

Goodbye to the River: A Summary

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Goodbye to a River

A NARRATIVE



JOHN GRAVES

Illustrations by Russell Waterhouse



Center for Environmental Research at Hornsby Bend



The Geography of Rivers: Morphology, Ecology, and Culture

The 2013 Lunchtime Lectures will explore the geography of rivers.

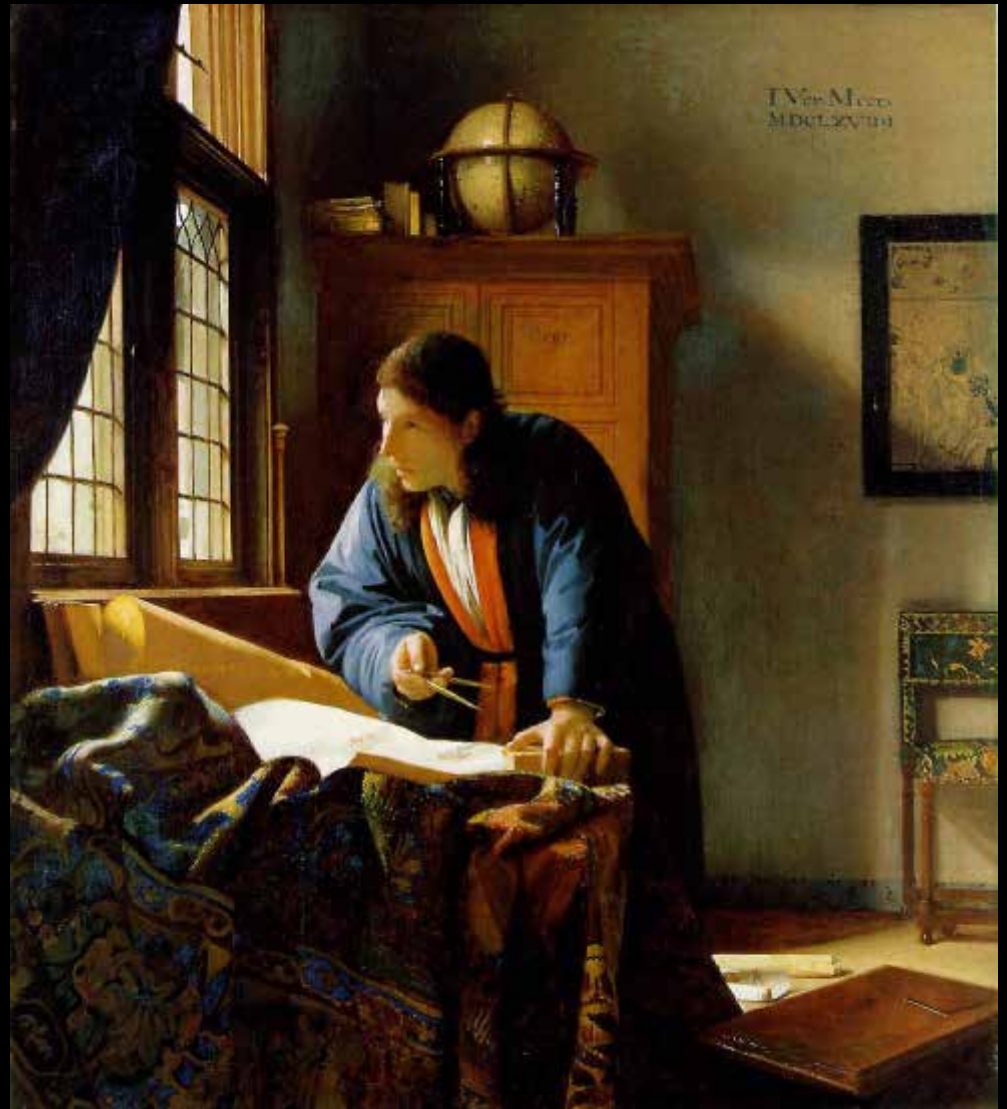


Geography

A literal translation would be "to describe or write about the Earth".

As the bridge between the human and physical sciences, geography is divided into two main branches – human/cultural geography and physical geography.

Vermeer "The Geographer"
1668–1669



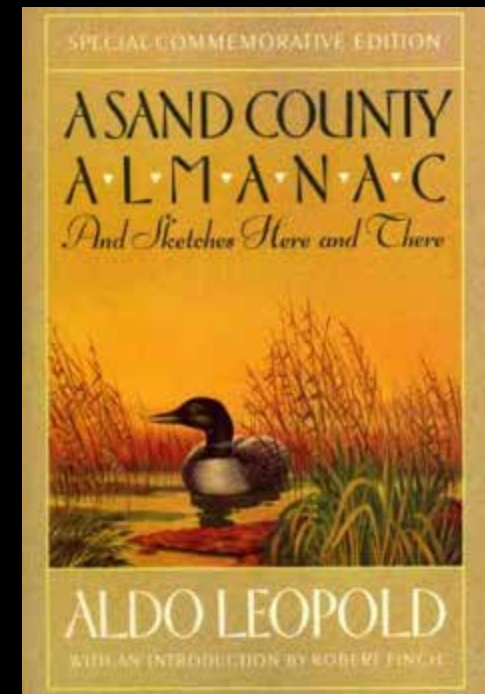
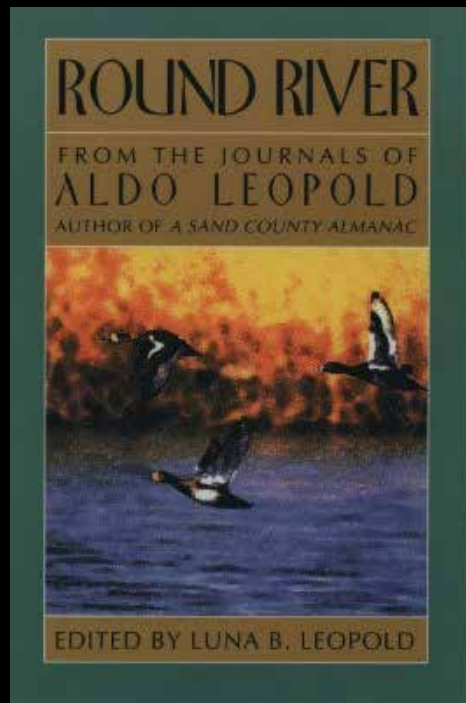
The Round River – Aldo Leopold 1887-1948

"One of the marvels of early Wisconsin was the Round River, a river that flowed into itself, and thus sped around and around in a never-ending circuit.

Paul Bunyan discovered it, and the Bunyan saga tells how he floated many a log down its restless waters."

Metaphor for ecology

"a river that flows into itself"



What is needed is a gentler basis for perceiving the effects of our engineering capabilities. This more humble view of our relation to the hydrologic system requires a modicum of reverence for rivers.

Luna Leopold
October 8, 1915 – 2006

"A Reverence for Rivers"



The Culture of Rivers – January to April

Humans have ancient and complex cultural relationships to rivers revealing the deep significance rivers have for the human psyche. The river as a symbol of Being can be found throughout mythology, and, from the Pre-Socratic philosopher Heraclitus, we supposedly learned that one cannot step in the same river twice. Moreover, the visual arts, music, and literature of rivers reveal the rich imaginative engagement of human culture with the meaning of rivers.

January 9 at Dougherty Arts Center – The Round River: Myth, Meaning, and Rivers

January 30 at City Hall - The Round River: Myth, Meaning, and Rivers

February 13 at Dougherty Arts Center – Riverrun: Language, Art, and Rivers

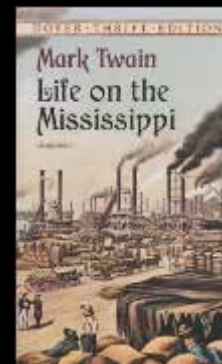
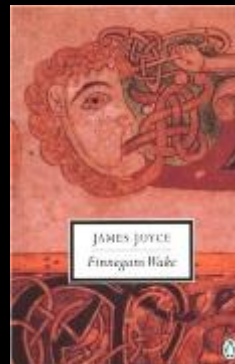
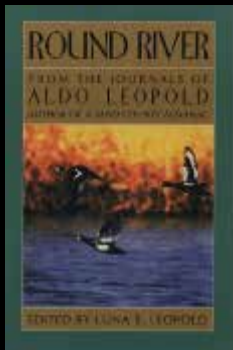
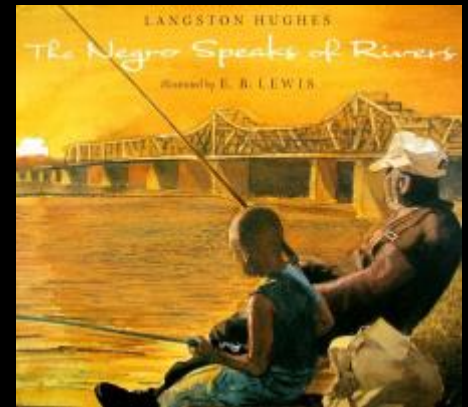
February 20 at City Hall – Riverrun: Language, Art, and Rivers

March 13 at Dougherty Arts Center – Riversong: American Rivers and Music

March 20 at City Hall – Riversong: American Rivers and Music

April 10 at Dougherty Arts Center – Strong Brown God: the Poetry of Rivers

April 17 at City Hall – Strong Brown God: the Poetry of Rivers



River Systems – May to August

Rivers write their way across the surface of the Earth, inscribing deeply or shallowly depending on how resistant the surface is to the flow of water and sediment carried by the river. This morphology of the physical geography of the Earth is the starting point for geography, but a geographer must go beyond the physical shapes and shaping of rivers in order to fully understand them. The living river begins with the geochemistry of flowing water which merges with the biochemistry of aquatic organisms and then further merges with the terrestrial ecology of organisms living along the river's riparian and bottomland zones.

May 8 at Dougherty Arts Center – River Process: the Fluvial System and River Hydrology

May 15 at City Hall - River Process: the Fluvial System and River Hydrology

June 12 at Dougherty Arts Center – River Life: the Ecology of Flowing Water

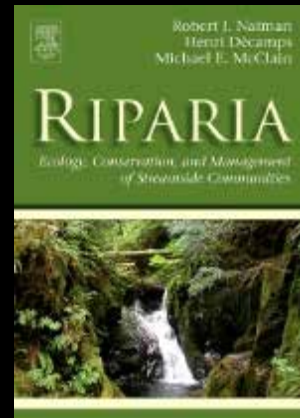
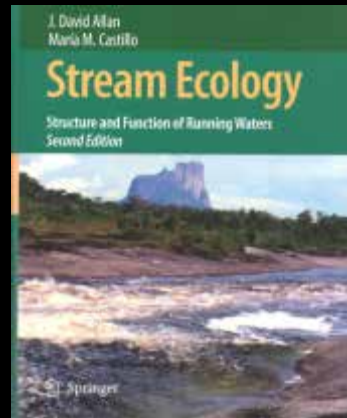
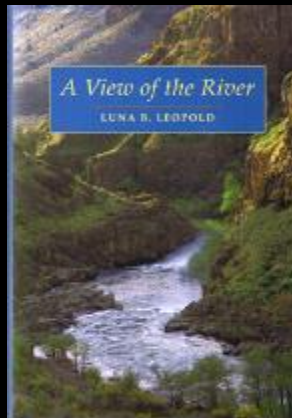
June 19 at City Hall - River Life: the Ecology of Flowing Water

July 10 at Dougherty Arts Center – Riparia: Life at the River's Edge

July 17 at City Hall - Riparia: Life at the River's Edge

August 14 at Dougherty Arts Center – Bottomland: Floodplain Habitats

August 21 at City Hall - Bottomland: Floodplain Habitats



Rivers of Culture – September to December

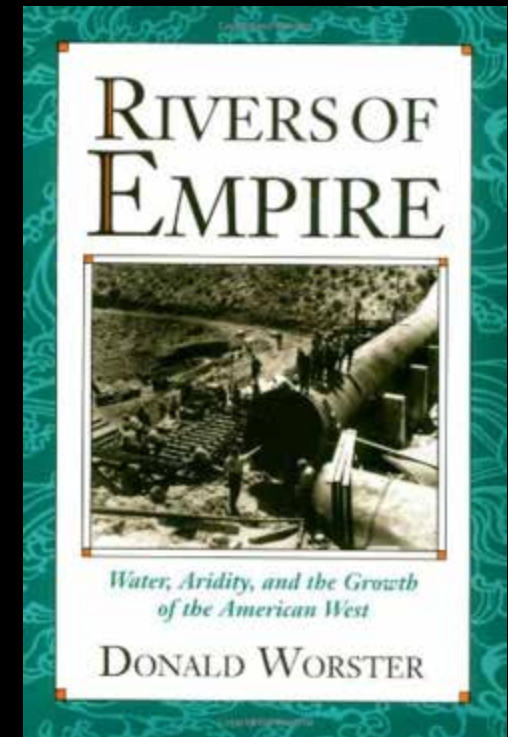
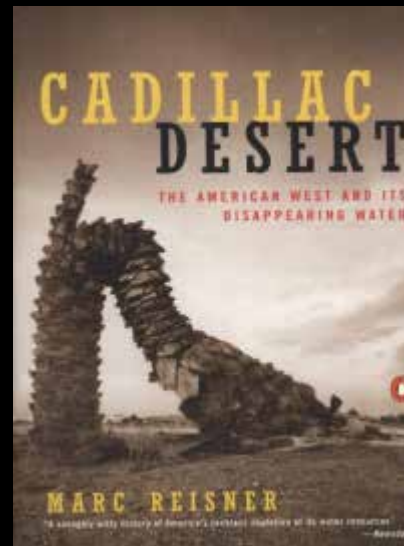
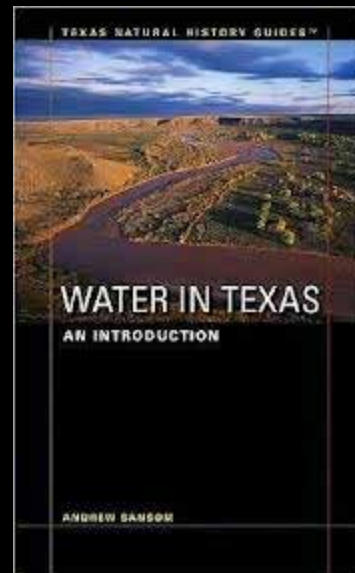
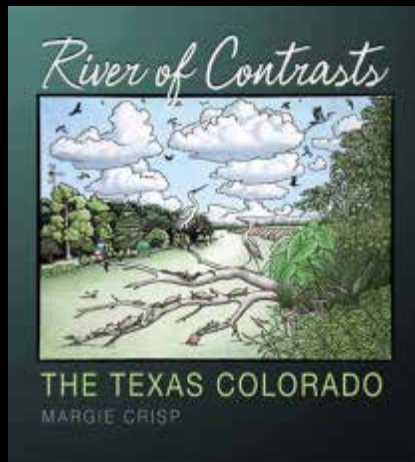
The keystone organisms that impact all aspects of river systems are humans, who settle along rivers and transform hydrology and ecology as we turn natural landscapes into cultural landscapes.

September 11 at Dougherty Arts Center – Rivers of Empire: American Rivers
September 18 at City Hall - Rivers of Empire: American Rivers

October 9 at Dougherty Arts Center – Waters the Land: Texas Rivers
October 16 at City Hall - Waters the Land: Texas Rivers

November 13 at Dougherty Arts Center – Another Colorado: Rivertown Austin
November 20 at City Hall - Another Colorado: Rivertown Austin

December 11 at Dougherty Arts Center – Goodbye to the River: A Summary
December 18 at City Hall - Goodbye to the River: A Summary



River Language

A Linguistic Journey



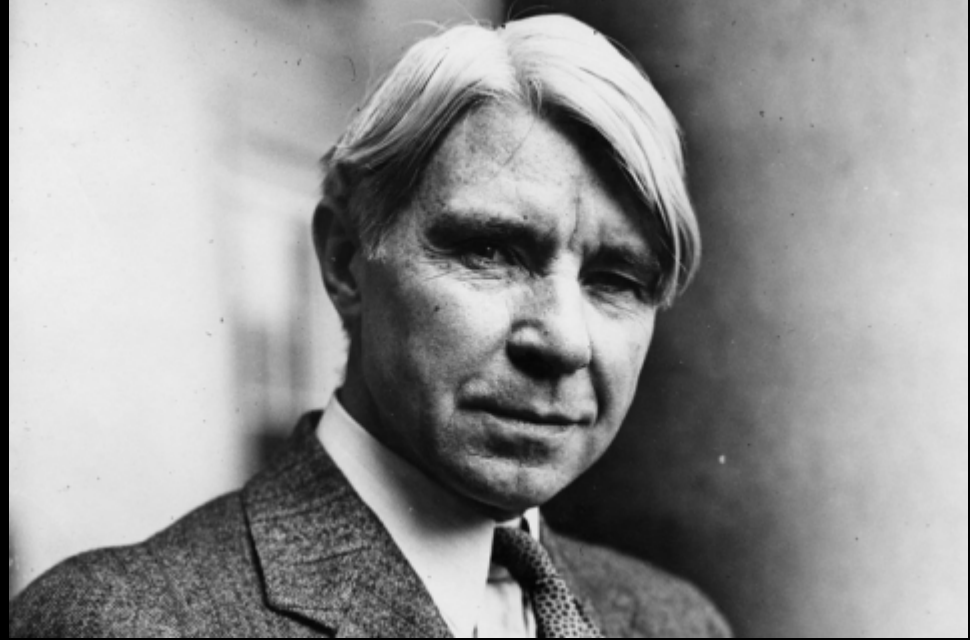
Riverside	Aquifer	Downstream
Riparian	Floodplain	Upstream
Riverine	Erosion	Midstream
Bottomland	Aggrading	Fork
Shoal	Degrading	Hydraulic
Eddy	Downcutting	Terrace
Whirlpool	Reach	Flume
Bar	Channel	Gradient
Rapid	Drainage	Slope
Bank	Watershed	Gravel
Bed	Catchment	Gully
Riffle	Basin	Hydrological
Ripple	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

Carl Sandburg

1878–1967

Languages

There are no handles upon a language
Whereby men take hold of it
And mark it with signs for its remembrance.
It is a river, this language,
Once in a thousand years
Breaking a new course
Changing its way to the ocean.
It is mountain effluvia
Moving to valleys
And from nation to nation
Crossing borders and mixing.
Languages die like rivers.
Words wrapped round your tongue today
And broken to shape of thought
Between your teeth and lips speaking
Now and today
Shall be faded hieroglyphics
Ten thousand years from now.
Sing—and singing—remember
Your song dies and changes
And is not here to-morrow
Any more than the wind
Blowing ten thousand years ago.

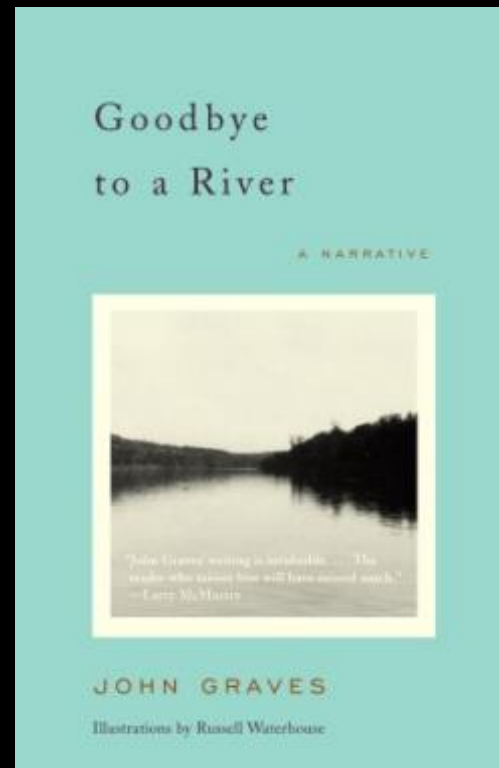
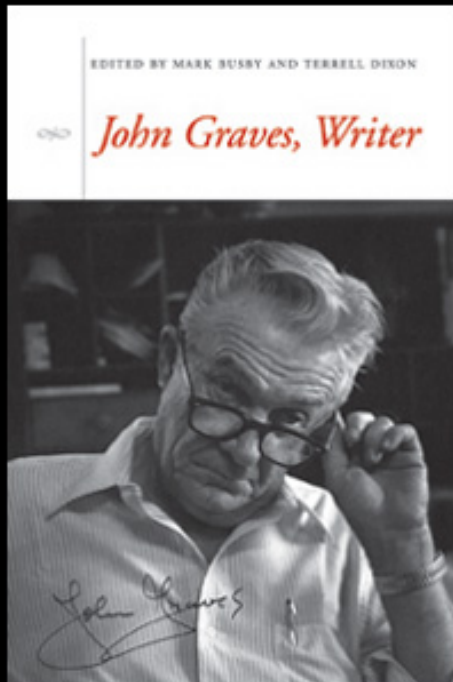


John Graves
1920-2013

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.

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

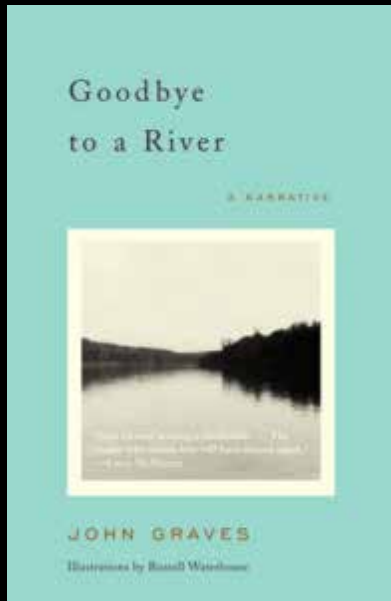


The Real Whole River

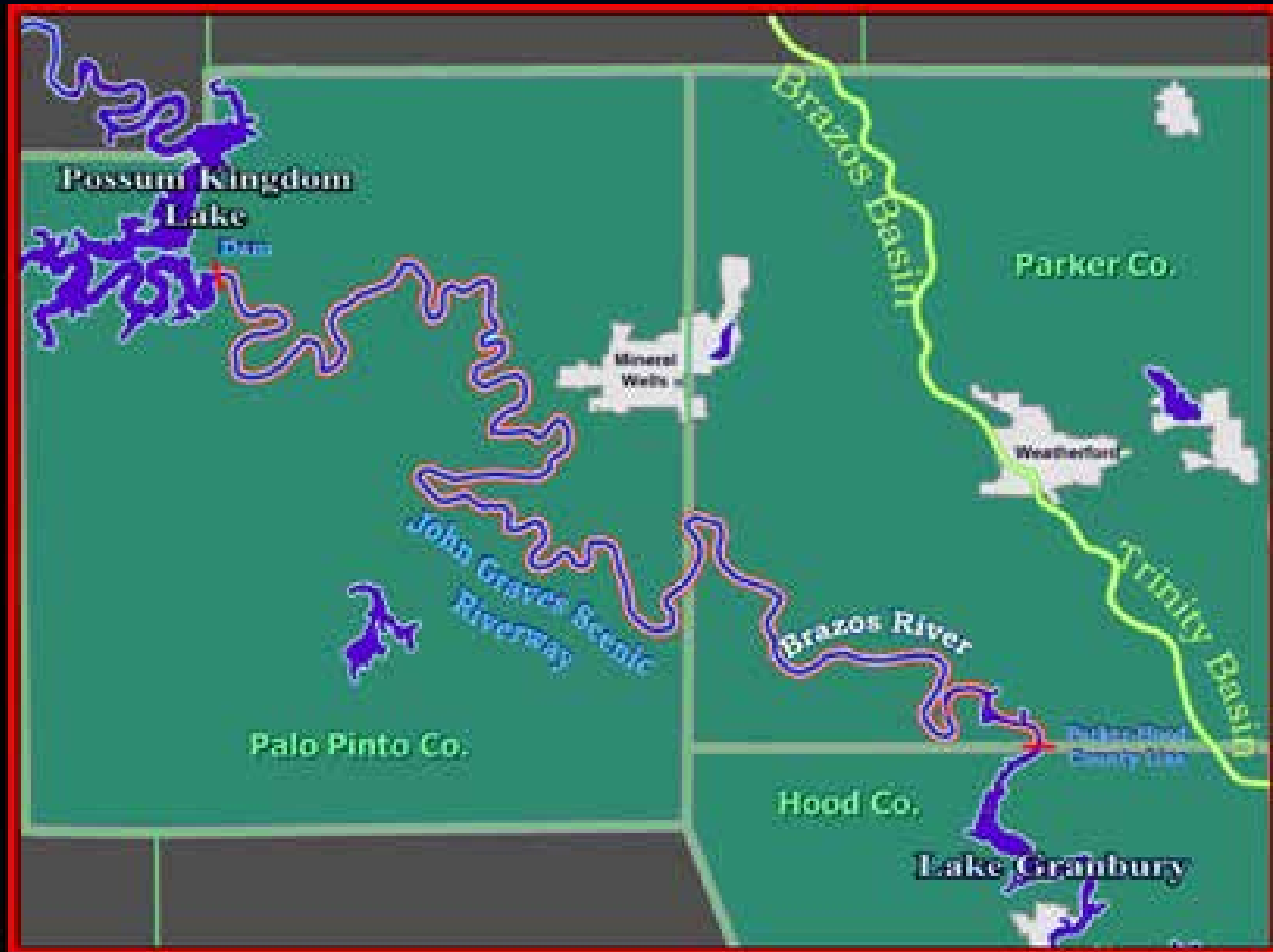
A whole river is mountain country and hill country and flat country and swamp and delta country, is rock bottom and sand bottom and weed bottom and mud bottom, is blue, green, red, clear, brown, wide, narrow, fast, slow, clean, and filthy water, is all kinds of trees and grasses and all the breeds of 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



A three week trip down the Brazos River in November 1957



113-mile segment of the Brazos River between
Possum Kingdom Lake and Lake Granbury

Shadowed Inheritance

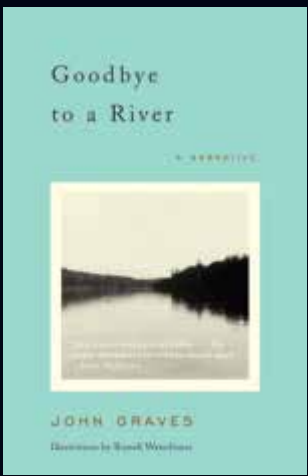
Neither a land nor a people ever starts over clean.

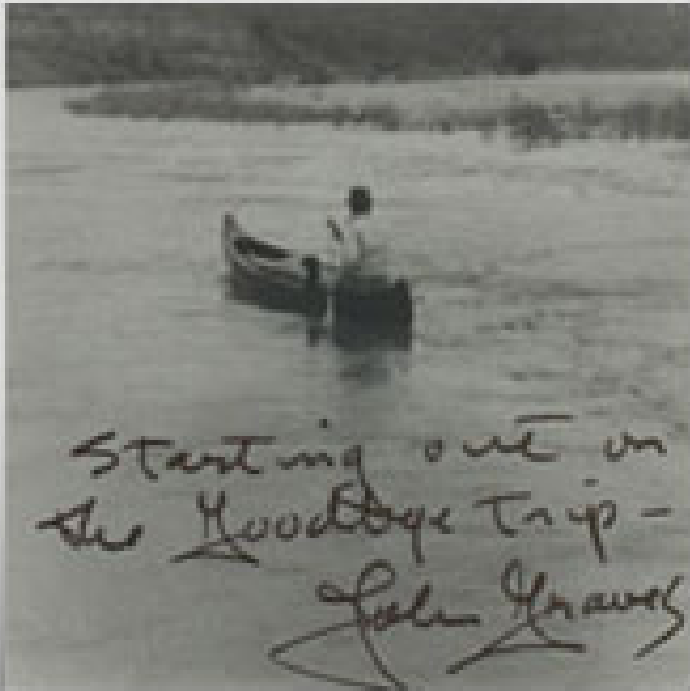
Country is compact of all its past disasters and strokes of luck—of flood and drouth, of the caprices of glaciers and sea winds, of misuse and disuse and greed and ignorance and wisdom—and though you may doze away the cedar and coax back bluestem and mesquite grass and side-oats grama, you're not going to manhandle it into anything entirely new.

It's limited by what it has been, by what's happened to it. And a people, until that time when it's uprooted and scattered and so mixed with other peoples that it has in fact perished, is much the same in this as land.

It inherits.

237





You could go on forever. You know it. Your muscles have gone supple-hard and your hands as crusty as dry rawhide, and your head is cleared, and your boat goes precisely, unstrenuously where and how you want it to go, and all your gear falls into its daily use with thoughtless ease.

There is merely not enough river, not enough time...

You are spare, bare, and ascetic. You knew Saint Henry, Yankee moralist though he might be, and knew too all those other old loners who'd ever baked their bread by fires in manless places.

You knew the sovereign pulse of being.

Or you thought you did...



Reverence for Rivers - Wendell Berry b. 1934

The Peace Of Wild Things

When despair grows in me
and I wake in the middle of the night at the least sound
in fear of what my life and my children's lives may be,
I go and lie down where the wood drake
rests in his beauty on the water, and the great heron feeds.
I come into the peace of wild things
who do not tax their lives with forethought
of grief. I come into the presence of still water.
And I feel above me the day-blind stars
waiting for their light. For a time
I rest in the grace of the world, and am free.



"A Reverence for Rivers" Luna Leopold (October 8, 1915 – 2006)

Speaking of the Persians who dominated Asia Minor in the 5th century B.C., Herodotus said, "They never defile a river with the secretions of their bodies, nor even wash their hands in one; nor will they allow others to do so, as they have a great reverence for rivers." It is the last phrase that deserves our attention.

The river is like an organism; it is internally self-adjusting. It is also resilient and can absorb changes imposed upon it, but not without limit.

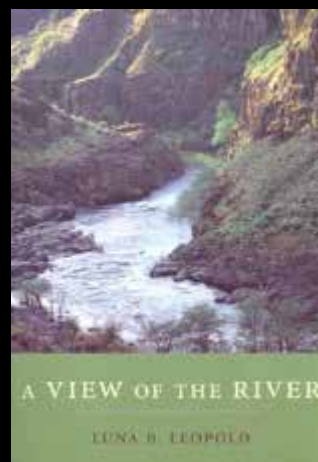
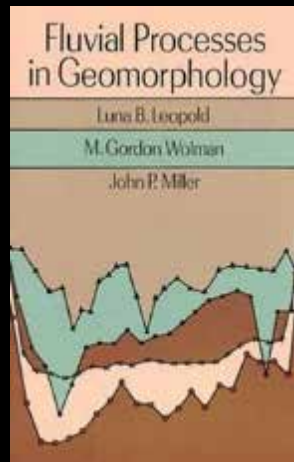
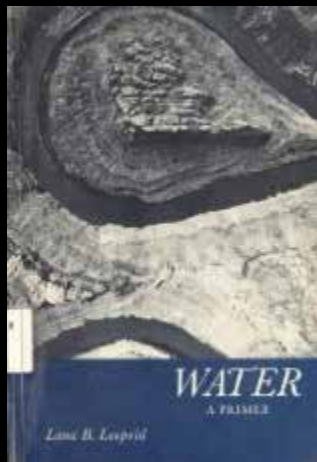
Our economic views are too insensitive to be the only criteria for judging the health of the river organism.

What is needed is a gentler basis for perceiving the effects of our engineering capabilities.

This more humble view of our relation to the hydrologic system requires a modicum of reverence for rivers.

The Virtual Luna Leopold Project

<http://eps.berkeley.edu/people/lunaleopold/>



Luna B. Leopold
2005 GRA Lifetime Achievement Award

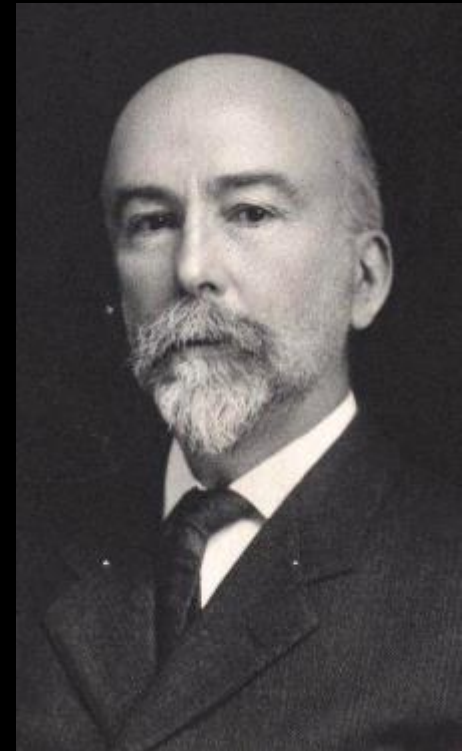
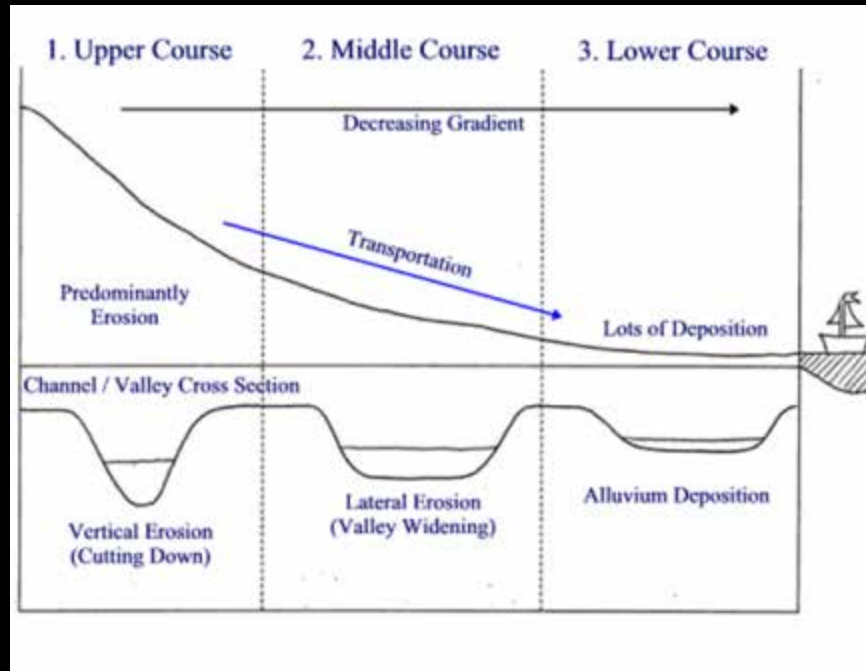


The Life of a River – Hydraulic System

William Morris Davis (1850 - 1934) was an American geographer, geologist, geomorphologist, and meteorologist, often called the "father of American geography".

His most influential scientific contribution was the cycle of erosion, first defined around 1884, which was a model of how rivers create landforms. His cycle of erosion suggests that (larger) rivers have three main sections: upper course, middle course, and lower course - each of which has distinct landforms and other properties associated with it.

He viewed the river system as having a life of its own. Its youthful headwaters, he said, are steep and rugged. It rushes toward the sea, eroding bed and bank on its way. In its central part, it is mature, winding sedately through wide valleys adjusted to its duty of transporting water and sediment. Near its mouth it has reached, in its old age, a nearly level plain through which it wanders in a somewhat aimless course toward final extinction as it joins the ocean that had provided the sustaining waters through its whole life span.

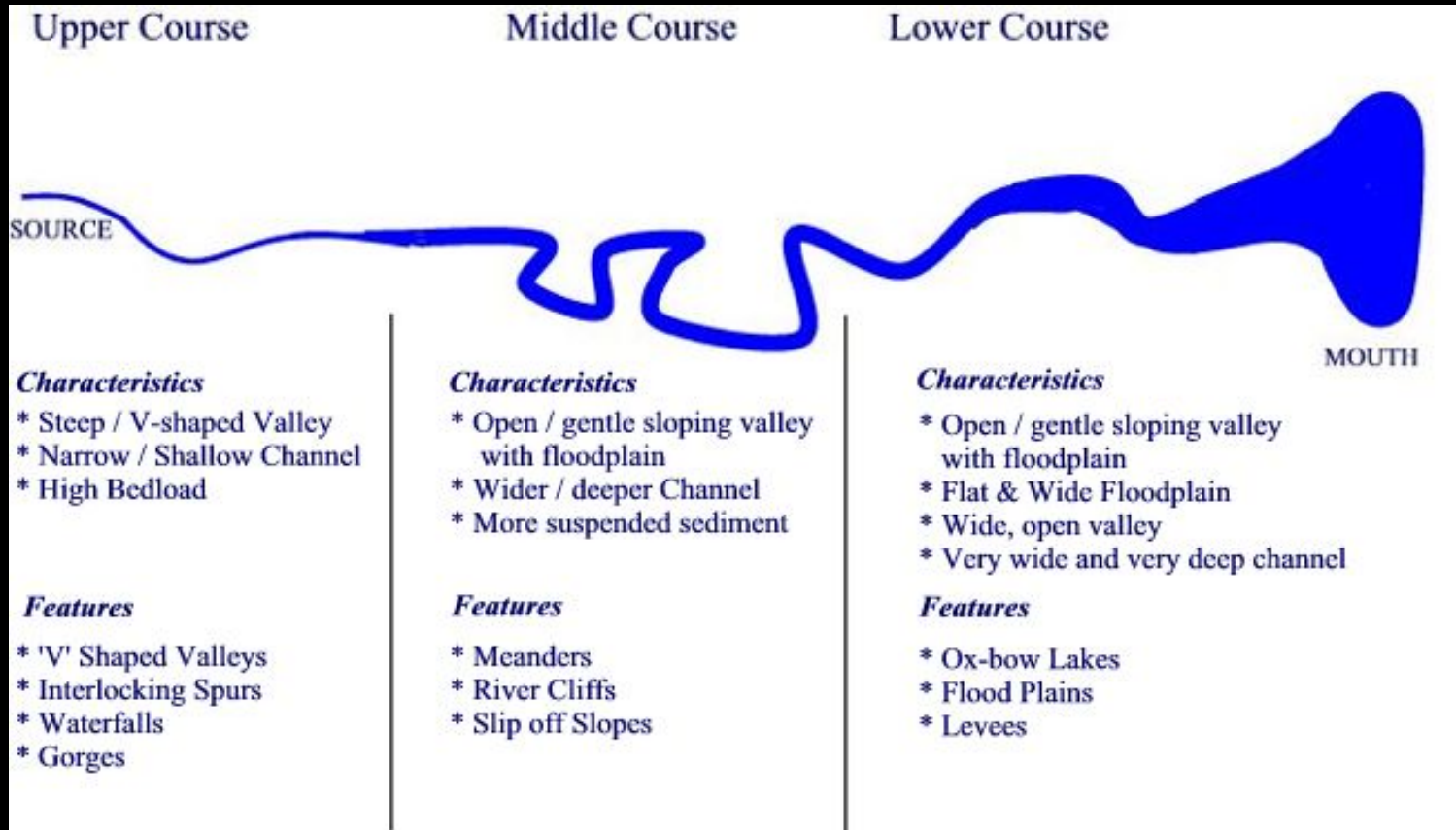


A river is
water and sediment

River Course

Fluvial Geomorphology

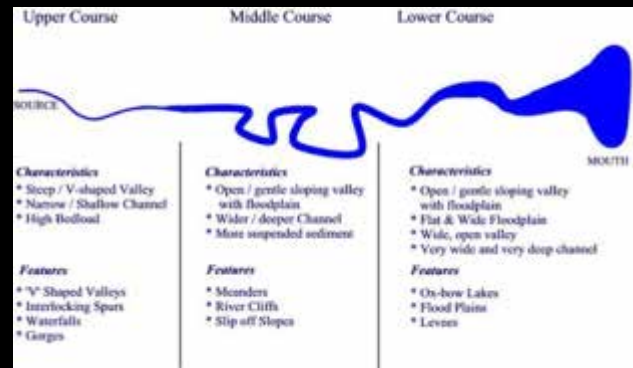
Sinuosity is inversely proportional to slope



Upper Course - Source

Erosion and Transportation

Oxygen and Life



River sources are usually small and, in the case of mountain streams, steep and erosional.

In temperate environments, small streams tend to be shaded by an interlocking, overhead tree canopy.

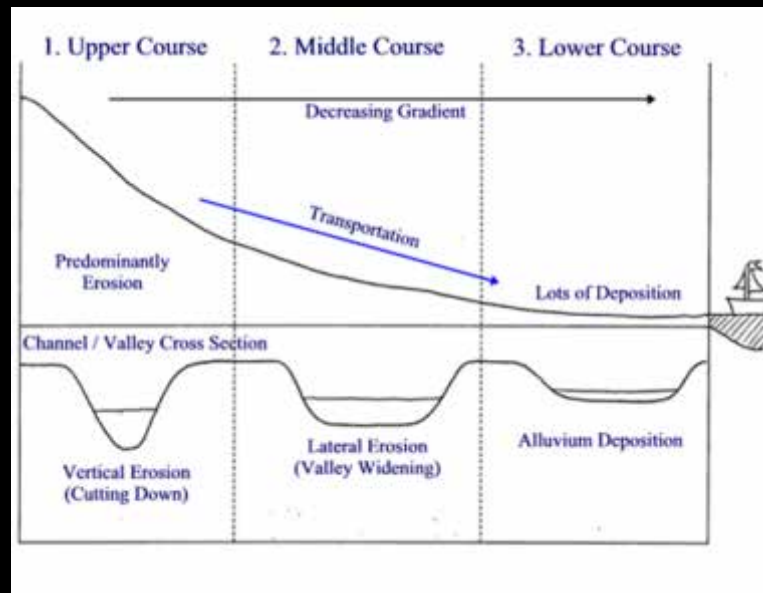
Such conditions result in cool, well-oxygenated streams that are abundantly supplied with a food base of leaves.

Fine particles of organic matter are released as the leaves are broken down by biological communities in the streams

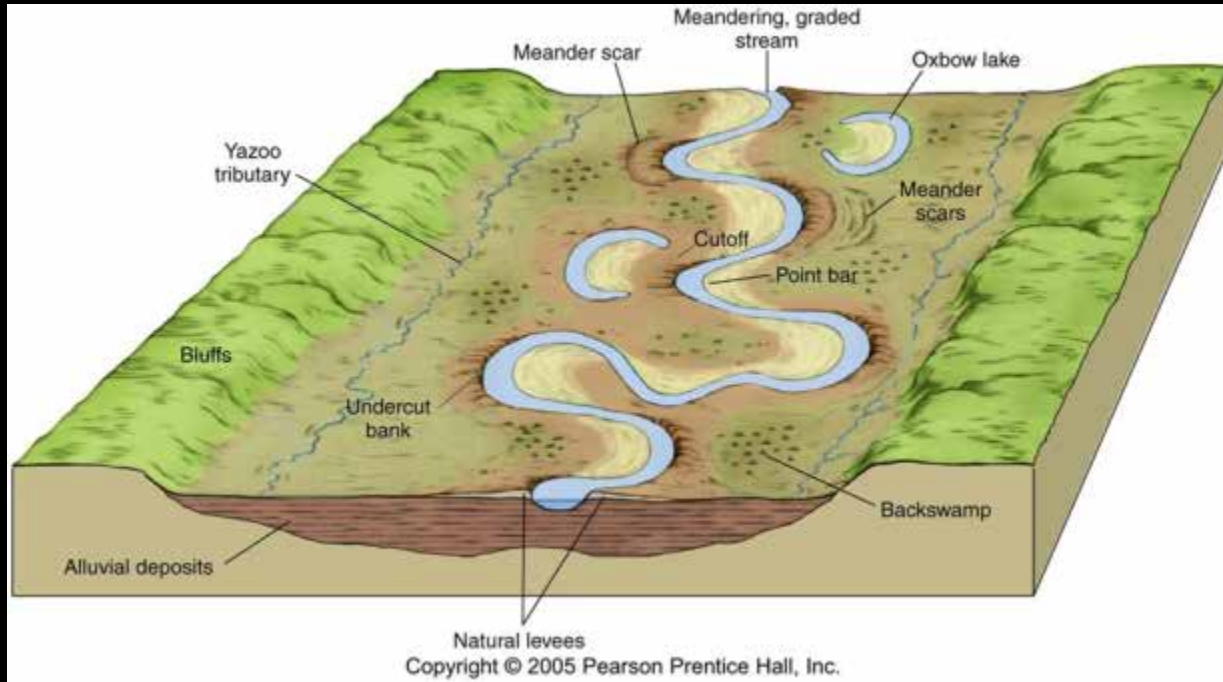


The Middle Course

Erosion à Transportation and Deposition

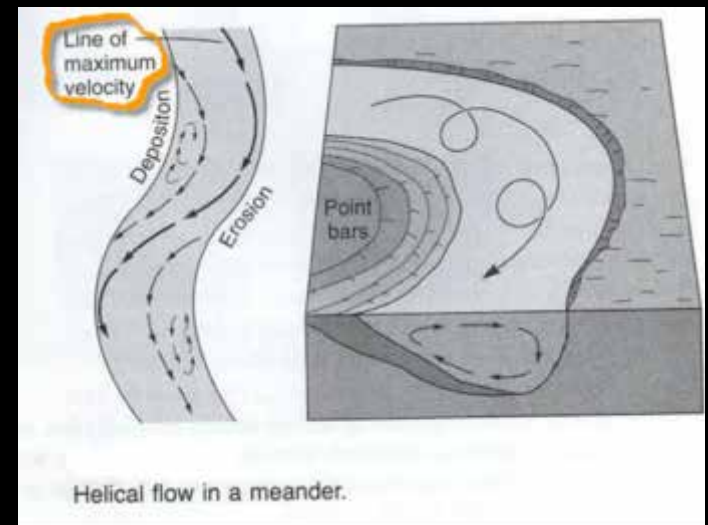


The Middle Course: The Meander Belt

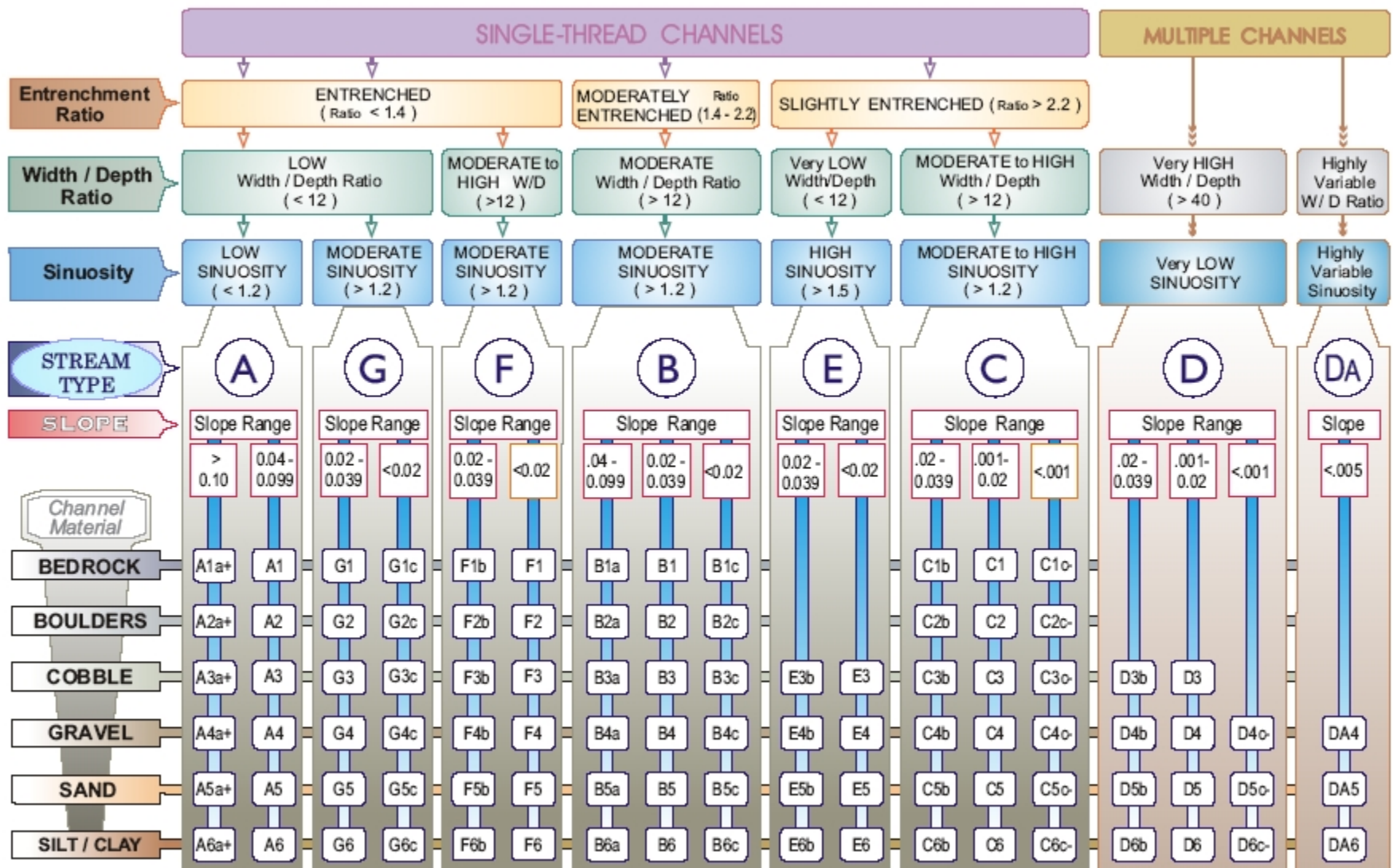


A Meander

The helical flow continues to erode the outside of the bend and deepens the pool.



The Key to the Rosgen Classification of Natural Rivers

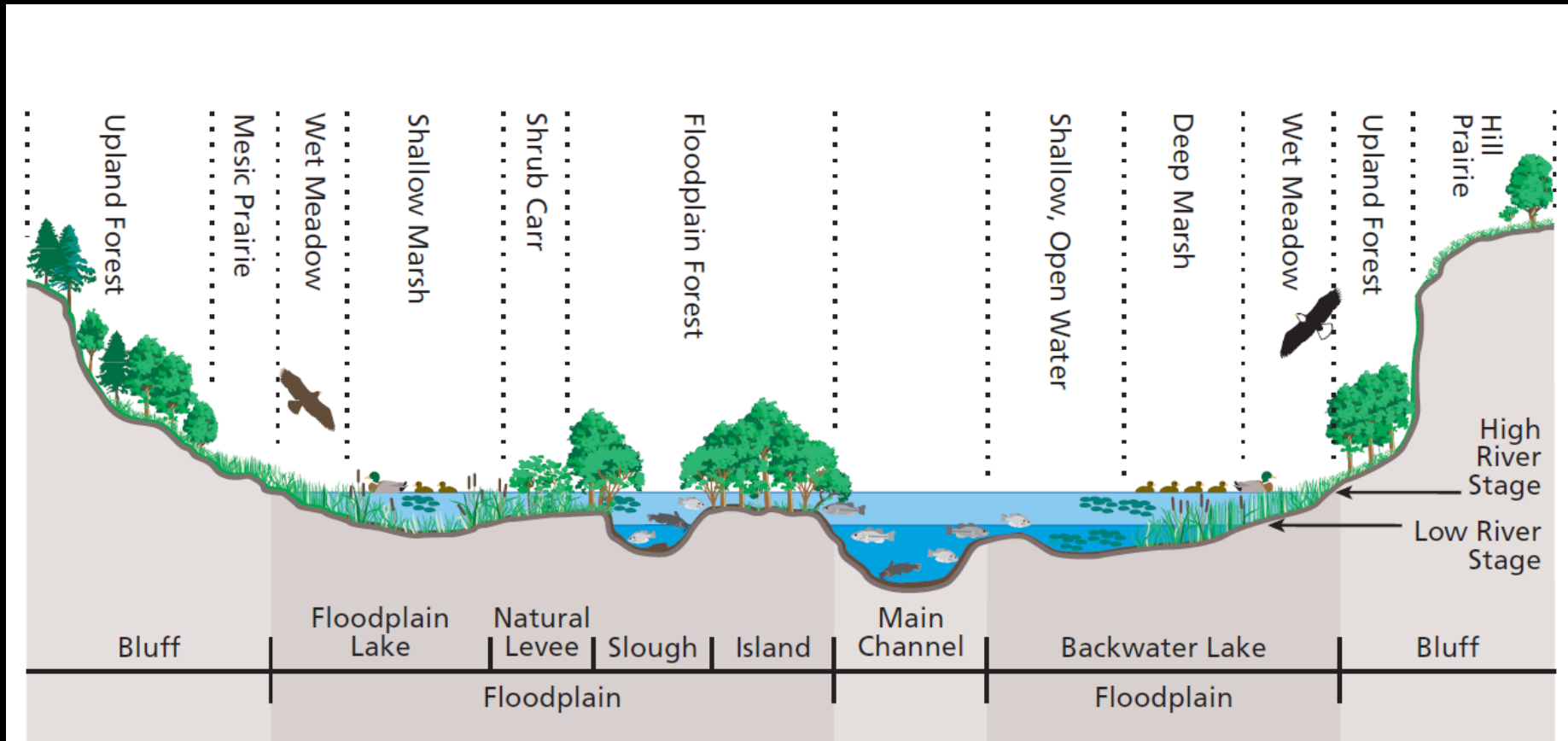
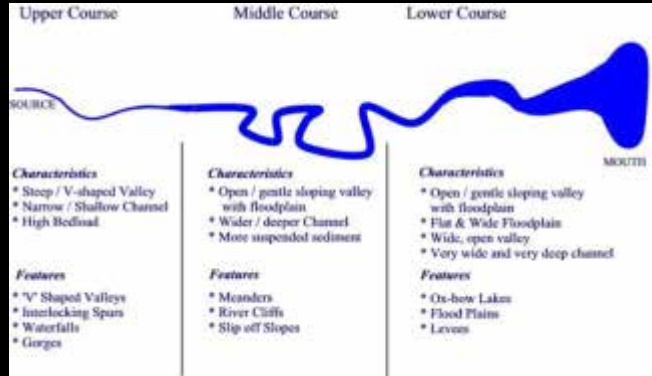


KEY to the **ROSGEN** CLASSIFICATION of NATURAL RIVERS.

As a function of the "continuum of physical variables" within stream

reaches, values of **Entrenchment** and **Sinuosity** ratios can vary by +/- 0.2 units; while values for **Width / Depth** ratios can vary by +/- 2.0 units.

The Middle Course: Life in the Meander Belt



Life in the Meander Belt

Hornsby Bend

At some point along their path to the sea, rivers have typically gained enough water and width to preclude interlocking tree canopies.

Streams at this point are warmer and less abundantly supplied with leaves than was the case upstream.

Open canopy, and fairly shallow water, means that light can reach the river benthos, increasing in-stream primary productivity.



Life in the Meander Belt

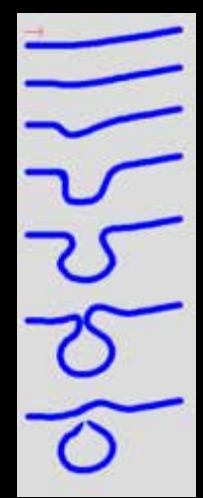
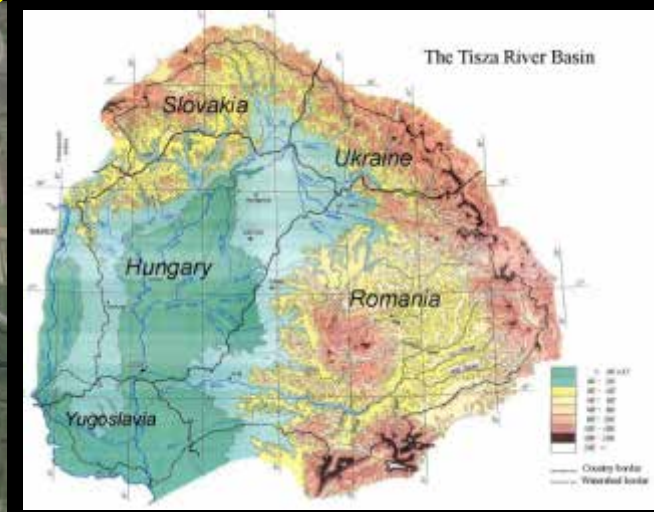
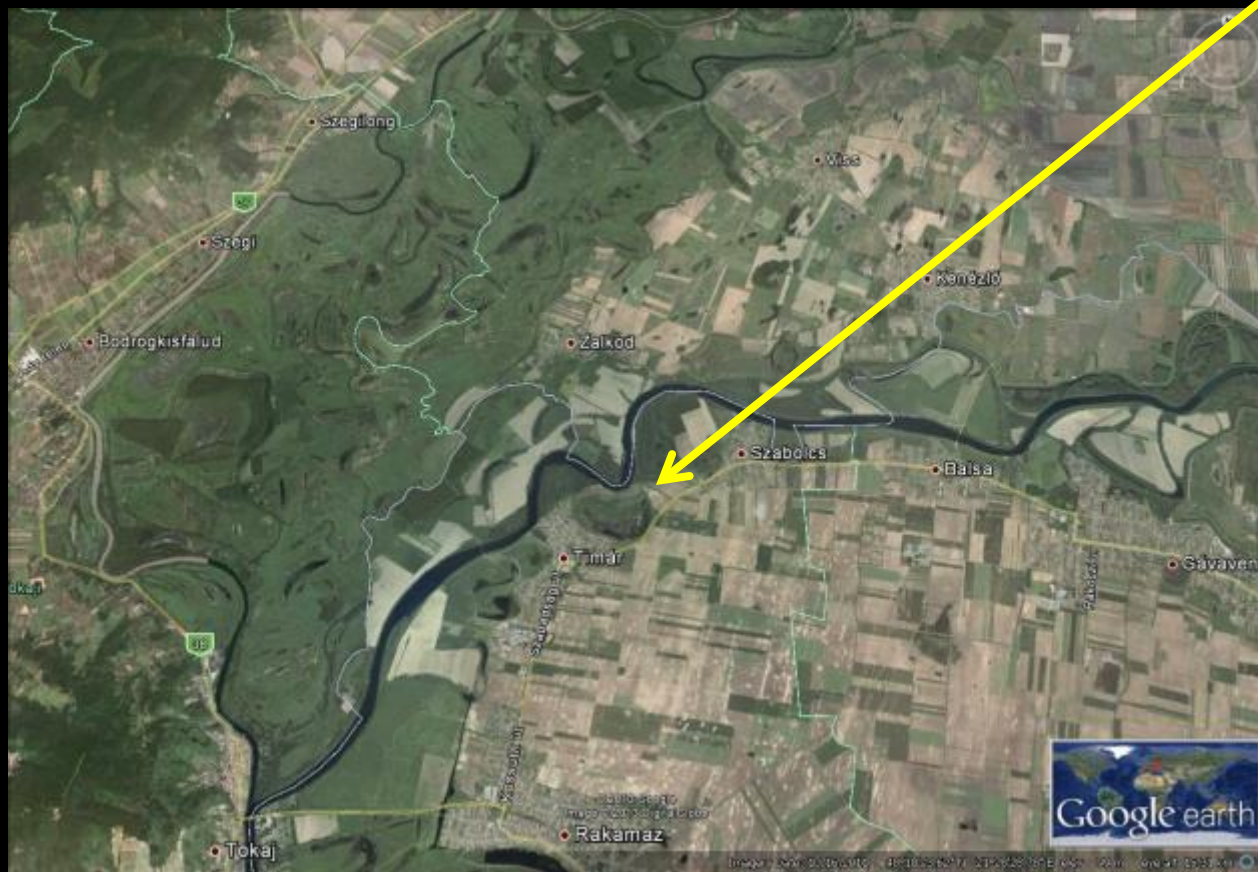
All that is gold does not glitter,
Not all those who wander are lost...

J.R.R. Tolkien



Life in the Meander Belt

The Tisza River in Northeastern Hungary



THINKING GLOBALLY

THE PEACE CORPS JOINS IN

Can teaching English help the upper Tisza?

by Judy Braus

When it first flows into Hungary from the Soviet Union, the Tisza River is relatively clean—especially when compared to its infamous neighbor, the Danube. But before long the water quality of the Tisza begins to plummet.

The Szamos and Kraszna rivers, flowing from Romania, dump heavy metals, phosphates, and other pollutants into the Tisza as it makes its way south. At Tokaj, near the lower end of the Upper Tisza, the Bodrog River, flowing from Czechoslovakia, dumps more tainted water. And along its 600-kilometer path through Hungary, the Tisza relentlessly receives in-country pollution, including waste and run-off from chemical factories, power plants, and agricultural fields.

Pollution of the Tisza River is just one example of many serious environmental problems facing Hungary. Like the rest of Central Europe, the country suffers from acid rain, smog, hazardous waste disposal, habitat destruction, and other

environmental problems. But there is a bright spot in the doom and gloom of the pollution and degradation. Armed with enthusiasm and innovative ideas and backed by an agency-wide commitment to environmental education, U.S. Peace Corps volunteers have begun tackling environmental problems at the grass roots level, working in camps, schools, and communities across Hungary.

An environmental education workshop conducted in the dead of winter in a small town near the Czechoslovakian border gave many volunteers their first opportunity to get involved with Hungary's environmental problems. During the workshop, more than 60 volunteers working as English teachers and their Hungarian colleagues took part in sessions focusing on air and water pollution, solid waste, and natural resources issues—as well as on teaching strategies for incorporating environmental education into their English teaching lesson plans. They also studied strategies for motivating

students to get involved in local environmental issues and for helping students develop lifelong problem-solving skills.

As a result of the workshop, many of the volunteers immediately began incorporating environmental topics into their daily lesson plans. During site visits, Kathryn Rulon, Associate Peace Corps Director for Education, found that volunteers were successfully using environmental content to teach English, encouraging student creativity, and empowering students to make a difference: "I couldn't believe how many of the volunteers were creatively adapting environmental content to match the interests and concerns of their students. I'd walk into classrooms and the students would be debating energy issues, writing environmental poetry, or performing pollution raps. Environmental education and English teaching are a natural fit!"

Several volunteers also took the activities and lesson plans developed during the workshop to camp. They

As for the problems in the upper Tisza River, one Peace Corps volunteer, Kevin Anderson, channeled his concern into a concrete proposal for action. Before the workshop, Kevin had been working with the Nyireggyaza Chapter of the Hungarian Ornithological and Nature Protection Society to band sand martins and also to organize a summer environmental camp. Through his work, he discovered that the Upper Tisza not only supports the largest colony of sand martins in Europe, but it is also rich in forest and wetland habitats that provide homes to some of the most diverse wildlife in the country. He realized that a public awareness campaign would be important, given that many of his neighbors in the rural town of Nyireggyaza consider the area an undeveloped "wasteland" that would be more useful if it were developed.

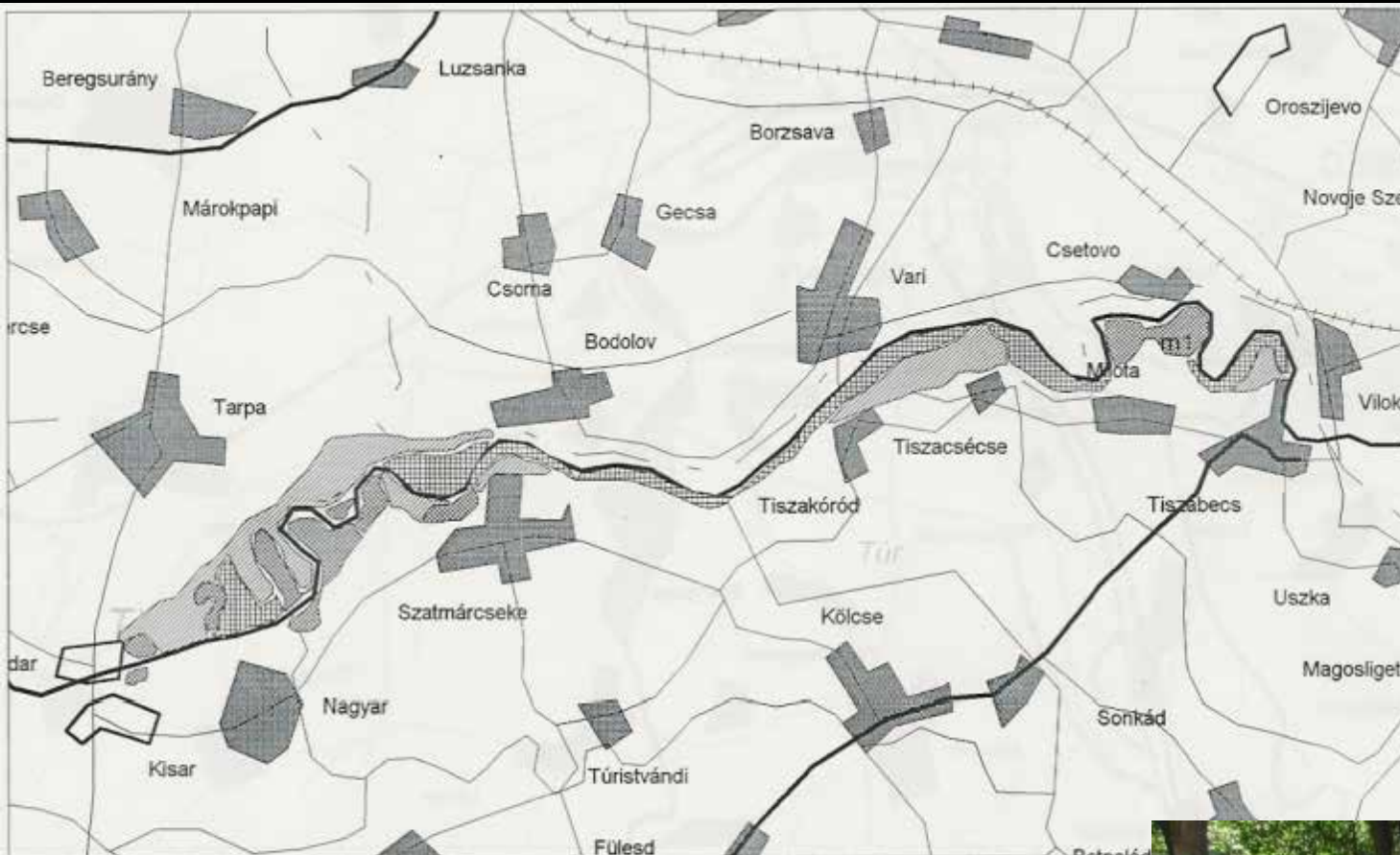
It was after attending the workshop



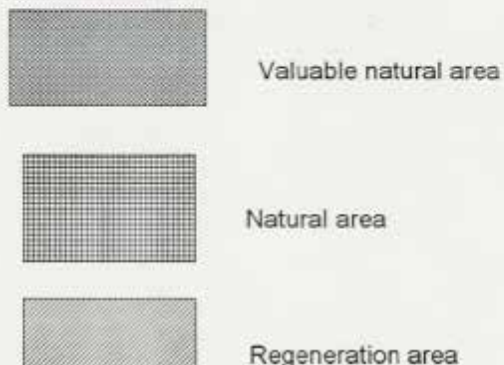
On assignment in Hungary, Peace Corps volunteers teach English and environmental literacy at the same time.



Paul S. Conklin photo. Copyright 1990, Peace Corps.



Riparian Habitat
Mapping Project 1991
225km along the upper
Tisza River



Bodrogzug and Felső-Tisza Ramsar Sites

1:500000

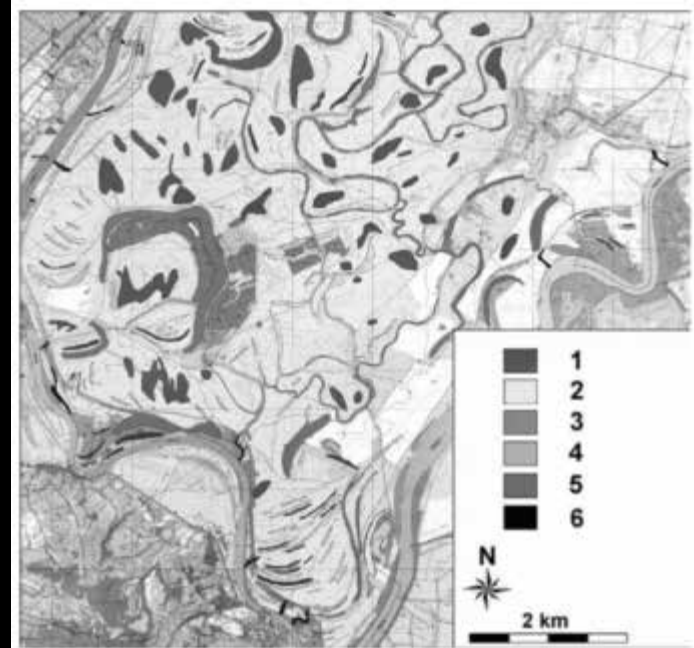
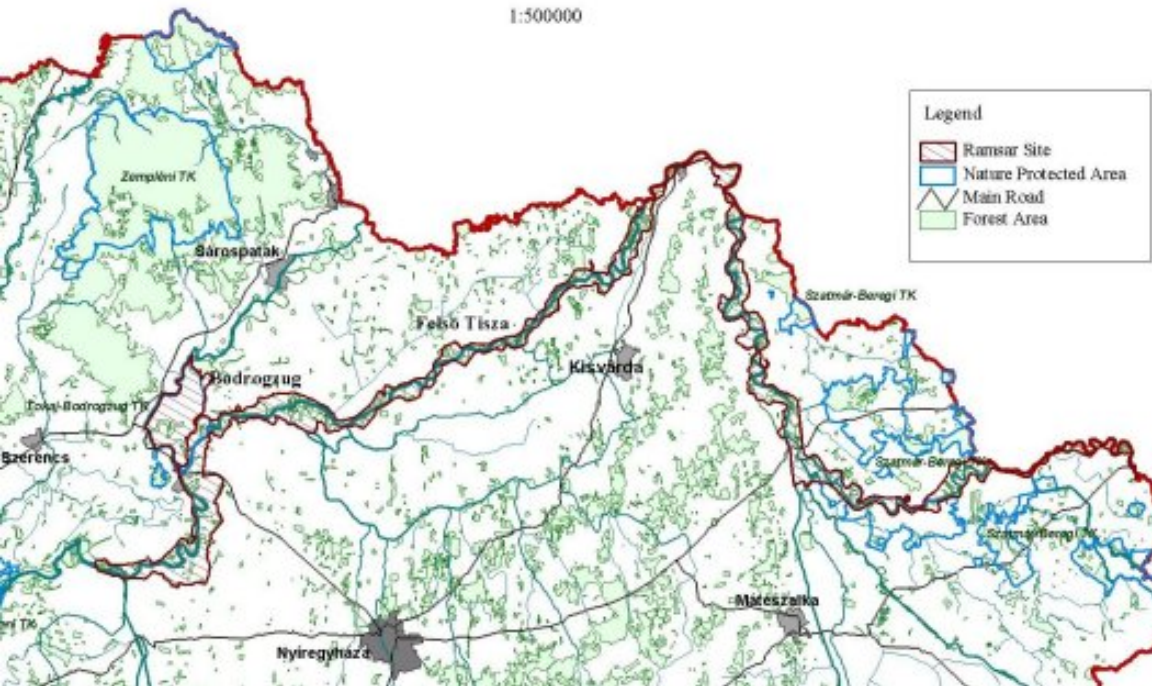


FIG. 2 - Landforms of the SW Bodrogköz (In: Szabó & *alii*, 2004). 1: fluvial ridge, 2: swale, 3: abandoned cut-offs, 4: present natural levee, 5: backswamps, 6: (remnants of) one-time flood-plain ditches.



The Upper Tisza River in northeastern Hungary.

Now a cross-border UN Ramsar Wetland of International Importance



Tisza River Ecological Research Field Center

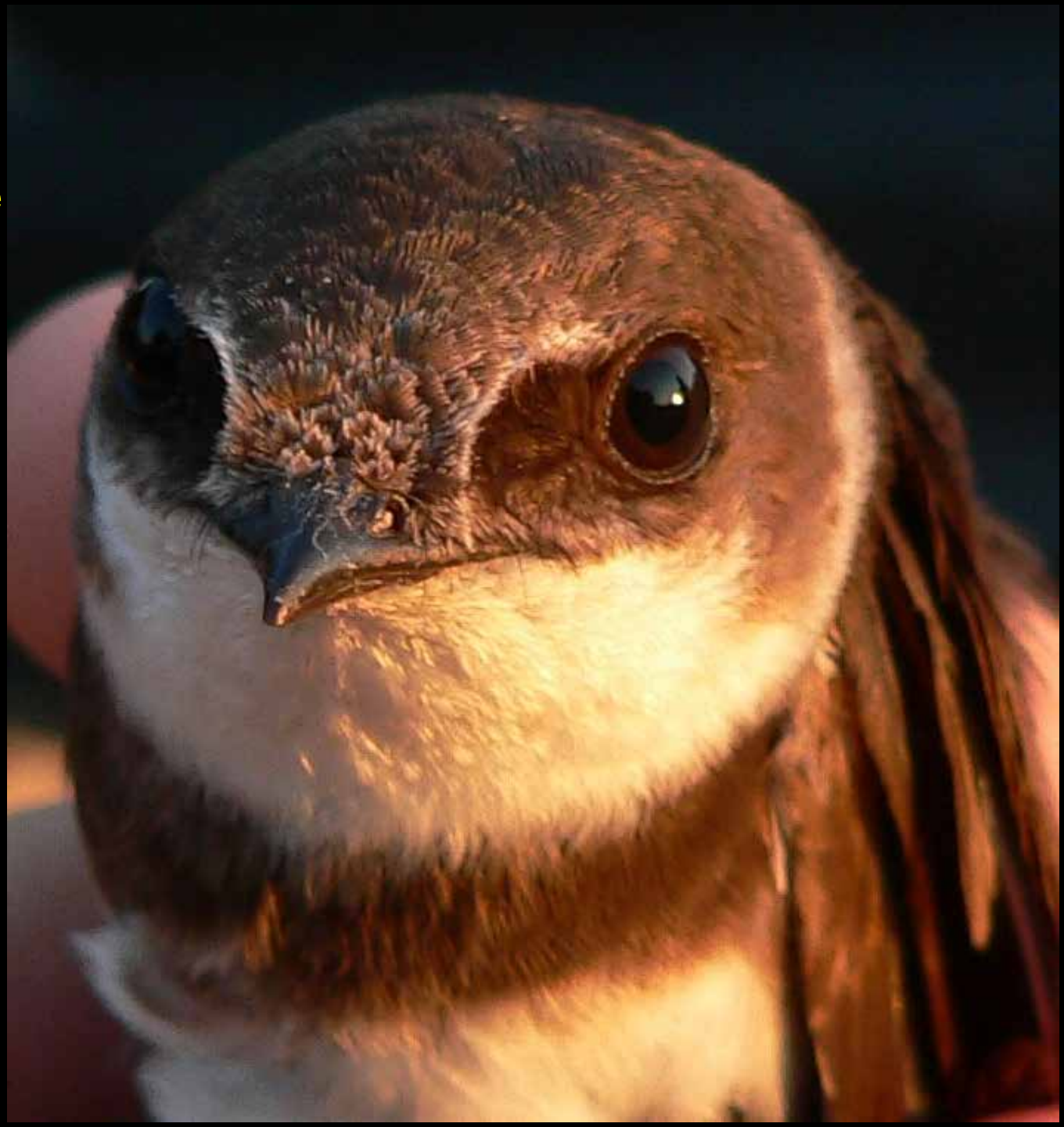
Established 2002



Life at the River's Edge

Riparia riparia
(Linnaeus, 1758)

Sand Martin
Bank Swallow





Riparian = Waterway Margins



Riparian areas are transitional zones between terrestrial and aquatic ecosystems.



By the Side of the River

"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;

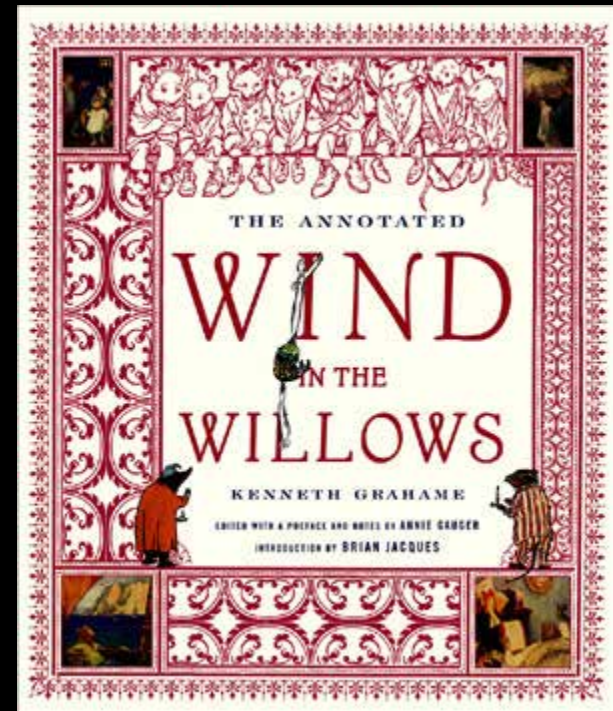
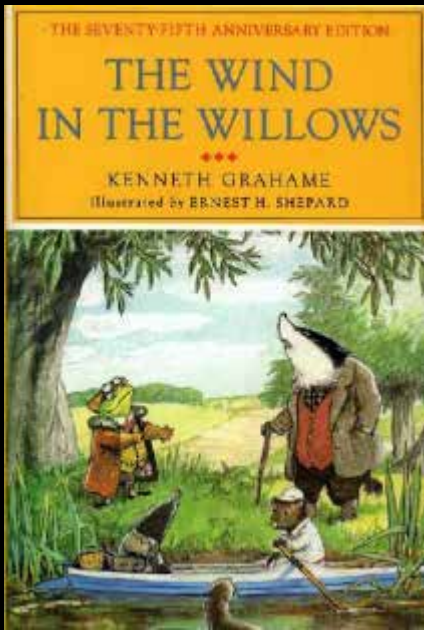
and when tired at last, he sat on the bank, while the river still chattered on to him, a babbling procession of the best stories in the world, sent from the heart of the earth to be told at last to the insatiable sea."



The River Memory – Riversides and Childhood

The Wind in the Willows by Kenneth Grahame 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 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

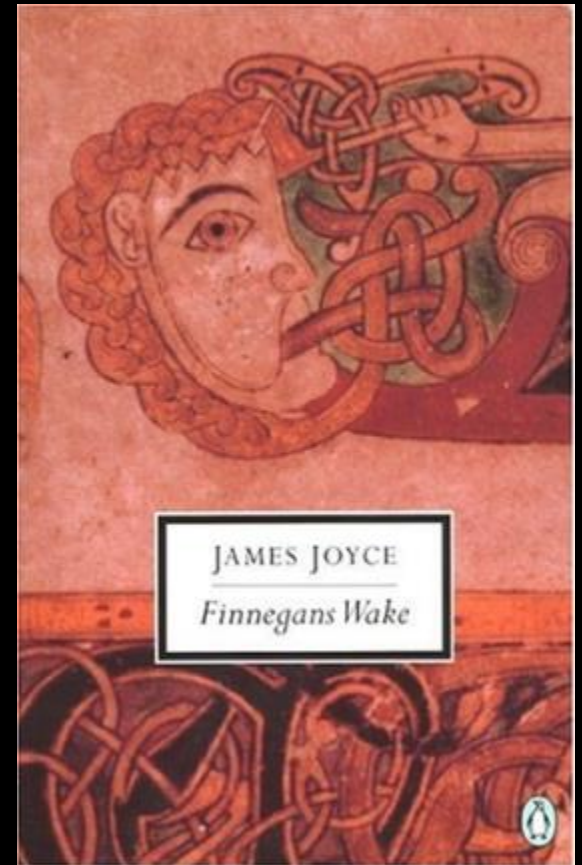
"riverrun, past Eve and Adam's, from swerve of shore to bend of bay, brings us by a commodius vicus of recirculation back to Howth Castle and Environs."

("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.



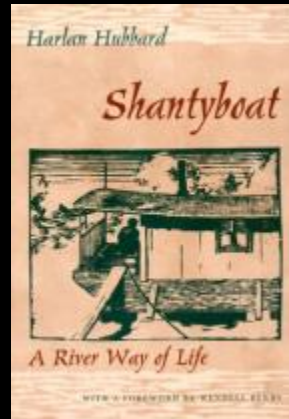
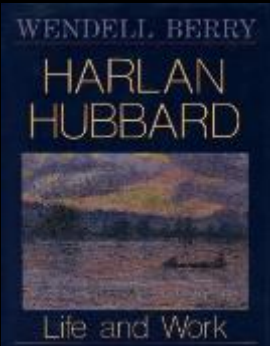
Finnegans Wake was published in book form, after 17 years of composition, on 4 May 1939. Joyce died two years later in Zürich, on 13 January 1941

Drifting - A River Way of Life

Harlan Hubbard 1900 - 1988

After building their "shantyboat," out of mostly salvaged materials, Harlan and Anna Hubbard 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.

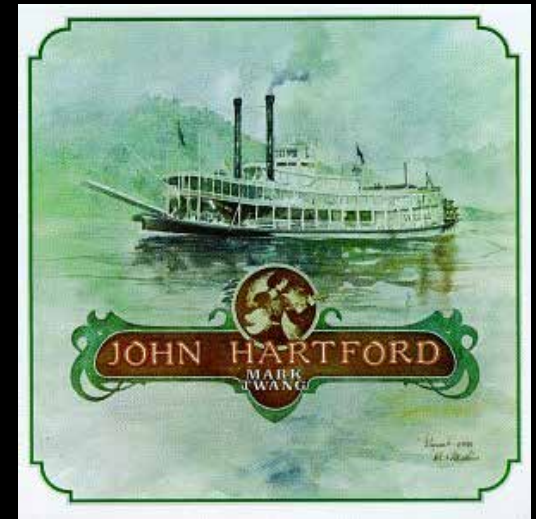


Riversong - A River Way of Life



John Hartford

1937- 2001



John Hartford was one of the rarest of musical birds. He had one foot deeply rooted in the past and the other always at least a few steps into the future - and both were dancing.

--Larry Groce, Mountain Stage

"The River Knows Your Name" John Hiatt

Oh the river knows your name
And your tears falling like the rain
All around you suffering and pain
Oh the river knows your name

And the river hears you cry
As the lightning cracks the open sky
As your momma sings a lullaby
Oh the river she knows why

Let the river wash you down
Beneath the surface with a rushing sound
Like a freight train passing through a town
Let the river wash you down

Let the river take away
All the words you and I could never say
In the silence darling let us pray
Let the river take it all away

Oh the river she knows your name
From the Brazos to the Wabash to the Seine
No two journeys are ever quite the same
But the river knows your name
Oh the river knows your name

American Rivers and Music

Geography of Rivers

Naming



American Rivers and Music

Geography of Rivers

Naming

"American Rivers" Tom Russell



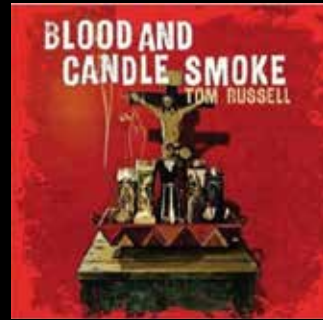
Ain't no more cane on the Brazos
Yeah, yeah, yeah
It's all been ground down to molasses
Yeah, yeah, yeah

I saw a red iron sunset from a rust iron bridge
In the Indian country of the mockingbird kid
I saw the moon in a boxcar being carried as freight
Through 62 winters through 48 states
And in an old Chinese graveyard I slept in the weeds
When a song and a story were all a kid needs
Hear the rhymes and the rattles of those runaway trains
And the songs of the cowboy and the sound of the rain

And it's mamma I miss you
I woke up and screamed
American rivers roll deep through my dreams
Colorado, Allegheny, Shenandoah, Susquehanny
And the Wabash and the Hudson and the brave Rio Grande
I was a kid there asleep in sand and your water

We named them for Indians our guilt to forsake
The Delaware, the Blackfoot, The Flathead and Snake
Now they flow past casinos and hamburger stands
They are waving farewell to the kid on the land...
With their jig-sawed old arteries
So clogged and defiled no open heart miracle's
Gonna turn 'em back wild

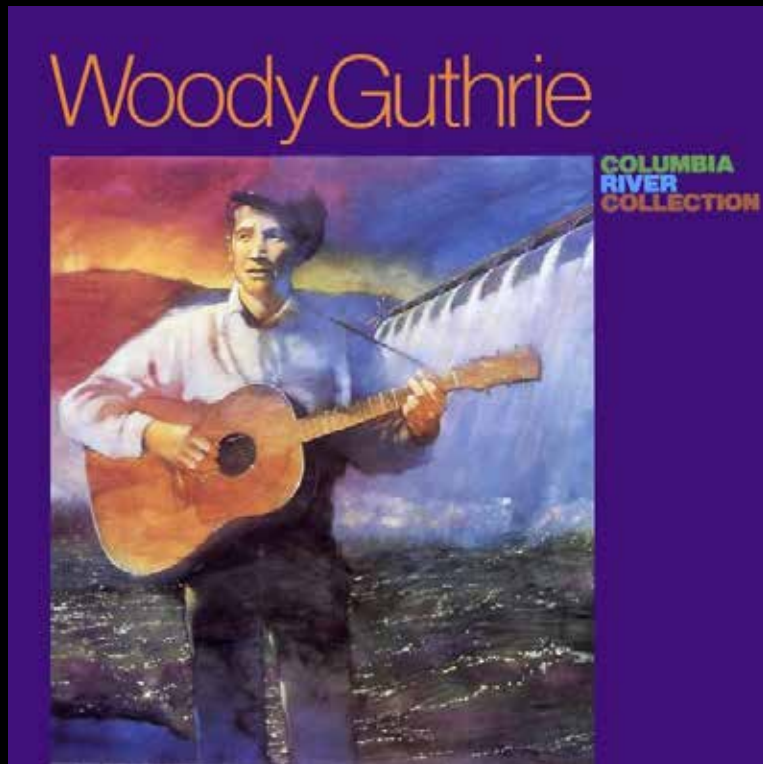
Past towns gone to bankers past fields gone to seed
All cut up and carved out so divided by greed
And old grandfather catfish with his whiskers so long
And his life is a struggle cuz the oxygen's gone



The Columbia River and Woody Guthrie

In 1941, Woody age 28, was hired by the Bonneville Power Administration in Portland, Oregon to write music for a film about the Columbia River and public power. This collection presents all known recordings of Woody singing his Columbia River songs, including *Roll On Columbia*, *The Biggest Thing That Man Has Done*, and *Grand Coulee Dam*.

Roll on, Columbia, roll on, roll on, Columbia, roll on
Your power is turning our darkness to dawn
Roll on, Columbia, roll on.







Out with the old, in with the new...

Stator
Rotor
Generator
Turbine

Water Flow

Generator

1. Water flowing through the powerhouse spins the turbine.
2. The turbine spins part of the generator called the rotor.
3. Magnets on the outer edge of the rotor spin past copper coils causing electrons to flow in the coils.
4. Electricity flows from the copper coils through transformers and power lines to homes and businesses throughout the Northwest.

Here is how a turbine works to bring power to your home...

The new minimum gap runner turbines nearly eliminate gaps between the blades and the hub as the blade angles change. This reduces injuries to fish and improves power production efficiency.

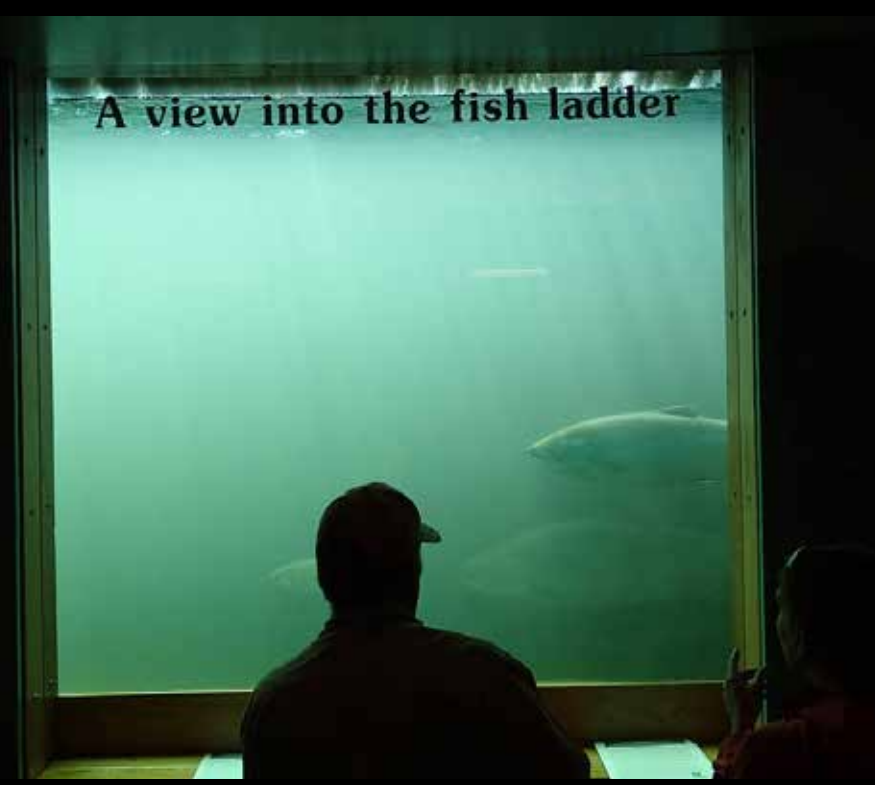
If you see a solid jog can rock and forth, it eventually breaks due to metal fatigue. After 60 years metal fatigue caused the old turbines to break too. Repairs became so frequent that replacing all of the turbines made good economic sense.

The new minimum gap runner turbines nearly eliminate gaps between the blades and the hub as the blade angles change. This reduces injuries to fish and improves power production efficiency.

Building for the future. The new turbines are now in place and are providing a much longer life span.

Central Powerhouse
1000
1000





Waist Deep in the Big Muddy

Pete Seeger

[Made more famous because of its censorship from The
Smothers Brothers Comedy Hour]

It was back in nineteen forty-two,
I was a member of a good platoon.
We were on maneuvers in Loozianna,
One night by the light of the moon.
The captain told us to ford a river,
That's how it all begun.
We were knee deep in the Big Muddy,
But the big fool said to push on.

The Sergeant said, "Sir, are you sure,
This is the best way back to the base?"
"Sergeant, go on! I forded this river
'Bout a mile above this place.
It'll be a little soggy but just keep slogging.
We'll soon be on dry ground."
We were -- waist deep in the Big Muddy
And the big fool said to push on.



Well, I'm not going to point any moral;
I'll leave that for yourself
Maybe you're still walking, you're still talking
You'd like to keep your health.
But every time I read the papers
That old feeling comes on;
We're -- waist deep in the Big Muddy
And the big fool says to push on.

River as Metaphor



A classic album reissue with unreleased bonus tracks.

River as Threat – Floods

Louisiana 1927 Randy Newman

A song telling the story of the Great Mississippi Flood of 1927 that left 700,000 people homeless in Louisiana and Mississippi.



What has happened down here is the wind have changed
Clouds roll in from the north and it started to rain
Rained real hard and rained for a real long time
Six feet of water in the streets of Evangeline

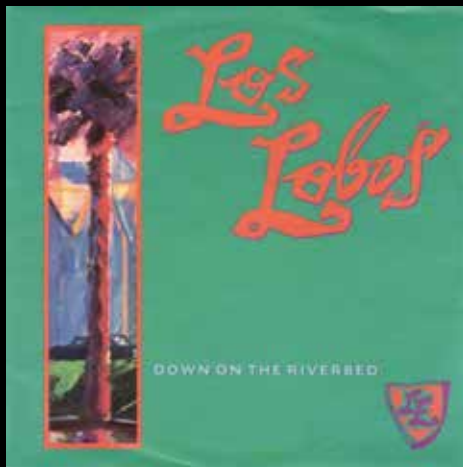
The river rose all day
The river rose all night
Some people got lost in the flood
Some people got away alright
The river have busted through
Cleared down to Plaquemines
Six feet of water in the streets of Evangeline

Louisiana, Louisiana
They're tryin' to wash us away
They're tryin' to wash us away
Louisiana, Louisiana
They're tryin' to wash us away
They're tryin' to wash us away

President Coolidge came down in a railroad train
With a little fat man with a note-pad in his hand
The President say,
"Little fat man isn't it a shame what the river has done
To this poor crackers land."

Louisiana, Louisiana
They're tryin' to wash us away
They're tryin' to wash us away
Louisiana, Louisiana
They're tryin' to wash us away
They're tryin' to wash us away





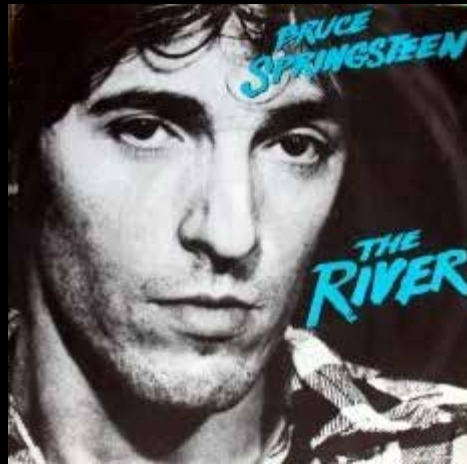
Down on the riverbed
Down on the riverbed
Down on the riverbed
I asked my lover for her hand

Dark Geography of Rivers

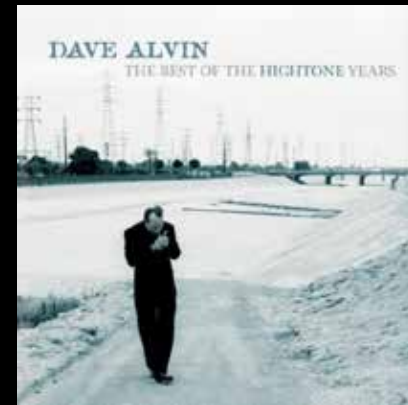
Bottomland
Bed
Banks
Ice

I was born by a river, but it was paved with cement
Yeah I was born by a river, but it was paved with cement
Still I stand out in that old dry river,
and wish that I was soaking wet

Someday it's gonna rain, someday it's gonna pour
Someday this old dry river, it well, won't be dry anymore



Is a dream a lie if it don't come true
Or is it something worse
that sends me down to the river
though I know the river is dry
That sends me down to the river tonight
Down to the river
my baby and I
Oh down to the river we ride



It's coming on Christmas
They're cutting down trees
Putting up reindeer
Singing songs of joy and peace
Oh, I wish I had a river
That I could skate away on...

Joni Mitchell "River"



River Metaphor

Lazy River

Up a lazy river by the old mill run
Lazy, lazy river in the noon day sun
Linger awhile in the shade of the tree
Throw away your troubles, dream a dream of me

(lyrics by Sidney Arodin)



also "Riverboat Shuffle", recorded by Bix Beiderbecke, which became a staple of jazz and Carmichael's first recorded song.

Moon River, wider than a mile,
I'm crossing you in style some day.
Oh, dream maker, you heart breaker,
Wherever you're going, I'm going your way.
Two drifters off to see the world.
There's such a lot of world to see.
We're after the same rainbow's end,
Waiting 'round the bend,
My huckleberry friend,
Moon River and me.

Moon River

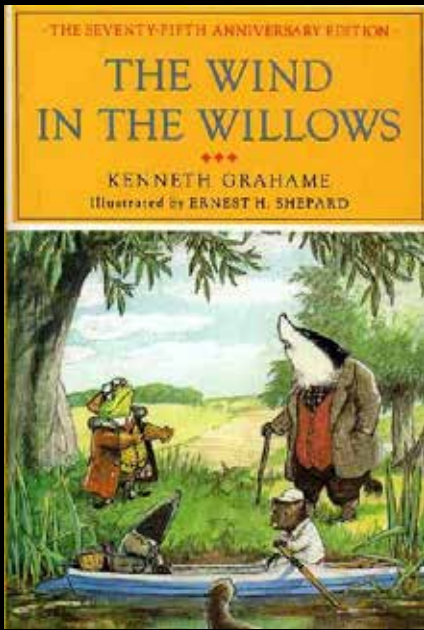
Composed by Henry Mancini with lyrics written by Johnny Mercer.

It received an Academy Award for Best Original Song for its first performance by Audrey Hepburn in the 1961 movie *Breakfast at Tiffany's*.

It also won Mancini the 1962 Grammy Award for Record of the Year and Mercer the Grammy Award for Song of the Year.

River Reverie

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



Piper At the Gates of Dawn - Van Morrison

The coolness of the riverbank
And the whispering of the reeds
Daybreak is not so very far away
Enchanted and spellbound
In the silence they lingered
And rowed the boat
As the light grew steadily strong
And the birds were silent
As they listened for the heavenly music
And the river played the song



The wind in the willows
And the piper at the gates of dawn
The wind in the willows
And the piper at the gates of dawn

The song dream happened and the cloven hoofed piper
Played in that holy ground
Where they felt the awe and wonder
And they all were unafraid of the great God Pan
(Chorus)

When the vision vanished
They heard a choir of birds singing
In the heavenly silence, between the trance and the reeds
And they stood upon the lawn and listened to the silence

Fluvial Philosophy – Metaphor and Myth

Heraclitus c. 535 – c. 475 BC

A Greek philosopher of Ephesus, Heraclitus propounded a distinctive theory which he expressed in oracular language.

He is best known for his doctrines that things are constantly changing (universal flux or process) and that fire is the basic material of the world.

Plato indicates the source of the flux doctrine:

"Heraclitus, I believe, says that all things go and nothing stays, and comparing existents to the flow of a river, he says you could not step twice into the same river" (Plato *Cratylus*)

What Heraclitus actually said is the following:

"On those stepping into rivers staying the same, other and other waters flow."

Understand?



"On those stepping into rivers staying the same, other and other waters flow."

Heraclitus derives a striking insight from an everyday encounter.

It makes perfectly good sense.

We call a body of water a river precisely because it consists of changing waters.

If the waters should cease to flow it would not be a river, but a lake or a dry streambed.

There is a sense, then, in which a river is a remarkable kind of existent,

one that remains what it is by changing what it contains.



Some things stay the same only by changing – Flux or Process

One kind of long-lasting material reality exists by virtue of a process of constant turnover in its constituent matter.

Here constancy and change are not opposed but inextricably connected.

A human body could be understood in precisely the same way, as living and continuing by virtue of constant metabolism.

Organisms and Ecosystems are understood in this same way – a system of processes or cycles.

On this reading, Heraclitus believes in flux, but not as destructive of constancy;

rather it is, paradoxically, a necessary condition of constancy. Understand?



The Myth of Orpheus

Orpheus was a legendary musician, poet, and prophet in ancient Greek religion and myth.

The major stories about him are centered on his ability to charm all living things with his music.

But the love and loss of Eurydice and the death of Orpheus involves the passage over and into rivers.

Auguste Rodin
Orpheus & Eurydice (1887)



Tree arising! O pure ascendance!
Orpheus Sings! Towering tree within the ear!
Everywhere stillness, yet in this abeyance:
seeds of change and new beginnings near.

The Sonnets to Orpheus Rainer Maria Rilke, February 1922



Orpheus
Roman mosaic

The Myth of Orpheus and Eurydice

Orpheus falls in love with the beautiful nymph Eurydice, and the two make plans to wed. But on their wedding day, Eurydice steps on a snake, which bites her.

She is killed, and Orpheus is stricken with terrible and all-consuming grief.

Disconsolate, Orpheus finds a cave which leads to Hades and follows Eurydice to the Underworld.

Armed only with his lyre and his beautiful voice, Orpheus makes his way past every terrifying danger the underworld holds to the crossing of the river Styx.



John Roddam Spencer Stanhope
Orpheus and Eurydice on the Banks of the Styx
1878

The Myth of Orpheus and Eurydice

Here his musical charms are so persuasive that the King of the Dead permits the minstrel to take his love home with him - on one condition: that as he leads Eurydice up to life again, he not turn to look at her.

Just as they are almost safely away, Orpheus is overcome with doubt about whether she is truly behind him. Without thinking, he turns to look.

Her faithful shade immediately vanishes, and the devastated Orpheus attempts to return to Hades and rescue her again.



Orpheus Leading Eurydice from the Underworld
Jean-Baptiste-Camille Corot 1861



Auguste Rodin
Orpheus & Eurydice (1887)

But this time the boatman Charon refuses to carry him across the river. He sits on the shore starving, hoping for death, so that he may join Eurydice. But the gods will not let him die.

Reluctantly, he returns to the upper world, finding solace only in his music.

He spent the rest of his days scorning women, not willing to love another so to stay true to the memory of Eurydice. He wandered the earth before being torn apart by the women of Thrace, who were angry at him for spurning their love and companionship.

They threw his head into a river, and it kept on singing all the way to the sea.

The Sonnets to Orpheus Rainer Maria Rilke

But you, divine one singing on the brink of destruction
while legions of forsaken maenads tore at your flesh;
you vanquished their shrieks with harmony, oh bright one,
while from utter devastation rebounded your song afresh.

And though you fade from earthly sight,
declare to the silent earth: I flow.
To the rushing water say: I am.



John William Waterhouse (1849–1917)

"Nymphs Finding the Head of Orpheus"
1900

Divine Geography of Rivers

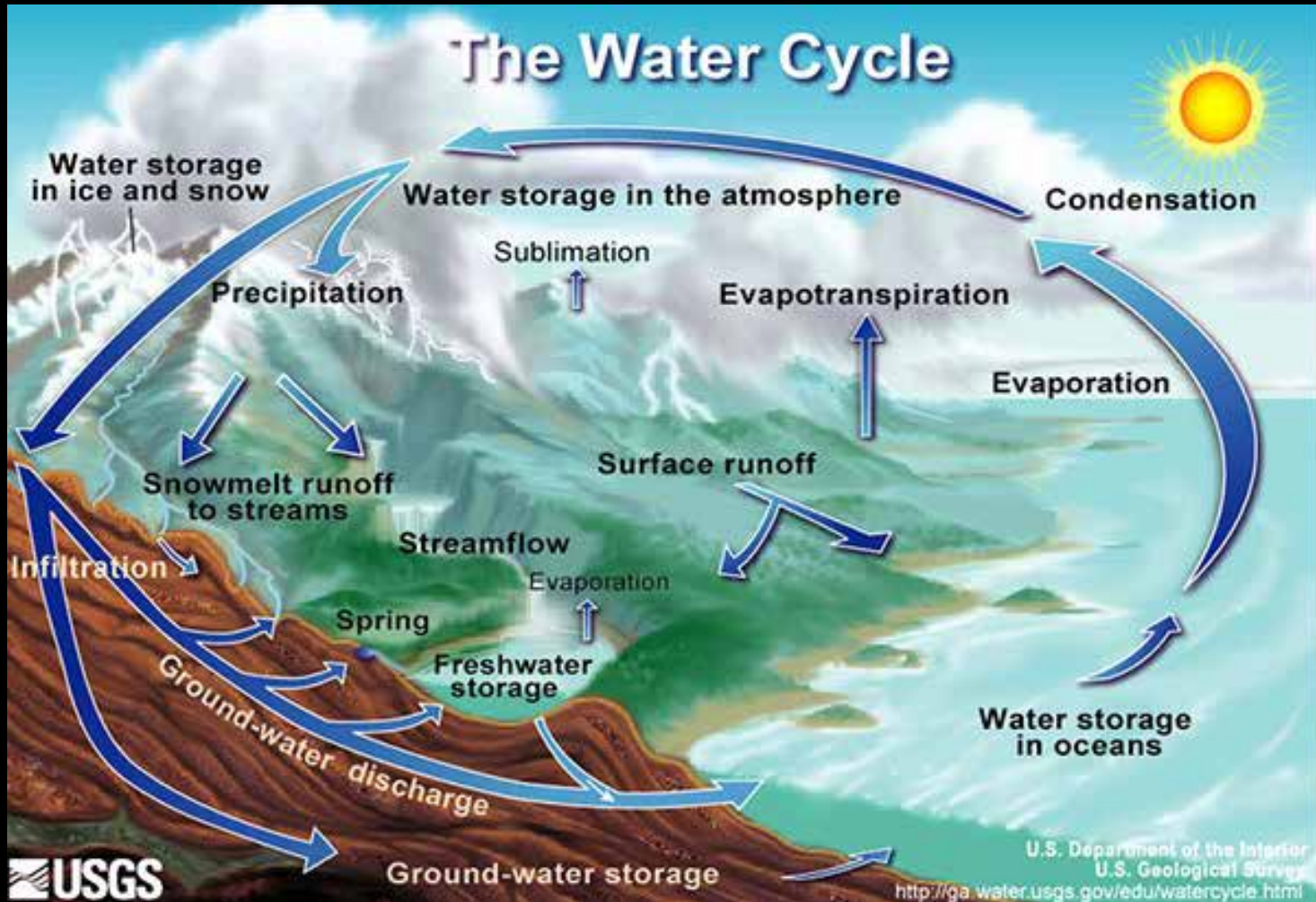
Okeanos, Earth-Encircling River

Okeanos is the font of all the earth's fresh-water: including rivers, wells, springs and rain-clouds.

In a cosmological sense, the river symbolized the eternal flow of time.



The Round River



The Round River – Aldo Leopold

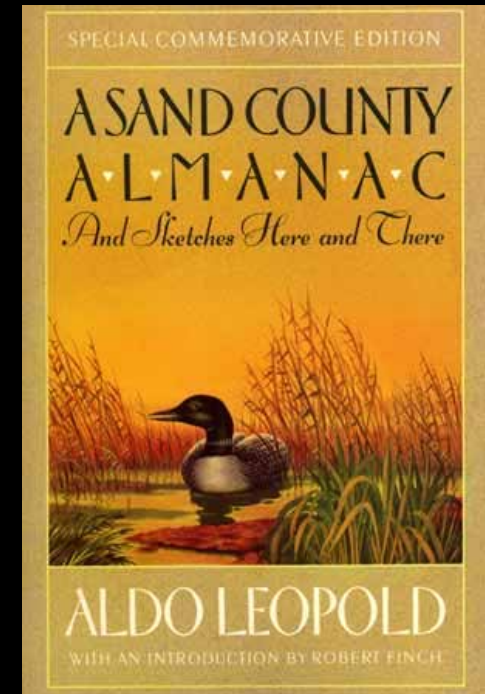
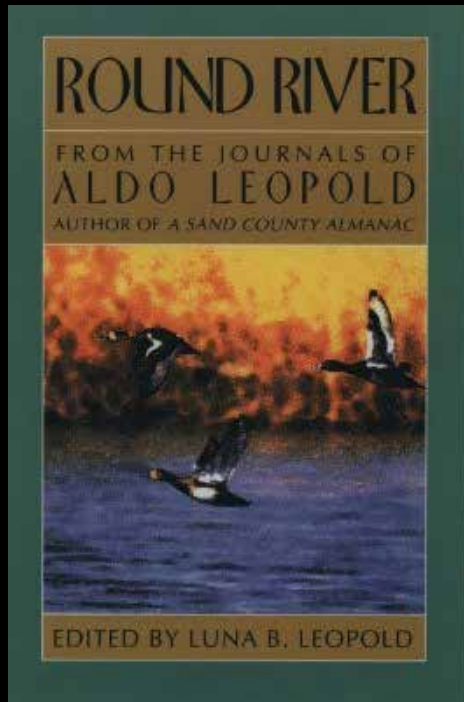
"One of the marvels of early Wisconsin was the Round River, a river that flowed into itself, and thus sped around and around in a never-ending circuit.

Paul Bunyan discovered it, and the Bunyan saga tells how he floated many a log down its restless waters."

Metaphor for ecology

"a river that flows into itself"

Aldo Leopold 1887-1948



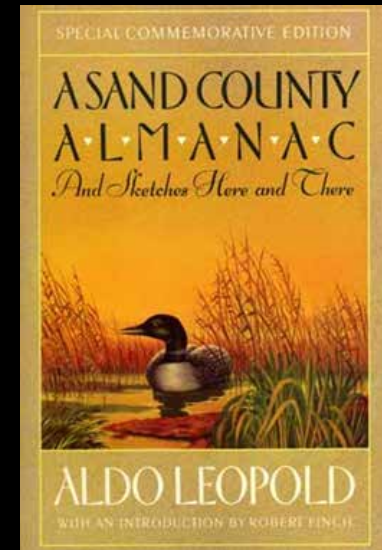
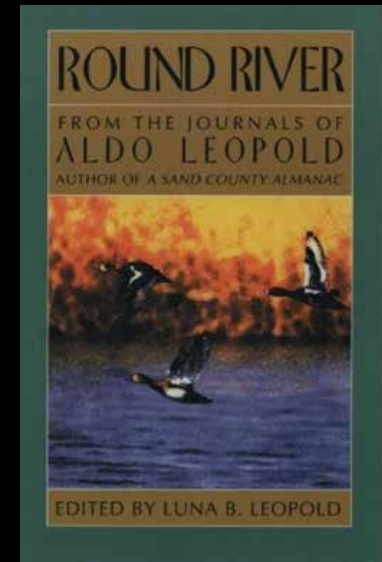
Round River

Ecology is an infant just learning to talk, and, like other infants, is engrossed with its own coinage of big words.

Its working days lie in the future.

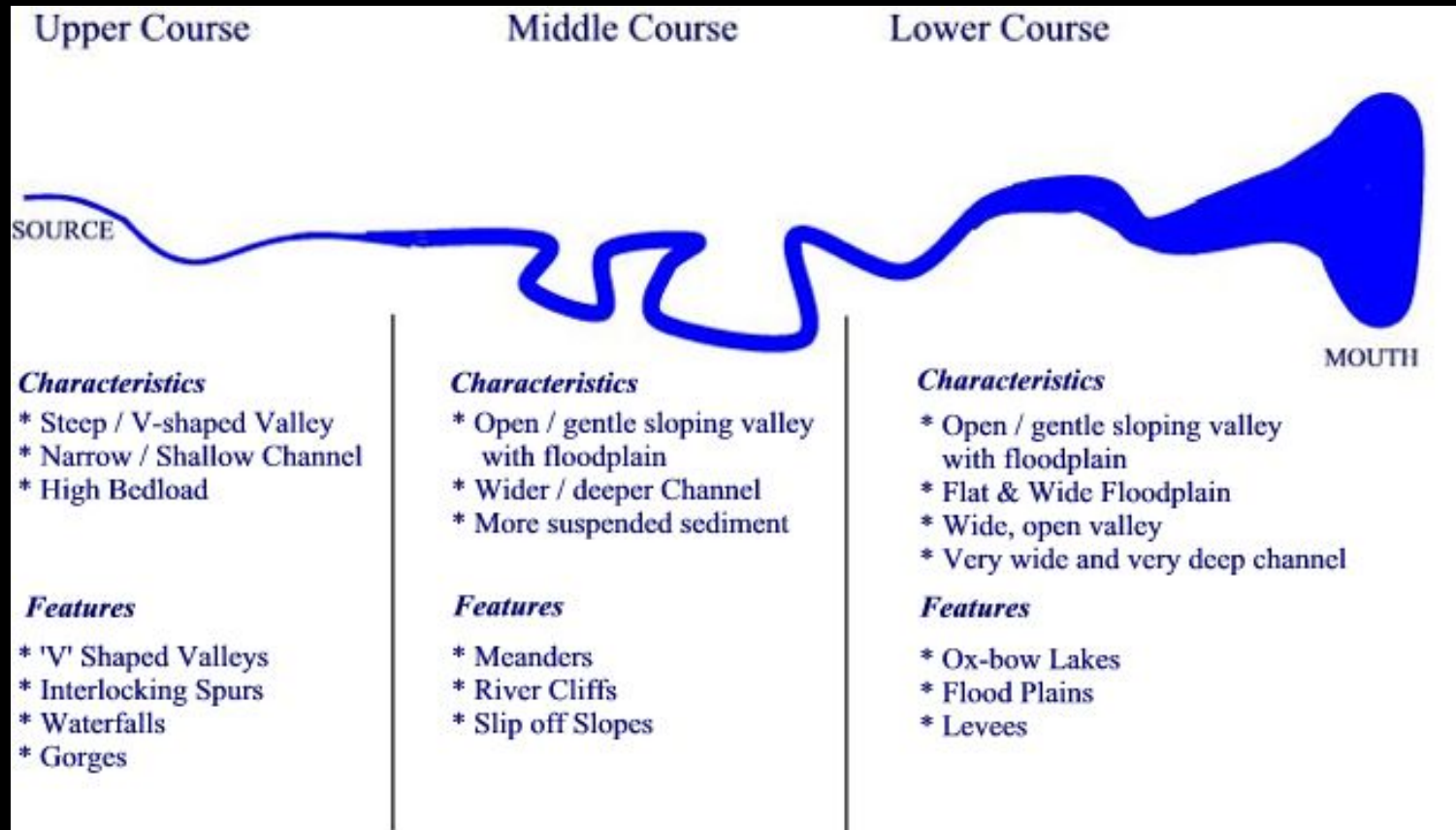
Ecology is destined to become the lore of Round River, a belated attempt to convert our collective wisdom of biotic materials into a collective wisdom of biotic navigation.

This, in the last analysis, is conservation.

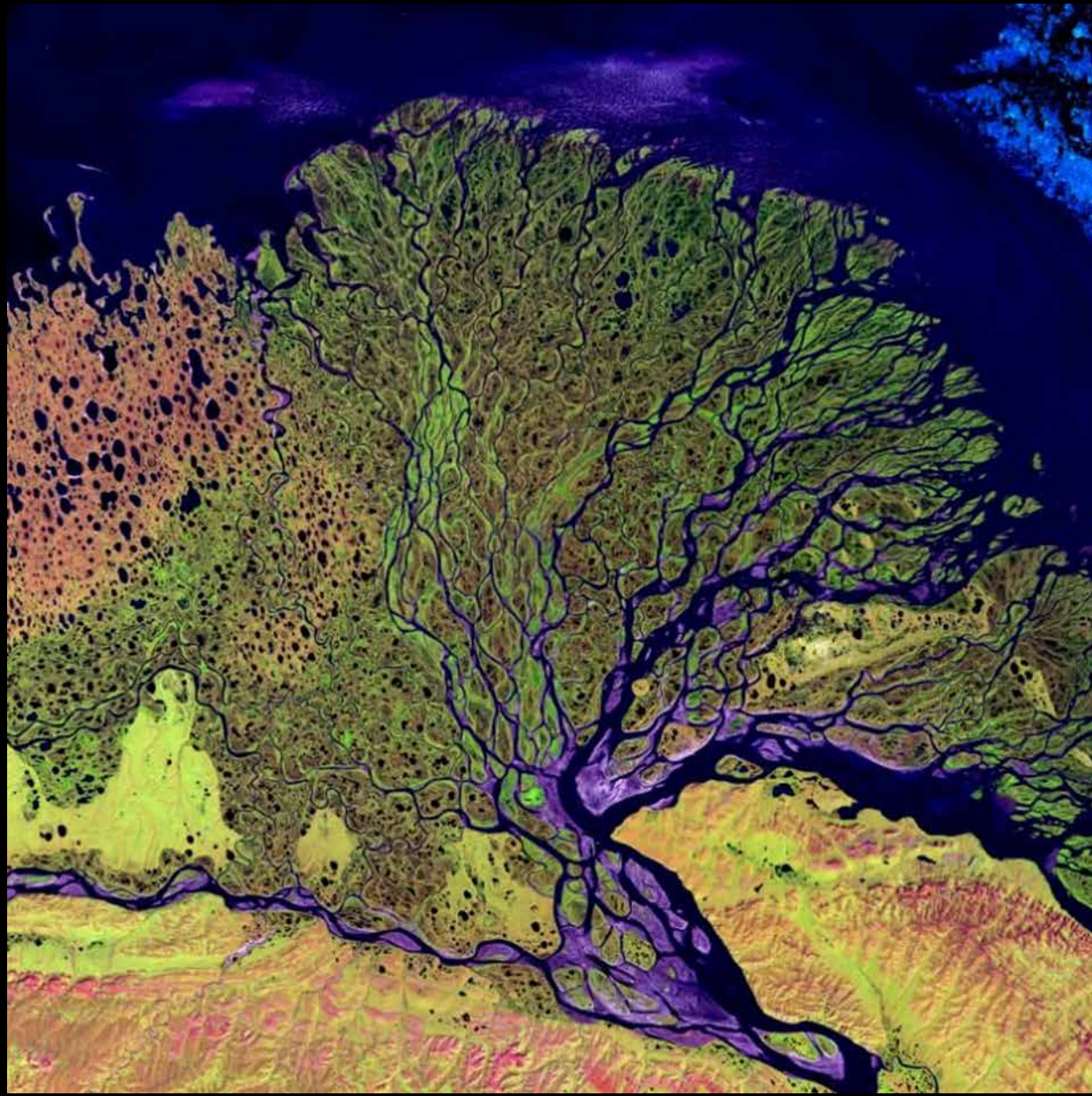


The River's End

The Lower Course – the Delta and the Mouth



Delta



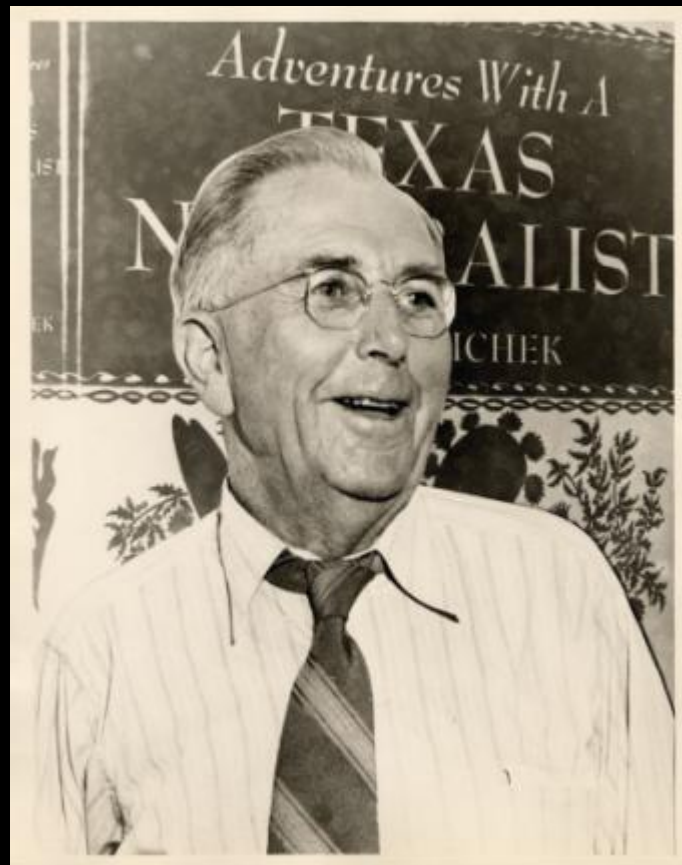
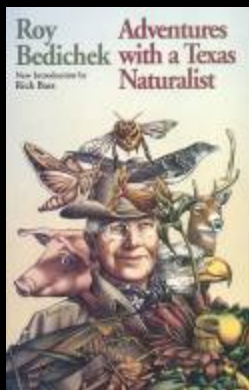
The Naturalist's River

Roy Bedichek 1878-1959

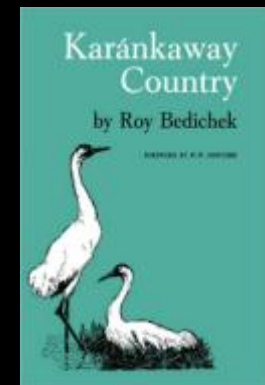
Rivers intrigue me. I can sit on a log and look upon a flowing stream for an hour at a time without feeling those twinges of conscience which come while idling in other environments.

18

1947



1950



The River – Living Organism but Problem of river terminology – mouth, head, source

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.

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.

