BOATS, BOATS EVERYWHERE

by Phyllis McIntosh

"There is nothing—absolutely nothing—half so much worth doing as simply messing about in boats," one animal character famously tells another in the children's book *The Wind in the Willows*. The millions of recreational boaters in the United States would undoubtedly agree.

But boating in America's waters is not all fun and sport. With thousands of miles of navigable rivers and ocean coastline, as well as five of the largest freshwater lakes in the world, the United States is a country built on water transportation—from riverboats that once plied the mighty Mississippi to the freighters and barges that move billions of tons of cargo today. Ferries, water taxis, and cruise vessels continue to transport millions of passengers across U.S. waterways for work and pleasure.

History of the Inland Waterways

Historically, Americans moved westward from the Atlantic Coast via numerous navigable waterways. Chief among these is the Mississippi River system, whose 9,000 miles of waterways include two other major rivers, the Missouri and the Ohio, and dozens of important tributaries.

The Mississippi has been a vital commercial artery since 1705, when the first reported cargo—

المنارة للاستشارات
www.manaraa.com

© Shutterstock.com

Boats anchored in Rockport Harbor, Massachusetts

15,000 bear and deer hides—was floated downstream for shipment to France. By the 1800s, the river was a major route for transporting agricultural products and other goods from west of the Appalachian Mountains to eastern cities.

Around the same time, construction of canals in the North and Midwest, especially around the Great Lakes, provided another means of water transport. The most famous and successful was the Erie Canal, which established a water route from Lake Erie to Albany, New York, and then via the Hudson River to New York City. Mules or horses walking along banks of the canals towed cargo barges and long, low passenger vessels known as packet boats, traveling at about two miles per hour. These canal boats provided an inexpensive way to ship goods and offered passengers a more comfortable alternative to bone-jarring stagecoaches.

المنارة للاستشارات www.manaraa.com

The Age of Steamboats

Early river travel relied on unstable rafts and flatboats and later on keelboats that could be poled by a small crew. All these boats had a major disadvantage: they were limited to one-way trips downstream.

The breakthrough in inland waterway transportation was the invention of the steamboat. Various inventors had been working for decades to propel a boat against a river current by means of a steam engine. But credit for the first successful design goes to American Robert Fulton, who debuted his *Clermont* in 1807 on the Hudson River, where it steamed from New York City to Albany and back in five days.

Fulton's innovation would revolutionize travel and commerce on the Mississippi. The maiden steamboat voyage on the river was made in 1811 by a somewhat ill-fated vessel named the *New Orleans*. While making its way from Pittsburgh via the Ohio River and then down the Mississippi toward its namesake city, the *New Orleans* was rocked by the New Madrid earthquake, the most violent tremors ever to strike the middle of the United States. The *New Orleans* managed to complete the trip and was subsequently placed in service between New Orleans and Natchez, Mississippi, only to sink two years later after hitting a submerged tree stump.

Soon hundreds of paddle wheelers—propelled by engines that turned large paddle wheels mounted to the side or stern of the boat—were steaming up and down the Mississippi. With their large size, some exceeding 300 feet in length, steamboats were efficient cargo carriers, transporting cotton and other agricultural products to market and bringing staples and finery back into the interior of the country. By the 1830s, steamboats with flat, shallow hulls were traveling the Upper Mississippi. Soon after that, river commerce was thriving as far north as what is now Saint Paul, Minnesota.

By 1817, steam navigation had also reached the Great Lakes. With completion of the Erie Canal in 1825, commerce in the region increased considerably. By 1840, more than a hundred steamboats were in service on the Lakes.

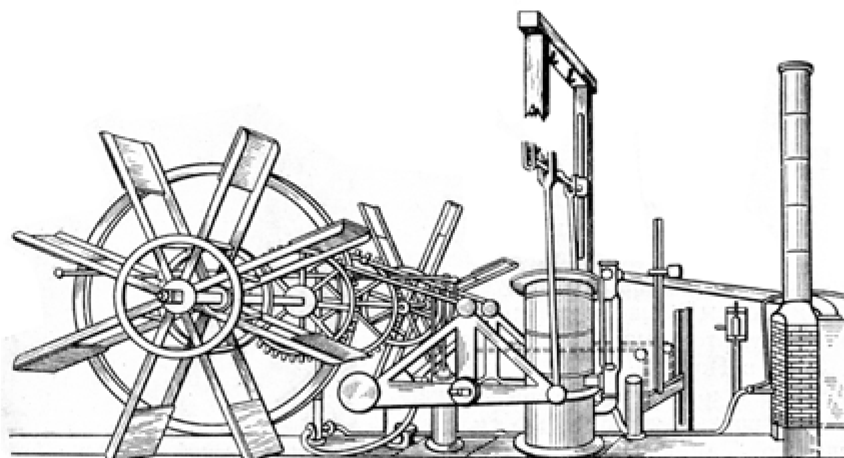
The new mode of transport was not without its dangers, however. Hundreds of the large wooden vessels were lost to fires, boiler explosions, and collisions. Especially on the rivers, many sank after hitting snags, rocks, or other submerged obstacles.

Despite such hazards, the popularity of steamboats ushered in a colorful era in American history known for:

- ***Luxurious travel.*** The addition of a second deck on the paddle wheelers provided ample space for passenger cabins, parlors, and dining rooms. Many of these double-deckers were floating palaces, with grand staircases, thick carpets, crystal chandeliers, and plush furniture, which attracted wealthy travelers and pleasure seekers. By the late 1800s, luxurious steamers were ferrying passengers around the Great Lakes, as well as on the Mississippi and other large rivers.

(left) This old engraving shows Robert Fulton's design for the engine of his steamboat *Clermont*, which made its debut on the Hudson River in 1807.

American Robert Fulton (1765–1815) created the first successful design for a steamboat.



© SHUTTERSTOCK.COM

المنارة للاستشارات

www.manaraa.com

- ***Showboats.*** Along with cargo and passengers, steamboats delivered entertainment to towns along the Mississippi and Ohio Rivers. The first floating theater barge, or showboat, was built in 1831 for a family of English actors who tied up at river landings for one-night performances of Shakespeare, fairy tales, and popular songs. Soon, larger floating theaters and even circus boats with live animal acts were steaming up and down the rivers.

  After disappearing during the Civil War, showboats enjoyed a revival in the 1870s, their approach to towns announced by the sound of a steam-driven musical instrument, the calliope. Well into the 20th century, showboats offered a variety of entertainment, including vaudeville, melodramas, and burlesque.

This New Orleans steamboat is propelled by engines that turn its large paddle wheel.

(inset) A paddle wheel in motion

© SHUTTERSTOCK.COM

© SHUTTERSTOCK.COM

Each year more than 200 million tons of cargo is shipped via the Great Lakes, which have port cities in several states and Canada.

Commercial Boats Today

With expansion of the railroads and the advent of the automobile, passenger traffic on U.S. waterways declined. Rivers and the Great Lakes continued to rival railroads for cargo transport, but the steamboats were gradually replaced by diesel-powered, propeller-driven vessels.

Today, there are 12,000 miles of commercially navigable waterways within the United States. The Mississippi River system comprises three-quarters of those waters. Accounting for the rest are the Ohio River system, the Columbia River system in the Pacific Northwest, and the Gulf Intracoastal Waterway, which connects Gulf ports such as Mobile, Alabama, and New Orleans, Louisiana, with major inland ports. Together, these waterways serve 41 of the lower 48 states, including every state east of the Mississippi River. Each year, they handle about 630 million tons of cargo, including coal for electric-generating plants, petroleum, sand, stone, gravel, agricultural products, and chemicals. The U.S. Army Corps of Engineers, with funds from a commercial fuel tax, oversees the waterways, dredging navigation channels and maintaining the 257 locks that raise and lower water levels where the elevation changes.

In addition to inland waterways, the United States is served by major seaports, such as New York, Los Angeles, Houston, and New Orleans, which are destinations for transoceanic shipping and international cruise ships. The Saint Lawrence Seaway, shared by the United States and Canada, links the Atlantic Ocean and the Saint Lawrence River with

المنارة للاستشارات

www.manaraa.com

A towboat pushes a barge loaded with sand down the Mississippi River near Saint Paul, Minnesota.

The *William G. Mather*, a retired Great Lakes bulk freighter, is now a ship museum docked on Lake Erie in Cleveland, Ohio.

the Great Lakes, making Lake ports closer to some European markets than ports on the East and Gulf Coasts. More than 200 million tons of cargo, primarily iron ore, coal, and grain, is shipped through the Great Lakes each year.

Cargo Vessels

Animals pulling flat-bottomed barges on canals in the 1800s gave rise to the word *towboat*, which is still used to describe boats that actually push instead of pull. By the mid-1800s, shippers had discovered that it was most efficient to push barges, often several lashed together, with steamboats. The practice, relying on powerful towboats producing up to 10,000 horsepower, continues to this day.

A modern tow may consist of four to six barges on smaller waterways to more than 40 on the wide lower Mississippi River. A 15-barge tow, common on large rivers, can move about 22,500 tons of cargo. According to the Army Corps of Engineers, it would require 225 rail cars or 870 tractor trailer trucks to haul the same load.

The workhorses on the Great Lakes are huge bulk carriers known as "lakers." Many of these freighters are self-unloaders, outfitted with boom and conveyor systems that enable the crew to unload the vessel without the help of onshore personnel or equipment. A 1,000-foot lake freighter can haul 70,000 tons of cargo, which on land would require 3,000 trucks. With self-unloading technology, that same freighter can discharge its entire cargo in less than ten hours.

Despite their size, both tow barges and lake freighters are remarkably fuel-efficient and environmentally friendly, according to the Army Corps of Engineers. On one gallon of gas, a truck can move a ton of cargo just 59 miles, and a train can move it 202 miles. On that same gallon of gas, a river barge can move a ton of cargo 514 miles, and a lake freighter can move it 607 miles. The Corps also calculates that a lake freighter carrying 1,000 tons of cargo emits 90 percent less carbon dioxide than a truck and 70 percent less than a train transporting the same load.

Passenger Boats

Although most people in the United States now take trips by car, plane, or train, water transportation still plays an important role in daily commuting and pleasure travel. Commercial passenger vessels include ferries, water taxis, and cruise boats.

Ferry boats that transport up to 1,700 passengers—or hundreds of passengers and their cars—operate on bays, harbors, and rivers. The single busiest ferry service in the country is the Staten

A water taxi cruises toward the dock in the Baltimore, Maryland, harbor.

www.manaraa.com

The Staten Island Ferry in New York City carries approximately 20 million passengers a year, making it the single busiest ferry service in the United States.

© Shutterstock.com

Island Ferry, which carries approximately 20 million passengers a year—an average of 60,000 every weekday—between two boroughs of New York City, Staten Island and Manhattan. Although most customers are commuters going to and from work, tourists also ride the ferry to see spectacular views of the New York skyline and to visit the Statue of Liberty.

The most extensive ferry system in the United States is Puget Sound's Washington State Ferries, which operates 10 routes and 20 terminals in the state of Washington and the Canadian province of British Columbia.

Ferries remain the only means of reaching some popular vacation destinations, such as the islands of Martha's Vineyard and Nantucket off the coast of Massachusetts.

In a number of cities, water taxis provide public transport around harbors and on rivers and canals. These boats may operate on demand, as taxicabs, or at scheduled stops, similar to buses. On the Hudson River in New York, catamarans painted yellow and black, like the city's taxicabs, serve commuters and tourists traveling between upper and lower Manhattan. In Baltimore, water taxis ferry visitors to various tourist attractions around the Inner Harbor.

A cruise ship takes passengers into Glacier Bay in Alaska for a close look at the glaciers.

Popular cruises within the United States include sailboat excursions on the Chesapeake Bay, paddlewheel cruises on the Mississippi River, a journey on the Erie Canal and Hudson River, and a voyage through Alaska's Inside Passage to view glaciers and wildlife. Many of these cruise-boat trips feature onboard naturalists and other experts who discuss the ecology and history of the region.

المنارة للاستشارات
www.manaraa.com

Two kayakers paddle along on Canadice Lake, one of the Finger Lakes in New York state.

Recreational Boating

More than 50 million Americans go boating every year, according to the Recreational Boating and Fishing Foundation. About 20 million own a boat, and 10 million more say they are considering buying one. The National Marine Manufacturers Association reports about 12.5 million registered boats in the United States. Florida leads all states in boat ownership, and states bordering the Great Lakes account for more than a quarter of all registered boats.

Recreational boats come in a variety of styles and sizes to suit every interest and pocketbook. Typical paddle sport boats include canoes, kayaks, and rowboats. These boats, usually operated by one or two people, are popular on lakes, rivers, or protected coastal waters.

Powerboats equipped with motors can cover greater distances and obviously attain greater speeds than boats powered by oars or paddles. Powerboats are especially popular for fishing. The boating industry has designed specific models to give anglers the greatest advantage in fishing for certain species, such as bass, trout, or salmon.

People who enjoy water sports, such as water skiing, wakeboarding, and parasailing, select high-powered boats designed for towing someone behind the boat. These types of powerboats include:

- ***Runabouts.*** Usually between 15 and 25 feet in length, these affordable boats are often powered by outboard motors. Built to skim across the water and able to carry four to eight passengers, runabouts are used for pleasure cruising, fishing, and water skiing.
- ***Cabin cruisers.*** Extending up to 45 feet in length, these comfortable vessels have galleys (small kitchens) and sleeping accommodations. Larger cruisers are considered yachts.

Another type of recreational boat is the sailboat. Powered by sails that catch the wind, these boats require training and skill to operate. Sailboats, which represent about 20 percent of the boating market, include:

- ***Sailing skiffs.*** These small, lightweight sailboats are often used for racing. Some have a device called a trapeze that allows the crew to suspend themselves over the water to give the boat greater stability.

المنارة للاستشارات

www.manaraa.com

- ***Day sailers.*** Up to 25 feet in length, these boats usually have a small auxiliary engine for use in case the wind dies, but they are not big enough for extended cruising.
- ***Cruising sailboats.*** Up to 60 feet or so in length, cruisers are wide enough for comfortable cabin accommodations, but they can still be handled by a small crew.
- ***Racing sailboats.*** While some sailors race family boats against others, usually of the same design, a true racing sailboat is a highly specialized vessel designed for maximum speed in ocean racing. Several famous races cross an entire ocean, and a few, such as the Volvo Ocean Race, circumnavigate the globe.

Certainly, there is something about going out on the sea—or a river, bay, or lake—in a boat that appeals to many people. Whether transporting a load of coal, a group of tourists, or a crew of sailors, a boat maintains an allure and sense of adventure that calls to all but the most dedicated landlubber.

Boating Banter

aft – toward the rear, or stern, of a boat
beam – the width of a boat at its widest part
bilge – the lowest section inside a boat's hull, where some water collects
draft – the depth of water a boat requires to operate
port – the side of a ship or boat that is on the left when facing forward (opposite of *starboard*)
screw – a boat propeller
scuttlebutt – slang for *gossip*; named after a water cask that sailors historically gathered around to drink and talk
slip – a berth for a boat between two piers or floats
spindrift – fine water spray swept from the crest of waves by a strong wind
starboard – the side of a ship or boat that is on the right when facing forward (opposite of *port*)

© Shutterstock.com

Cabin cruiser

المنارة للاستشارات

www.manaraa.com

Websites of Interest

Canals and Steamboats

http://xroads.virginia.edu/~HYPER/DETOC/transport/front.html

Part of the American Studies program at the University of Virginia, this site features detailed information about early canals, steamboats, and inventor Robert Fulton.

Discover Boating

www.discoverboating.com

This site provides abundant information for novice recreational boaters on types of boats, how to buy a boat, and kinds of boating activities and water sports.

National Waterways Foundation

www.nationalwaterwaysfoundation.org

Dedicated to research and helping the public understand the value of the nation's inland waterways, this organization includes on its website easy-to-read studies and brochures on the efficiency and environmental advantages of commercial water transportation.

Phyllis McIntosh is a freelance writer whose work has appeared in many national magazines.

© Shutterstock.com

Day sailer

© Shutterstock.com

Cruising sailboat

المنارة للاستشارات

www.manaraa.com

The Mississippi River in American Literature

No body of water is more deeply embedded in American life and culture than the mighty Mississippi. And no American is more closely associated with the Mississippi than 19th-century author and humorist Mark Twain. Born Samuel Clemens, he grew up in the river town of Hannibal, Missouri, a frequent stop for steamboats from Saint Louis and New Orleans. While working as a river pilot, Clemens took his pseudonym from a river term used to denote a depth of two fathoms, or 12 feet. "Mark twain" meant the water was deep enough for a boat to navigate.

The Mississippi River figures prominently in Twain's writings. In *Life on the Mississippi*, he recounts stories and memories from his days working on the river. In his most famous work, *The Adventures of Huckleberry Finn*, the Mississippi represents freedom and challenges for the young boy Huck and escaped slave Jim as they raft down the river.

The floating theaters that brought entertainment to Mississippi River towns inspired another popular novel, Edna Ferber's *Show Boat*, published in 1926. The novel—which portrayed the lives of the actors and workers on the *Cotton Blossom* showboat—led to a Broadway musical and film of the same name that featured the memorable songs "Ol' Man River" and "Can't Help Lovin' Dat Man."

This postage stamp honoring Mark Twain depicts his connection to steamboats and the Mississippi River.

المنارة للاستشارات
www.manaraa.com