition, the chips and weeds, and occasional logs and stems of trees that floated past, fulfilling their fate, were objects of singular interest to me, and at last I resolved to launch myself on its bosom and float whither it would bear me.



# Mark Twain's Mississippi

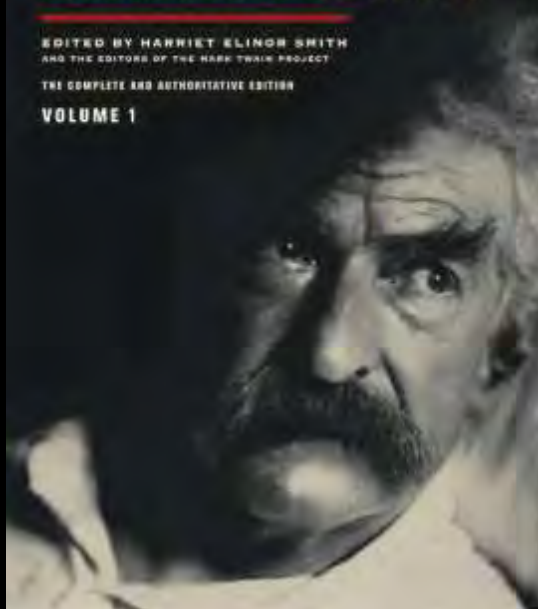


## AUTOBIOGRAPHY OF MARK TWAIN

EDITED BY HARRIET ELLIOTT SMITH  
AND THE EDITORS OF THE MARK TWAIN PROJECT

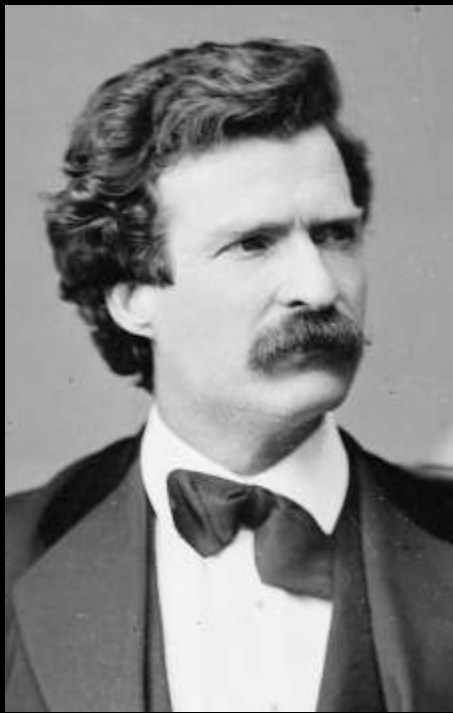
THE COMPLETE AND AUTHORITATIVE EDITION

VOLUME 1



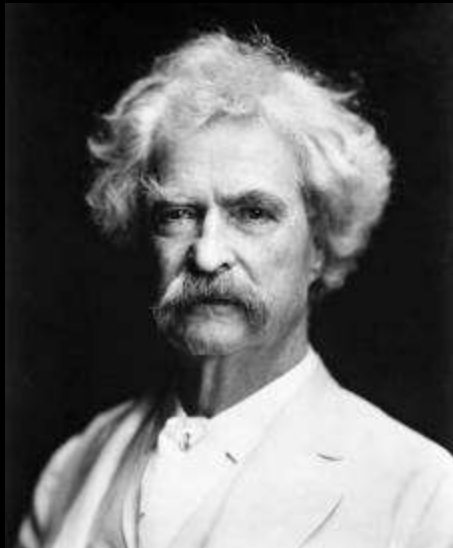
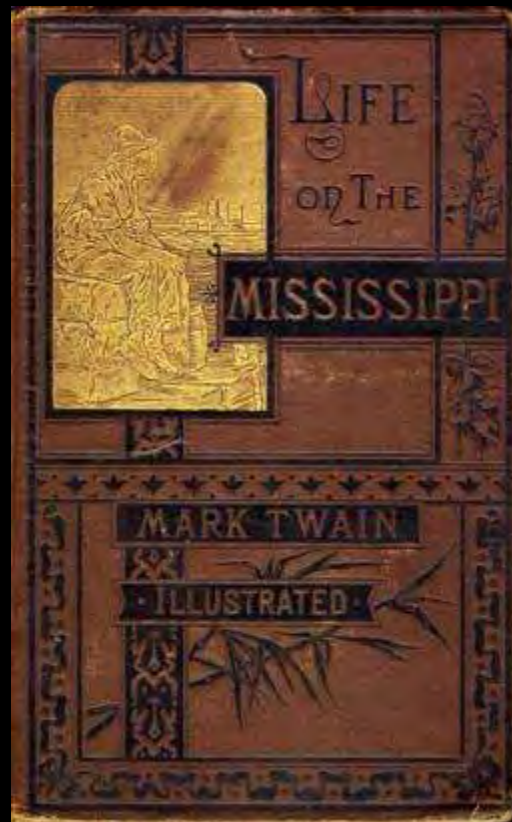
Innocence and Experience: A Life on the River

Mark Twain 1835-1910

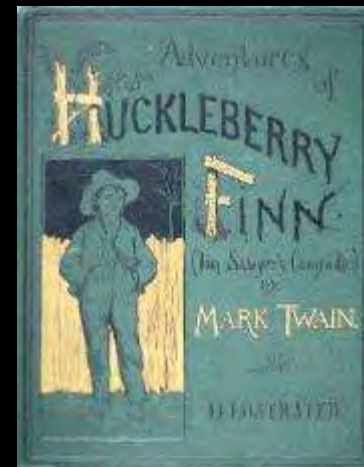


*Life on the Mississippi* is a memoir of his days as a steamboat pilot on the Mississippi River before the American Civil War, and also a travel book, recounting his trip along the Mississippi many years after the War.

Published 1883



Published 1876



Published 1884

BUT the basin of the Mississippi is the BODY OF THE NATION. All the other parts are but members, important in themselves, yet more important in their relations to this.

I still keep in mind a certain wonderful sunset which I witnessed when steamboating was new to me.

A broad expanse of the river was turned to blood; in the middle distance the red hue brightened into gold, through which a solitary log came floating, black and conspicuous; in one place a long, slanting mark lay sparkling upon the water;

in another the surface was broken by boiling, tumbling rings, that were as many-tinted as an opal;

where the ruddy flush was faintest, was a smooth spot that was covered with graceful circles and radiating lines, ever so delicately traced;

the shore on our left was densely wooded, and the sombre shadow that fell from this forest was broken in one place by a long, ruffled trail that shone like silver;

and high above the forest wall a clean-stemmed dead tree waved a single leafy bough that glowed like a flame in the unobstructed splendor that was flowing from the sun.

There were graceful curves, reflected images, woody heights, soft distances;

and over the whole scene, far and near, the dissolving lights drifted steadily, enriching it, every passing moment, with new marvels of coloring.

I stood like one bewitched. I drank it in, in a speechless rapture.



Now when I had mastered the language of this water and had come to know every trifling feature that bordered the great river as familiarly as I knew the letters of the alphabet, I had made a valuable acquisition.

But I had lost something, too. I had lost something which could never be restored to me while I lived. All the grace, the beauty, the poetry had gone out of the majestic river!

"This sun means that we are going to have wind to-morrow; that floating log means that the river is rising, small thanks to it;

that slanting mark on the water refers to a bluff reef which is going to kill somebody's steamboat one of these nights, if it keeps on stretching out like that;

those tumbling 'boils' show a dissolving bar and a changing channel there; the lines and circles in the slick water over yonder are a warning that that troublesome place is shoaling up dangerously;

that silver streak in the shadow of the forest is the 'break' from a new snag, and he has located himself in the very best place he could have found to fish for steamboats;

that tall dead tree, with a single living branch, is not going to last long, and then how is a body ever going to get through this blind place at night without the friendly old landmark?"

No, the romance and the beauty were all gone from the river. All the value any feature of it had for me now was the amount of usefulness it could furnish toward compassing the safe piloting of a steamboat.



Innocence and Experience: A Life on the River

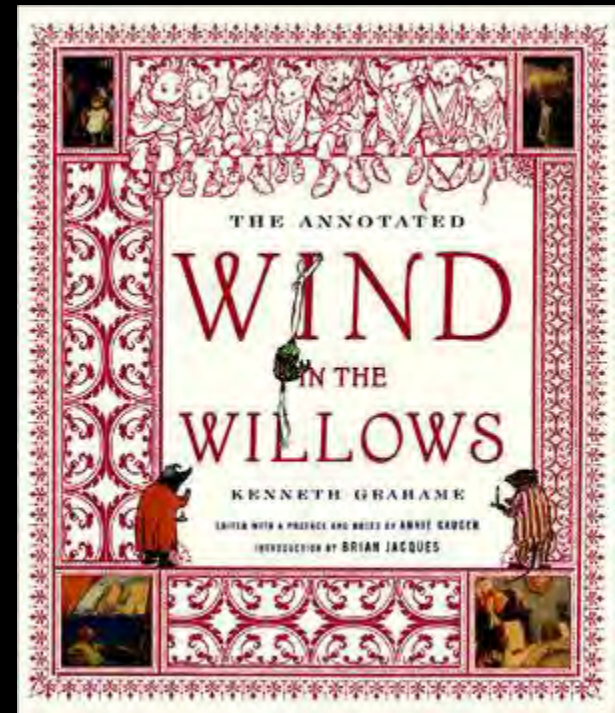
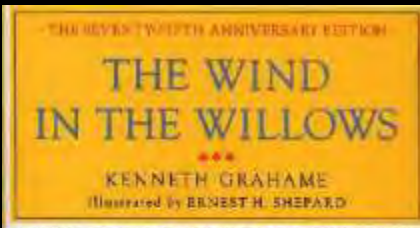


The River of Childhood  
Kenneth Grahame (1859 – 1932)

*The Wind in the Willows* is a classic of children's literature first published in 1908.

“Believe me, my young friend, there is nothing - absolutely nothing - half so much worth doing as simply messing about in boats.”

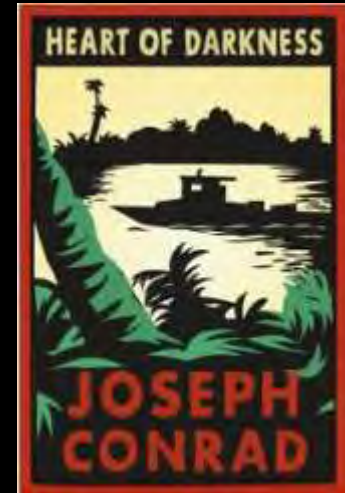
“The Mole was bewitched, entranced, fascinated. By the side of the river he trotted as one trots, when very small, by the side of a man who holds one spellbound by exciting stories; and when tired at last, he sat on the bank, while the river still chattered on to him, a babbling procession of the best stories in the world, sent from the heart of the earth to be told at last to the insatiable sea.”



## The Dark Journey

Joseph Conrad 1857-1924  
*Heart of Darkness* (1899)

Conrad retells the story of Marlow's job as an ivory transporter down the Congo River. Through his journey, Marlow develops an intense interest in investigating Kurtz, an ivory-procurement agent. *Heart of Darkness* explores the darkness potentially inherent in all human hearts, and deals with the themes of colonialism, racism, and savagery versus civilization.



Now when I was a little chap I had a passion for maps. I would look for hours at South America, or Africa, or Australia, and lose myself in all the glories of exploration. At that time there were many blank spaces on the earth, and when I saw one that looked particularly inviting on a map (but they all look that) I would put my finger on it and say, 'When I grow up I will go there.'

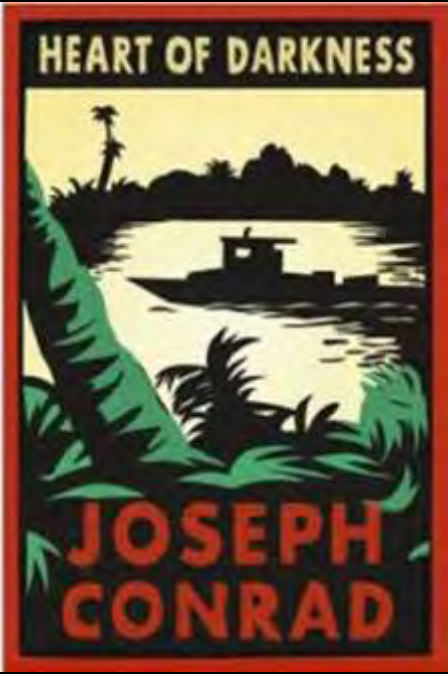
I have been in some of them, and... well, we won't talk about that.

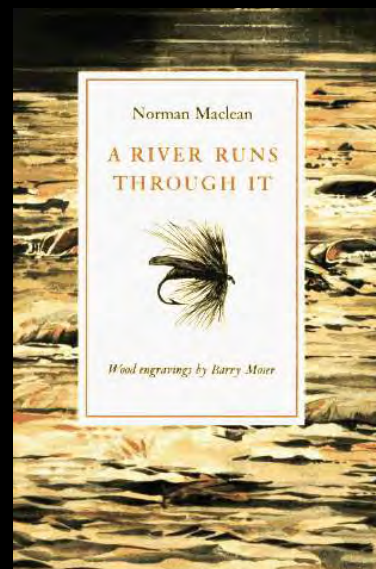
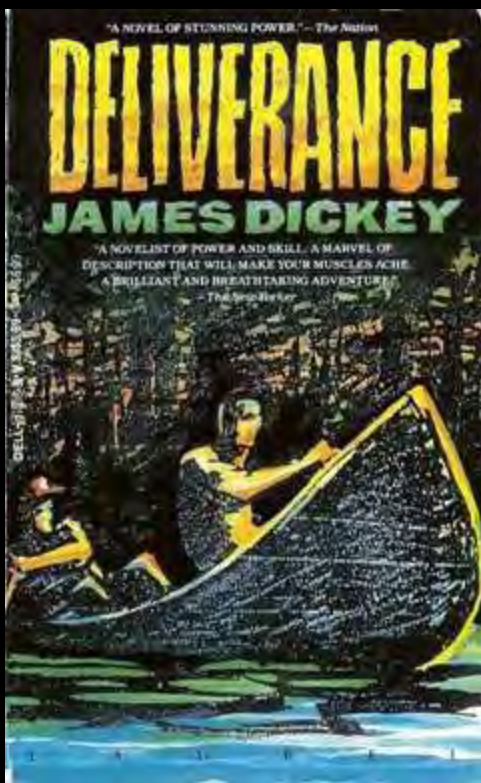
But there was one yet—the biggest, the most blank, so to speak—that I had a hankering after.

True, by this time it was not a blank space any more. It had got filled since my boyhood with rivers and lakes and names. It had ceased to be a blank space of delightful mystery—a white patch for a boy to dream gloriously over. It had become a place of darkness.

Following Marlow's tale there is a dark shift in sentiments as we learn a little more about the current conditions of their location in England on the Thames; and read at the story's end:

The offing was barred by a black bank of clouds, and the tranquil waterway leading to the uttermost ends of the earth flowed sombre under an overcast sky—seemed to lead into the heart of an immense darkness.





## River of Consciousness - James Joyce 1882-1941

"A way a lone a last a loved a long the...riverrun, past Eve and Adam's, from swerve of shore to bend of bay..."

*Finnegans Wake* opens with the words

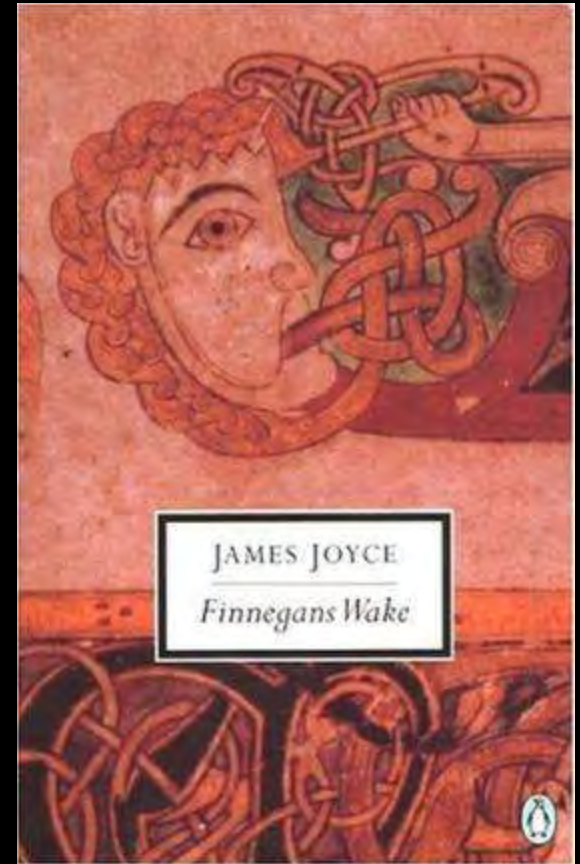
"riverrun, past Eve and Adam's, from swerve of shore to bend of bay, brings us by a commodius vicus of recirculation back to Howth Castle and Environs."

("vicus" is a pun on Vico)

and ends

"A way a lone a last a loved a long the".

In other words, the book ends with the beginning of a sentence and begins with the end of the same sentence, turning the book into one great cycle.



*Finnegans Wake* was published in book form, after 17 years of composition, on 4 May 1939. Joyce died two years later in Zürich, on 13 January 1941

# Anna Livia Plurabelle

Book 1 Chapter 8 known as the "Anna Livia Plurabelle" chapter, is interwoven with hundreds of river names from all over the globe, and is widely considered the book's most celebrated passage. The chapter was described by Joyce in 1924 as "a chattering dialogue across the river by two washerwomen who as night falls become a tree and a stone."

○

tell me all about

Anna Livia! I want to hear all

about Anna Livia. Well, you know Anna Livia? Yes, of course, we all know Anna Livia. Tell me all. Tell me now. You'll die when you hear. Well, you know, when the old cheb went futt and did what you know. Yes, I know, go on. Wash quit and don't be dabbling. Tuck up your sleeves and loosen your talk-tapes. And don't butt me --- hike! --- when you bend.



Joyce reading of Anna Livia Plurabelle

[http://www.openculture.com/2012/02/james\\_joyce\\_reads\\_anna\\_livia\\_plurabelle\\_from\\_ifinnegans\\_wakei.html](http://www.openculture.com/2012/02/james_joyce_reads_anna_livia_plurabelle_from_ifinnegans_wakei.html)



Anna Livia is a bronze monument located in the Croppy Acre Memorial Park in Dublin, Ireland.

It was formerly located on O'Connell Street. Designed by the sculptor Éamonn O'Doherty, the monument was commissioned by businessman Michael Smurfit, in memory of his father, for the Dublin Millennium celebrations in 1988.

The monument is a personification of the River Liffey which runs through the city.

The river is represented as a young woman sitting on a slope with water flowing past her.

She is familiarly known by the people of Dublin as the Floozie in the Jacuzzi or the Whore in the Sewer (pronounced hoo-er to rhyme with sewer) among other names.

Both nicknames were encouraged by the sculptor himself



## Rivers and Remembrance

Ernest Hemingway 1899-1961

"**Big Two-Hearted River**" is a two-part short story written by American author Ernest Hemingway published in 1925 in his first collection of stories, *In Our Time*.

The story is generally viewed as an account of a healing process for Nick Adams, recently returned from WWI. In the story, Nick returns to his boyhood activities of camping and fishing.

Nick looked down into the pool from the bridge. It was a hot day. A kingfisher flew up the stream. It was a long time since Nick had looked into a stream and seen trout. They were very satisfactory. As the shadow of the kingfisher moved up the stream, a big trout shot upstream in a long angle, only his shadow marking the angle, then lost his shadow as he came through the surface of the water, caught the sun, and then, as he went back into the stream under the surface, his shadow seemed to float down the stream with the current, unresisting, to his post under the bridge where he tightened facing up into the current.

Nick's heart tightened as the trout moved. He felt all the old feeling.





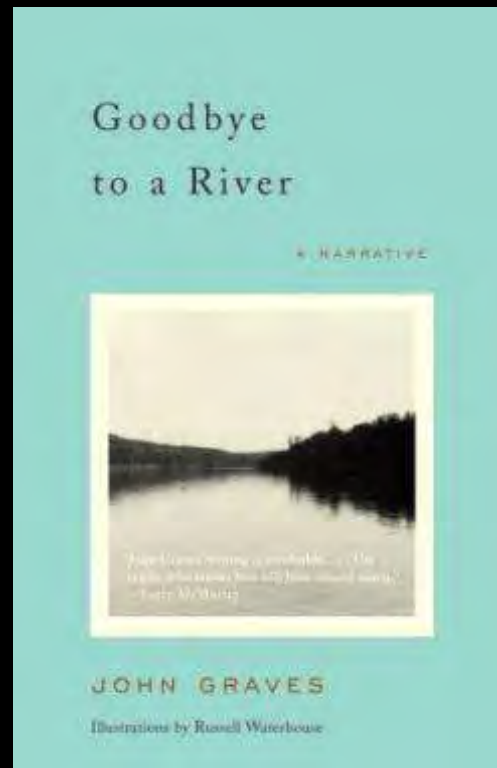
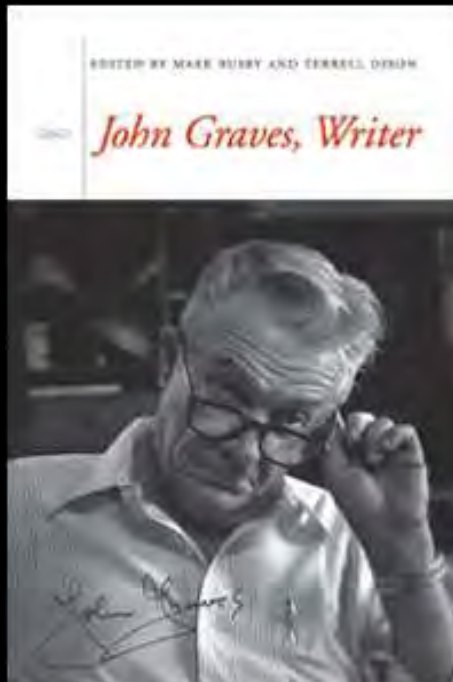
## Rivers and Remembrance

### John Graves 1920- *Goodbye to a River* (1960)

In the spring of 1957 Graves returned home to help care for his gravely ill father. In November of that year, Graves completed a three-week canoe trip down part of the Brazos River that he feared was about to be changed forever by dams.

His narrative chronicle of the trip was first published as a magazine article in *Holiday*, and later Graves added history, philosophy and folklore which resulted in his first major book, *Goodbye to a River* (1960). The book attracted national attention and critical praise for its original style.

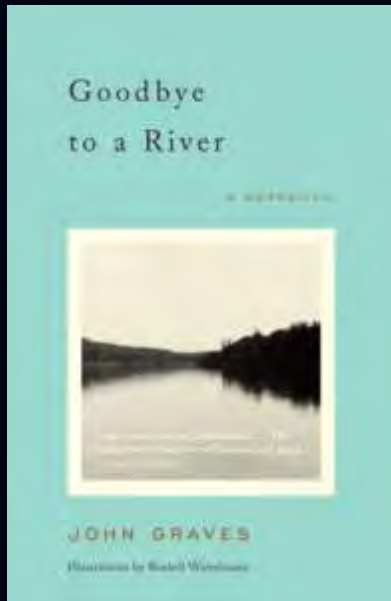
One river, seen right, may well be all rivers that flow to the sea...



## The Real Whole River

A whole river is mountain country and hill country and flat country and swamp and delta country, is rock bottom and sand bottom and weed bottom and mud bottom, is blue, green, red, clear, brown, wide, narrow, fast, slow, clean, and filthy water, is all kinds of trees and grasses and all the breeds of animals and birds and men that pertain and have ever pertained to its changing shores, is a thousand differing and not compatible things in-between that point where enough of the highland drainlets have trickled together to form it, and the wide, flat, probably desolate place where it discharges itself into the salt of the sea.

It is also an entity, one of the real wholes, but to feel the whole is hard because to know it is harder still. 4



# The Naturalist's River

Roy Bedichek 1878-1959

Rivers intrigue me.

I can sit on a log and look upon a flowing stream

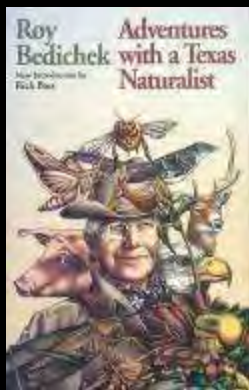
for an hour at a time

without feeling those twinges of conscience

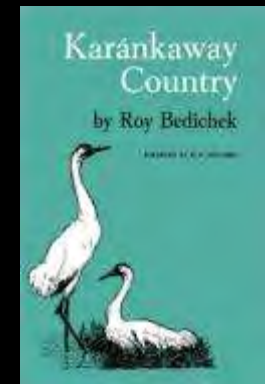
which come while idling in other environments.

18

**1947**



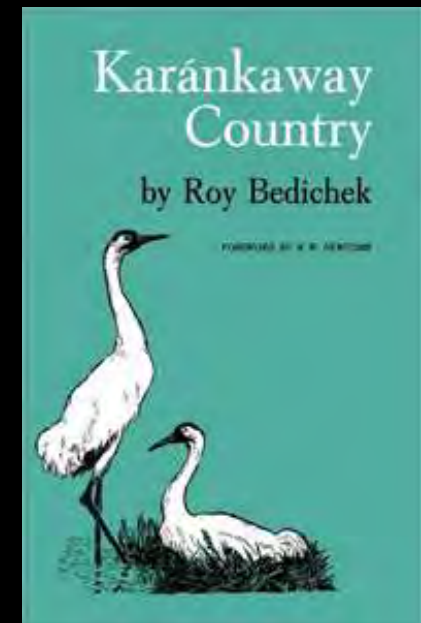
**1950**



## Rivers as Living Organisms

The river is a living organism, or at least it presents characteristics so similar to those of a living organism that to speak of it as such is more than mere metaphor. A river system is one of Nature's units, and it must be dealt with as such if it is to be dealt with successfully for serving human needs. 242

Texas rivers were once truly "rivers of life." As long as Nature was in control, each river system was nourished as an organism, and its business was conducted for all, impartially, on a self-sustaining basis. 278

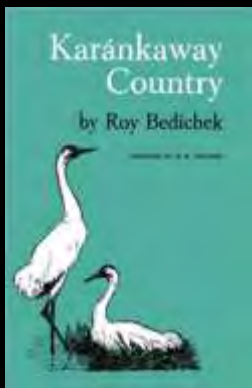


## Problem of river terminology – mouth, head, source

I think that ancient misnomer ‘mouth,’ which we use to designate the place where a river empties, has done the cause of conservation incalculable harm. Our river imagery is muddled at its source. We speak of the head of a river, but there is no mouth in the head. That orifice in our curious anatomy is at the other end. We speak of *the* source of a river, but a river has a thousand sources.

There is no better place than at the so-called ‘mouth’ of a diseased river to diagnose its ailment, for there we find out what it is being fed, whether it is digesting what it is taking in, the condition of its circulatory system, and whether or not its eliminations are normal. By the same token, there is generally no worse place to begin the treatment of the disease after its nature is discovered. 233-4

A river is not a colt to be “broken,” trained, stalled, and depended upon thereafter to do the will of his master. It is eccentric, unaccountable, either has no law of behavior or often keeps it secret from human investigators. Centuries, even, do not delimit its extremes. 244



# History and Folkways - *The Rivers of America Series*

Started in 1937

The series proved so popular that sixty-five volumes were eventually published over a 37-year period

"The natural rhythm moving the pioneer life of America forward was the rhythm of flowing water. It is as the story of American rivers that the folk sagas will be told." - Constance Lindsay Skinner creator of the Rivers of America series

Conceived and planned by Skinner in the mid-1930s during the depth of the Great Depression, the series planned to trace the history and folkways of the United States through its great rivers.

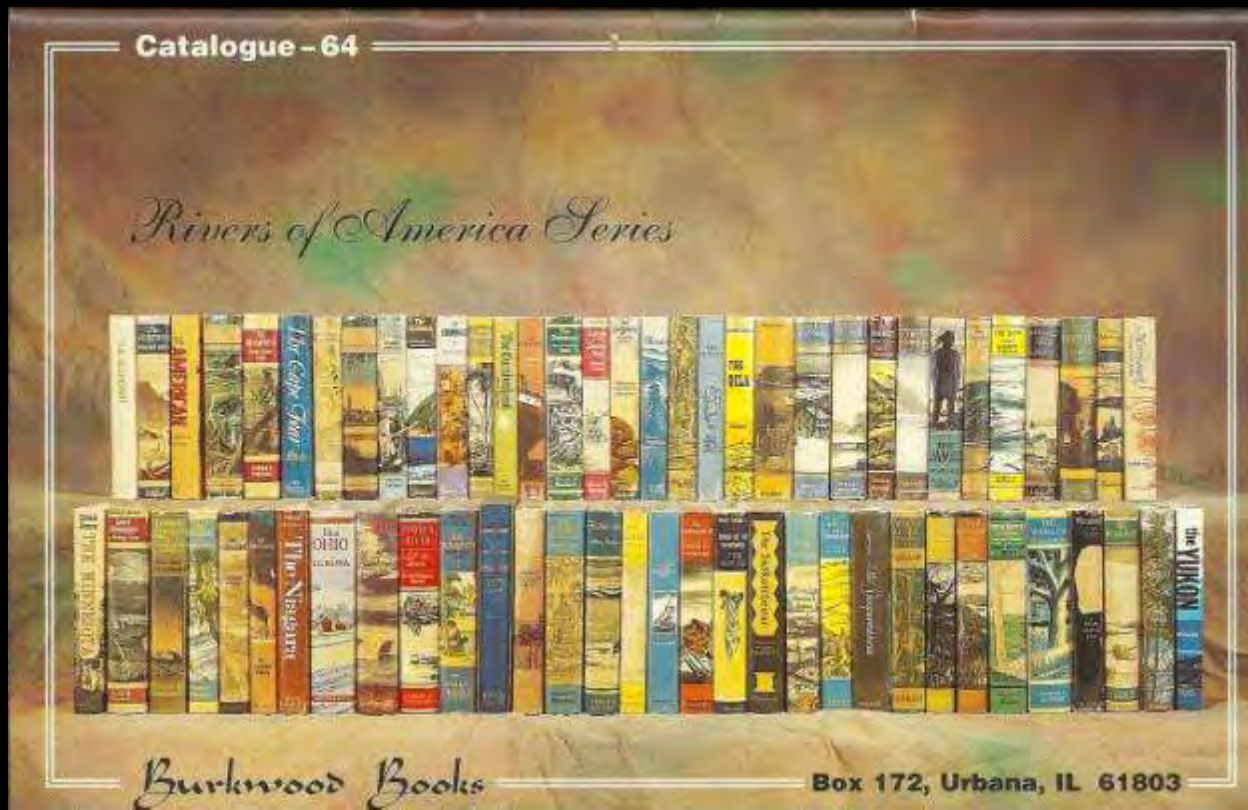


Initially projected as a series of twenty-four volumes under the editorship of Constance Lindsay Skinner, it developed into a series of sixty-two titles from the first title in 1937 to the last title in 1974.

Two titles, Havighurst's *Upper Mississippi* (1937) and Niles' *The James* (1939), were revised by the authors and published, respectively, in 1944 and 1945 and are normally considered part of the original series, thereby making it a series of sixty-four titles.

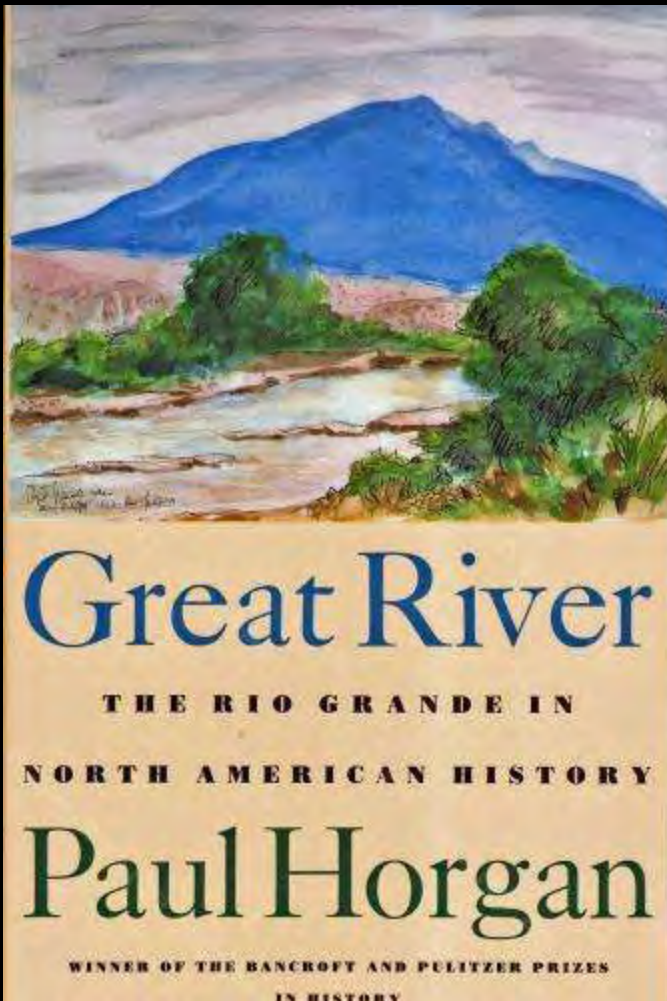
Many persons consider *Songs of the Rivers of America*, edited by Carl Carmer (New York: Farrar & Rinehart, 1942) to be a title in the series, thereby making a series of sixty-five titles.

The original series was published by Farrar & Rinehart (1937-1945) and its successor firms: Rinehart (1946-1958) and Holt, Rinehart, and Winston (1962-1974).



Paul Horgan 1903-1995

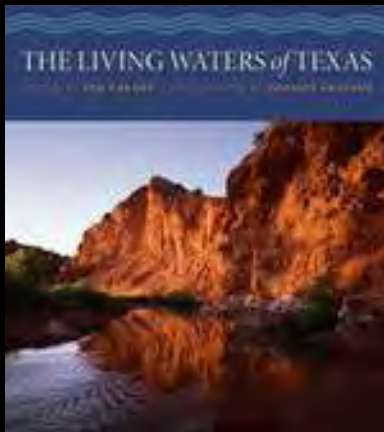
Great River: The Rio Grande in North American History  
1954





River Books, Sponsored by Meadows Center for Water and the Environment, Texas State University

Published by Texas A&M Press

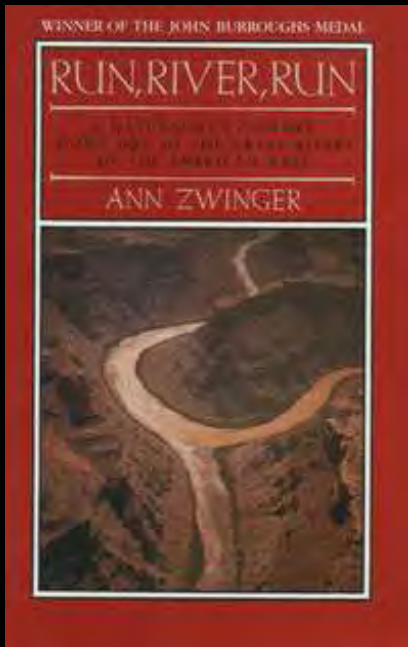


The Artist-Naturalist's River

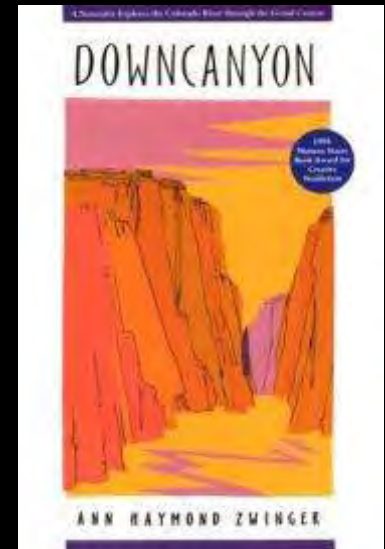
## The Artist-Naturalist's River

“. . . a river is a peculiar and insidious affair that is not always what it seems  
and . . . it slides into other dimensions in lovely and mysterious ways”

- Ann Zwinger



1975



Downcanyon: A Naturalist Explores the Colorado River Through Grand Canyon

1995

The Green River – Wyoming – Utah – “how it relates to the landscape and how it goes and what it shows of rock and wind, how people have used it and how it has used people”

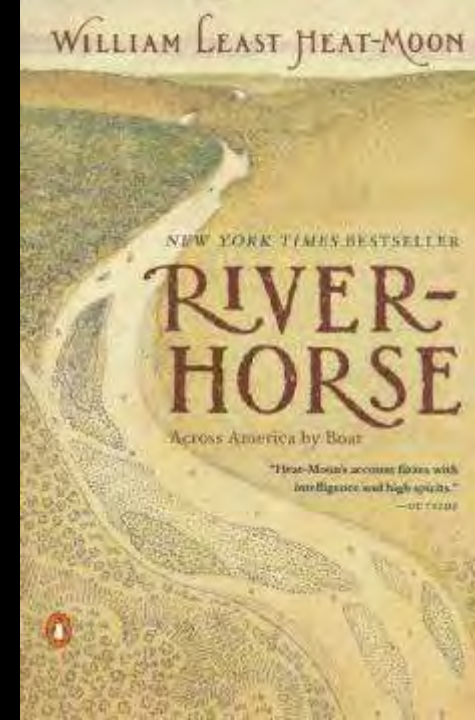
## Literary Journey

### *River-Horse: Across America by Boat* (1999)

William Least Heat-Moon

In 1995, Heat-Moon set out from New York harbor to the breakwater of Astoria, Oregon, almost entirely by water. Aboard his little launch *Nikawa* ("river horse" in Osage), Heat-Moon logged more than five thousand miles, completing a trek following in the wake of earlier explorers, from Henry Hudson to Lewis and Clark.

On the forward bulkhead, near the helm, I attached a wooden plaque, a proverb from the Quakers: PROCEED AS THE WAY OPENS. Aft, above the door to the weldeck and motors, I put up another, this one from Joseph Conrad's *Heart of Darkness*, the advice Marlow receives before ascending the Congo River: AVOID IRRITATION. I have spent my life trying to practice such simplicities, and when I fail, paying the costs.

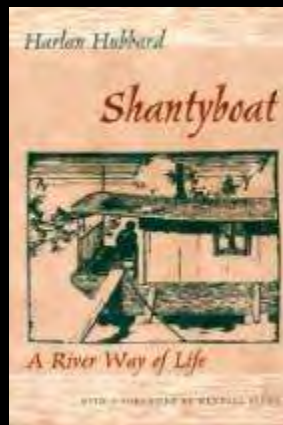
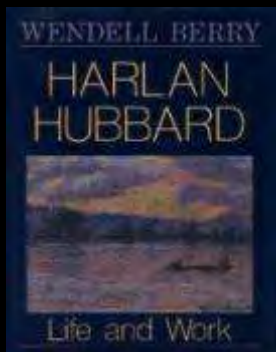


## A River Way of Life - Harlan Hubbard (1900 - 1988)

In 1943, he married Anna Eikenhout (she died 1986). The following year they built a shantyboat at Brent, Kentucky and traveled down the Ohio and Mississippi rivers, ending their journey in the Louisiana bayous in 1951. His book *Shantyboat* recounts the eight-year journey from Brent to New Orleans. His book *Shantyboat in the Bayous*, which was published in 1990, completes the story.

In 1951, Harlan and Anna built a primitive, yet elegant home at Payne Hollow on the shore of the Ohio River in Trimble County, Kentucky. It was there that the Hubbards lived lives that have been described as simultaneously frugal and abundant. To fully understand the Hubbards' lives and their rejection of modern society, *Payne Hollow and Journals, 1929-1944* are essential reading. Author Wendell Berry was a close friend of Hubbard's and has written and lectured on the Hubbards' lives.

Hubbard's art is largely pastoral and he was accomplished with oils, watercolors, and woodblock printing.



<http://www.harlanhubbard.com/index.html>

Wallis, Don. Harlan Hubbard and the River: A Visionary Life (Yellow Springs, OH: OYO Press), 1989.

Berry, Wendell. Harlan Hubbard: Life and Work (Lexington, KY: University Press of Kentucky), 1990.

After building their "shantyboat," out of mostly salvaged materials, Harlan and Anna set out on the river, drifting.

The pure delight of drifting.  
Each time, it was a thrill to shove out into the current,  
to feel the life and power of the river,  
whose beginning and end were so remote.  
We became a part of it, like the driftwood...  
The tension and excitement, the near ecstasy of drifting.  
We had to stop often and take it in small doses.



## River Language

### A Linguistic Journey

### Drifting...



Riverside	Aquifer	Downstream
Riparian	Floodplain	Upstream
Riverine	Erosion	Midstream
Bottomland	Aggrading	Fork
Shoal	Degrading	Hydraulic
Eddy	Downcutting	Terrace
Whirlpool	Reach	Flume
Bar	Channel	Gradient
Rapid	Drainage	Slope
Bank	Watershed	Gravel
Bed	Catchment	Gully
Riffle	Basin	Hydrological
Ripple	Sediment	Hyporheic
Bend	Branch	Thalweg
Pool	Stream	Sweep
Hole	Current	Sinuuous
Bankfull	Surface	Tributary
Snag	Submerge	Inflow
Backwater	Depth	Outflow
Alluvial	Sounding	Headwaters
Fan	Groundwater	Mouth
Braid	Surfacewater	Delta
Oxbow	Discharge	Estuary
Meander	Peak Flow	Flood



Applause!