# Traditional Work Boats of North Carolina

written & illustrated by
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**Beaufort, NC**

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# TRADITIONAL WORK BOATS

# OF

# NORTH CAROLINA

By

Michael B. Alford

To Suzanne and David,

This book is lovingly dedicated to my wife, whose love and understanding give meaning to my life, and to my son, who is my pride and joy.

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# TRADITIONAL WORK BOATS OF NORTH CAROLINA

## ACKNOWLEDGEMENTS
(First Edition)

The author wishes to acknowledge his indebtedness to the North Carolina Maritime Museum, The North Carolina Department of Agriculture, and the State of North Carolina for the opportunity to produce this book.

A debt of gratitude is also due to the entire staff of the North Carolina Maritime Museum for their constant support and encouragement. In addition fellow staff member Patricia Hay read the preliminary manuscript and made particularly useful suggestions that resulted in its final scope and form.

Special thanks are due the Board of Directors of the Friends of the Museum whose generous support made publication of this work possible.

## ACKNOWLEDGEMENTS
Second (Revised) Edition

The text of this Second Edition remains basically unchanged from the First, but contains typographical and other corrections, and revisions to update certain lists in the Appendices. Gratitude is again extended to the original staff who labored to make the First Edition successful.

For this edition, the author wishes to acknowledge the cooperation of the Department of Cultural Resources, which is now the parent agency of the North Carolina Maritime Museum. In addition the following staff members deserve special recognition for their significant contributions: Paul Fontenoy guided the project through republication; Jeannie Wilson Kraus performed the editorial and proofreading tasks and made many helpful suggestions; and Jerry Heiser's exhibit branch, especially Josh Loftin and Joe Barricella who did the graphics and typesetting. Jane Wolff was instrumental in initiating the reprint and keeping it alive through production.

Special thanks are extended to the Friends of the North Carolina Maritime Museum for their generous support, without which this republication would not have been possible.

Last but not least, I wish to express my appreciation to all the staff of the museum, past and present, for their continued support and encouragement for my work.

Michael Alford
Retired Curator of Maritime History
North Carolina Maritime Museum

# FOREWORD

The purpose of this booklet is to provide a general survey of the major types of small craft that have developed in North Carolina, together with sufficient commentary to make the reader more aware of the significance of boats in our society.

This compilation is by no means complete and is not particularly technical in its content. There are many varieties of boats, unique construction methods and uses of boats that could not be included because of space limitations. Much of what is included has never been in print and should be helpful to anyone who wants to know more about traditional boats or their role in the history of the coast. We also hope to spawn more questions than have been answered, and our desire is that you will be stimulated to learn more about our maritime heritage by reading and by visiting maritime museums. To that end the appendices list resources that offer a variety of enjoyable ways to raise your awareness and broaden your understanding of this interesting and important aspect of coastal life.

## *Introduction*

A great diversity of boat types evolved in North Carolina because the water and the land are so profusely mingled in the eastern part of the state. This kind of topography results in many different conditions and many different uses for boats. We can only begin to touch on the range of types that have been in use over the past four-hundred years.

Boats were the most convenient, and in many cases, the only means of travel until the advent of modern roads and bridges, which in some areas came as late as the 1930s. Throughout most of the state's history, the transportation of goods, produce, and freight was conducted primarily on the water. Even after the railroads came in the late 1800s, there were many towns and cities without rail connections. Boats were used to connect the railroads with most of the coast.

Coastal communities were and still are, relatively speaking, isolated and remote. Each community developed its own peculiar boatbuilding "dialect" resulting in regionally unique styles of

boats. The common thread was simplicity and functionalism. Native materials were used for their construction; function and the environment dictated their form. Rugged individualism and personal experience tempered the mix.

These elements have influenced boatbuilding traditions through generations of builders and are responsible for many of the unique methods and techniques used by North Carolina boatbuilders to this day. In boat shops and backyards in Carteret and Dare counties, individuals and small family-owned businesses still produce wooden boats, one at a time, in a time-honored tradition. Family names of the builders have not changed as much as the boats themselves, whose only link with their heritage now seems to be the sweet smell of cedar wood chips on the shop floor. The natural aroma of fresh-cut wood mingles with the sharp pungency of modern glues and preservatives. The buzz and whir of power tools has replaced the soft swish-swish of the hand saw and the irregular thumping of the hand adz. The soft, easy lines of sailing hulls have given way to the angular, broad-beamed shapes of high-speed, engine-driven boats. Yet, the products are still unique. They are one-of-a-kind boats that reflect the individualism of the builder, the traditions of the community, and the needs of the job for which they are intended.

This booklet celebrates the heritage of these watercraft and the people who built and used them.

# PART I.
# BOATS SINCE THE CIVIL WAR

Just after the Civil War, North Carolina and the other southern states began to undergo great changes. During the Reconstruction period, industrial developments and an influx of northern capital made many of the old ways obsolete. Previously, most of the fishing was done for subsistence and food supplementation. Improvements in transportation, canning and preserving processes, and other factors brought about greater demands for fish and fish products and opened up markets farther inland. The small, simple fishing craft that had served so well for so long could no longer handle the demands of the new conditions. They needed to stay out longer, sail to more distant fishing grounds, and carry larger catches of fish than they had in the past.

Likewise, the need to transport goods and produce grew and diversified so that new types of boats were needed to meet the new conditions. By 1875 boatbuilders and fishermen (they were often one and the same) were experimenting with different types of boats. The roundbottom shad boat is an example of a new type that developed during this period. The sharpie is an example of a type which was introduced from outside the state and was so well-suited to its new environment that it became established and evolved into a distinctive type unique to North Carolina.

## FLATBOTTOM BOATS

Flatbottom, in boat construction, refers to boats built in a particular way. There are many kinds of boats that are flat in the bottom, or nearly so, but not all of them are really flatbottom boats. There are two basic ways to build flatbottom boats. One is to build the bottom first and put the sides on last. The other is to build the sides first and then attach a bottom to them. Both methods end up with a boat characterized by a sharp angle or corner, called the chine, between the bottom and the sides.

Boats built by the first method usually have bottom planks that run fore-and-aft, or length-wise, and boats built by the second method have transversely planked bottoms. Most of the flatbottom boats indigenous to North Carolina are like the second type, with the bottom planks running from side to side.

This simplicity of construction makes it possible for persons with little more than ordinary carpentry skills to build a skiff in just a few days time, with only a small investment in materials (Fig. 1).

### Shove Skiffs

There are hundreds of small creeks that feed the rivers and bays of the coast. Farms and small settlements border these marsh-rimmed waterways. Dwellers along these shores have countless reasons to venture out on the water. Tending nets, gathering oysters,

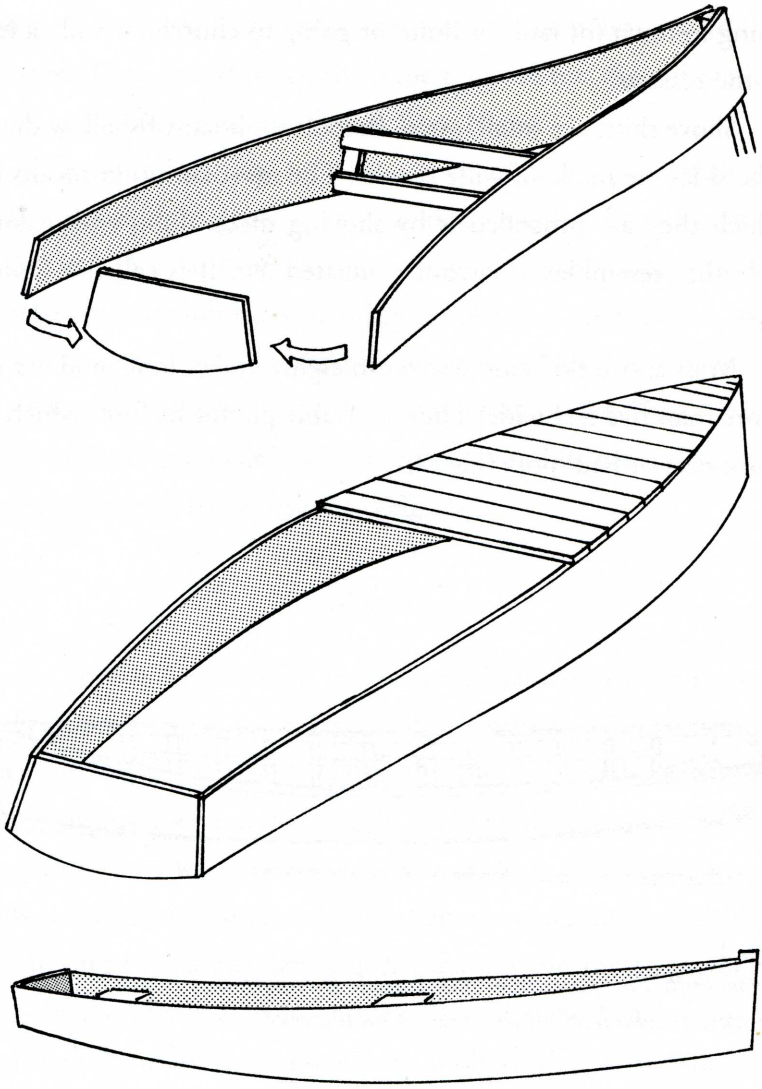

Fig. 1
*Flatbottom boat construction uses simple methods and inexpensive materials to make a boat.*

going to town for nails or flour, or going to church are only a few of the reasons.

Shove skiffs are small, open, flatbottom boats of shallow draft. The sides are made of wide planks. The most common means by which they are propelled is by shoving them along with a long pole that resembles a narrow, elongated oar. It is called a poling oar.

Most shove skiffs are sixteen to eighteen feet long, and are no more than five feet wide. They are stable platforms from which to work nets or haul pots (Fig. 2).

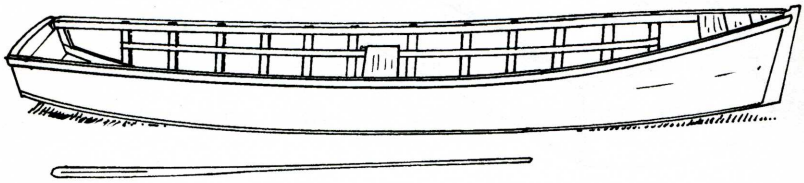

Fig. 2
*Shove skiff; This flatbottom skiff is basic transportation for anyone who lives on the miles of tidal creeks.*

## Sail Skiffs

Sail skiffs were very common and were built in lengths from fourteen to twenty feet. They provided more mobility than the

shove skiff, especially in water too deep for the poling oar to find bottom. They served much the same purpose but the sail made it more convenient to range farther from home.

The typical sailing rig was a sprit mainsail and small jib. Larger sail skiffs might also carry a sprit topsail and more rarely, a flying jib. The flat bottom and wide-plank sides made construction quick and simple. A pivoting centerboard enabled the boats to sail to windward but could be retracted when it was necessary to pole the skiff across shoals. Inhabitants of the Outer Banks often sailed to the mainland to conduct their business or buy groceries in little skiffs of this type (Fig. 3).

## Sharpies

In 1876 a Connecticut businessman named George Ives was in Beaufort to open a wholesale oyster business. He had brought with him one of the New Haven sharpies because he had found the local boats were not suited to the new fishing methods. The local fishermen were reluctant to give up their own familiar boats so Ives devised a plan to convince them to switch to the new type. He arranged for a race between his sharpie and the fastest of the local boats. His boat won very easily, and soon North Carolina boatbuilders were turning out boats built on the sharpie model as quickly as they could. The northern entrepreneur was successful in his business and lived out his life as a North Carolinian, making many beneficial contributions in the area of fishery regulations and the business of fishing.

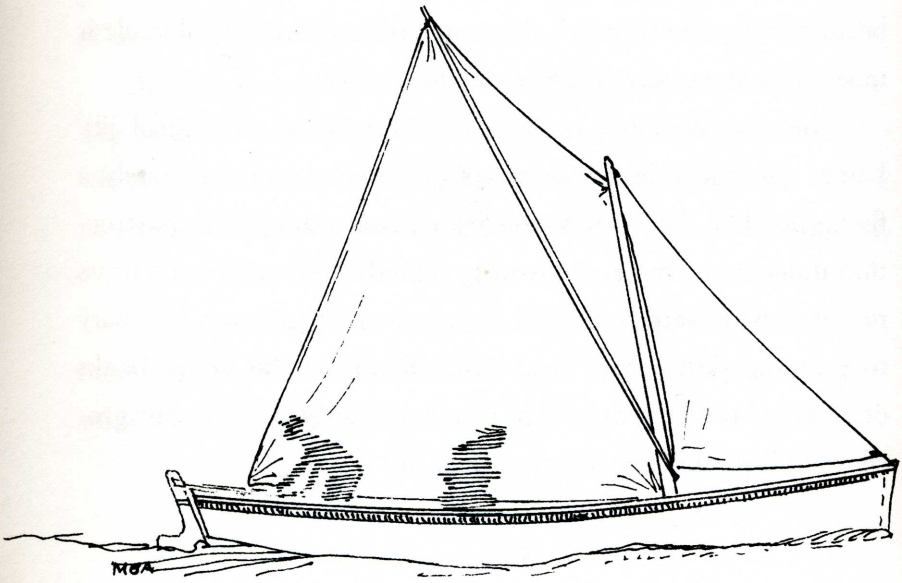

Fig. 3
*Sail skiffs were better for longer trips on the water.*

Typical characteristics of a sharpie are a plumb or upright straight stem, flat bottom, rather narrow proportions, low freeboard and a round stern. The basic rig is a two-masted leg-o-mutton style (Fig. 4).

Over the years, sharpies were modified to suit local conditions and the specific work for which they were built. Eventually they became so different from their predecessor, they took on an identity all their own. Core Sound sharpies, as they were sometimes called, were rigged as gaff schooners and gaff ketches. They were powerful, able vessels that dredged for oysters in winter, hauled

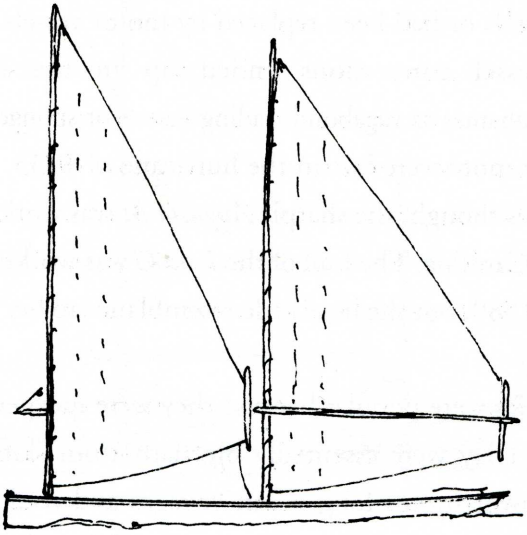

Fig. 4
*The basic sharpie rig was the leg-o-mutton spritsails of the original New England boat.*

freight, and sometimes made trading voyages to the West Indies. This was a surprising accomplishment for a flatbottom vessel, and this amazing ability resulted in the large sharpie very nearly replacing the more expensive and complicated roundbottom schooner that had been the mainstay of the sound and coasting merchants for a hundred years.

There were other distinctive rigs used on sharpies in North Carolina. Different types were known by colorful names like *yallawicker, spanker* and *Core Sounder* (Fig. 5). By the 1930s sailing

sharpies were becoming rare. Most of them had been converted to motor vessels or had been replaced by motor vessels. Many of the motor vessel conversions ended up in the Florida Keys and the Bahamas as vagabond trading vessels or sponge fishing boats. Hundreds more were lost in the hurricane of 1933. As late as the early 1960s though, the sharpie *Augusta M* was working under sail in North Carolina. The hull of the *Lala G* was working as a trawler as late as 1989, but she bore little resemblance to her original identity.

Sharpies were popular because they were inexpensive and easy to build. They were essentially big flatbottom skiffs. They were not as seaworthy for long ocean voyages and could not carry as much cargo as the schooners they replaced, but the economics of construction and operation made up the difference. Sharpies made it possible for people of less financial means to own a sizeable vessel, and for small businesses to operate on a smaller profit margin. These were important considerations in rural, remote sections of eastern North Carolina in the last quarter of the nineteenth century and the first quarter of the twentieth.

## Work Skiffs

Many of the modern work skiffs seen in North Carolina's coastal waters owe their origin to the sailing sharpie, although to the eye, they may not seem to be related. Sometimes the link with the past is not readily visible in the general appearance of the boat but is traced through the method of construction. In this case, the

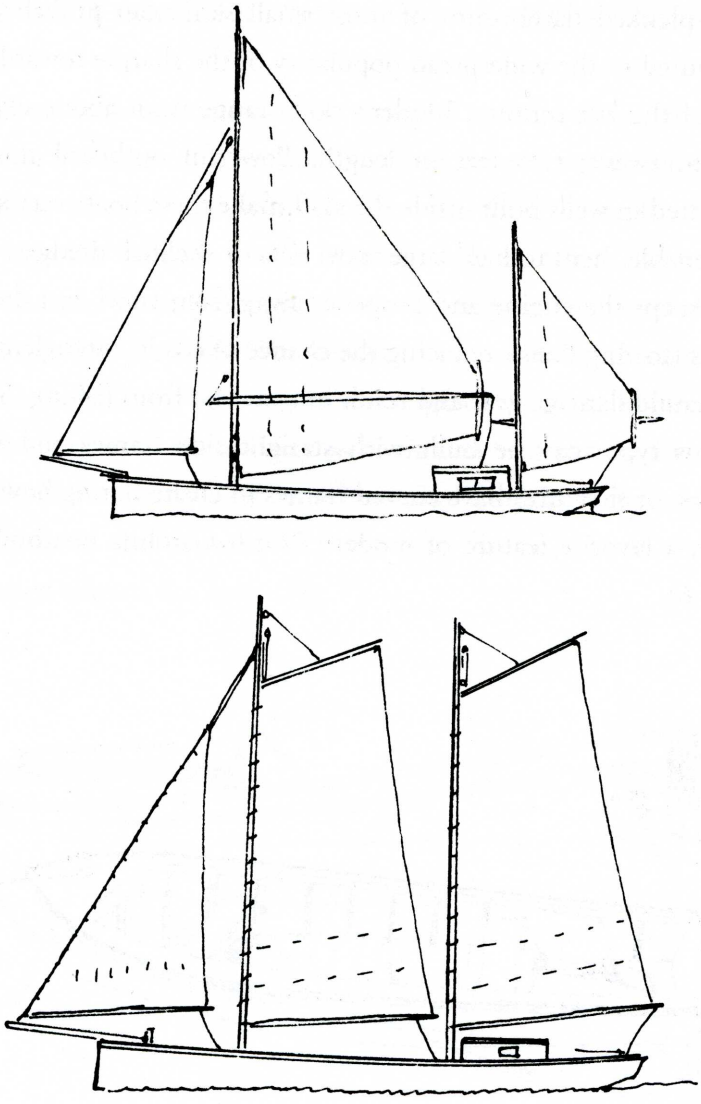

Fig. 5
*Sharpie rigs changed as the boat was adapted to specific needs in North Carolina.*

cross-planked flatbottoms of most small skiffs can probably be attributed to the widespread popularity of the sharpie toward the end of the last century. Modern skiffs range from about sixteen feet to twenty-two feet in length. Powerful outboard motors mounted in wells built inside the skiff make these boats very swift and enable them to haul large trawl nets or shellfish dredges. The well keeps the engine and propeller away from trawl and dredge warps (towing lines), reducing the chance of costly entanglements that could damage gear and result in time lost from fishing. Skiffs of this type may be built with straight side frames and wide planks, or they may have curved frames to create flaring bow sections, a favorite feature of modern North Carolina boatbuilders (Fig. 6).

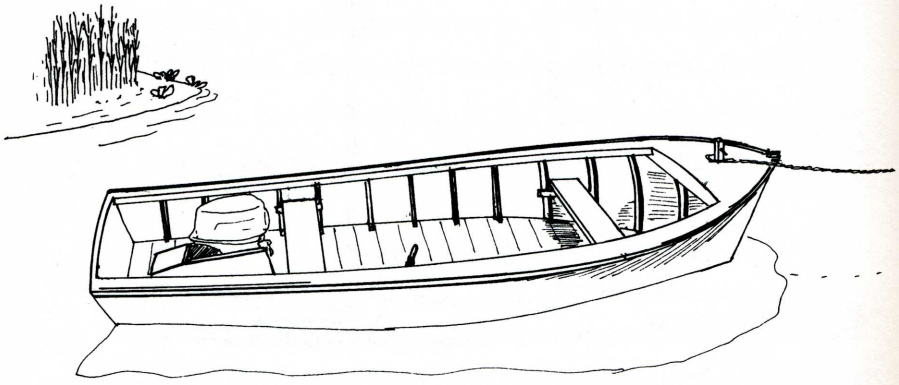

Fig. 6
*Work skiffs vary with each community, but they are always simple and practical.*

## V-BOTTOM OR DEADRISE BOATS

Boats with bottoms that are v-shaped in cross-section are said to be of deadrise construction. For the most part, this method of building boats has developed since the Civil War. In North Carolina the bottom planks of deadrise-built boats always run fore-and-aft. Their predecessors are the dugout log boats of the Colonial and pre-Civil War periods. Until midway through the twentieth century, when gasoline engines of high horsepower became available, these boats were all lean and narrow for their length, like the early dugouts. The typical deadrise boat is sharply v-shaped in the forward sections, and almost flat or shallow v-shaped toward the stern (Fig. 7).

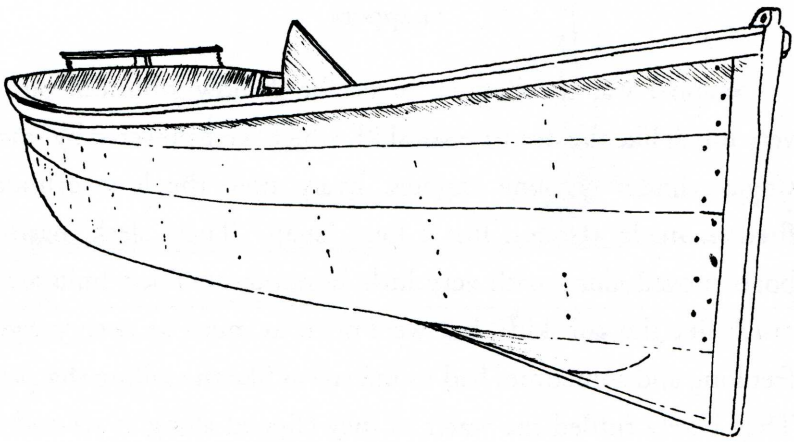

Fig. 7
*V-bottom or deadrise boats have a distinctive shape that makes them better suited to rough water than flatbottom boats.*

## Sail Skiffs

The sailing rig of v-bottom skiffs was usually identical with that of the flatbottom types, discussed earlier, despite the fact that the hulls have derived from quite different construction traditions. The best known example is the spritsail skiff that was popular in the waters around Beaufort from the 1880s into the twentieth century. Some are still sailed for pleasure, and in the late 1980s Julian Guthrie, retired from his yacht building business, was building two or three a year on special order.

Sail skiffs of this type were usually not more than twenty-two feet in length. They were used for fishing and light transportation (Fig. 8).

## Snappers

Snapper was a colloquial name for shallow v-bottom boats, very much like the deadrise sail skiff, which were powered by small single-cylinder gasoline engines. Every time the lone cylinder fired, it made a sound like a loud "snap." These sleek, narrow boats moved along with very little horsepower. Their hulls were much like the sail skiffs, but were often as much as twenty-eight feet long and sometimes had round sterns like the sailing sharpies. They barely ruffled the water as they clipped along at six-and-a-half knots on just drops of gasoline. They were useful for almost every chore around the waterfront. As bigger and more powerful

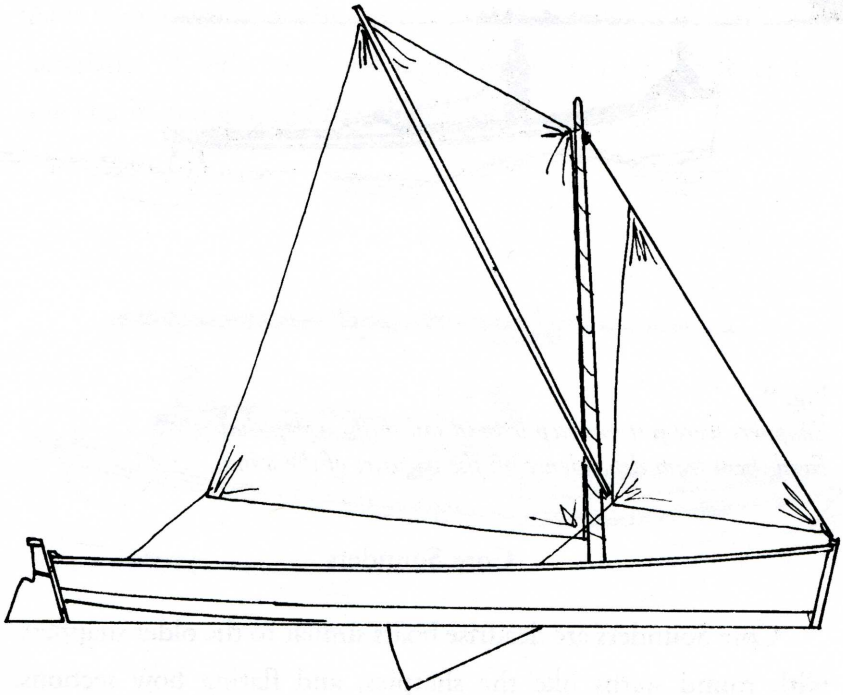

Fig. 8
*The deadrise sail skiff is a handy boat that is fast and able. It was a little like the family pickup truck.*

engines became available, the snapper gave way to speed and brute force, but not before lending some of its eye-catching features to the well-known Core Sound boats (Fig. 9).

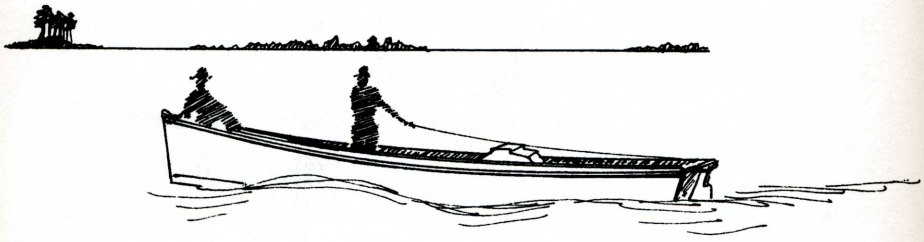

Fig. 9
*Snappers were just one step beyond sail skiffs, a step that freed them from dependence on the vagaries of the wind.*

## Core Sounders

Core Sounders are deadrise boats similar to the older snappers, with round sterns like the sharpies, and flaring bow sections. These boats came into prominence in the 1930s in the sink-net fishery where their low freeboard and round sterns were ideally suited to handling the nets.

Originally, Core Sounders had small engines and were long

and relatively narrow, around thirty-six to forty feet, with a beam of about one-fourth their length. As engine power has increased they have become wider, usually with beams of one-third their length. Early Core Sounders had only a slight amount of flare in the bow sections, but later boats have carried the feature to extreme as a kind of trademark of local builders.

Some of the old Core Sounders can still be seen in the fishing villages of eastern North Carolina, and recently some new boats have combined the traditional round stern with the modern characteristics of wide beam and high freeboard. They, however, lack the charm and grace of the older craft (Fig. 10).

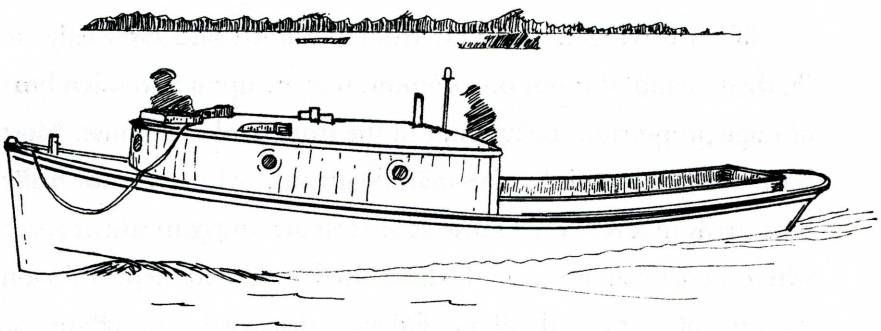

Fig. 10
*Core Sounders were noted as sink-net fishing boats but were adaptable to many other chores such as trawling and long haul fishing.*

### Flare-bow Skiffs and Boats

This is the general term used to describe modern power boats built in eastern North Carolina, especially eastern Carteret County. Skiffs may be outboard or inboard powered, up to about twenty-two feet long. Boats, in this sense, may be twenty-two to fifty-foot inboard craft built for the yacht or sport fishing trade. While this is a reasonable rule-of-thumb, there is nothing magical about these figures for distinguishing between skiffs and boats.

The technique of building flare into the bow frames is attributed to Brady Lewis who built boats in this manner first at Salter Path, N.C. in the early 1930s and then at Harkers Island soon after. The flared bow has become probably the single most distinctive feature of the modern Harkers Island boat (Fig. 11).

When driving Down East from Beaufort, and especially on Harkers Island, it is not uncommon to come upon a wooden boat of huge proportions being built in the front yard of a house. Most boats today are built by one-man boat yards, which are not really boat yards in any formal sense at all, but are any convenient space where a boat can be set up. Help is hired as needed, depending on the type of work to be done. Skills are dispersed throughout the population, much as they have been since Colonial times.

These craft, with moderate to average deadrise and flaring bow sections, have a reputation for speed and seaworthiness.

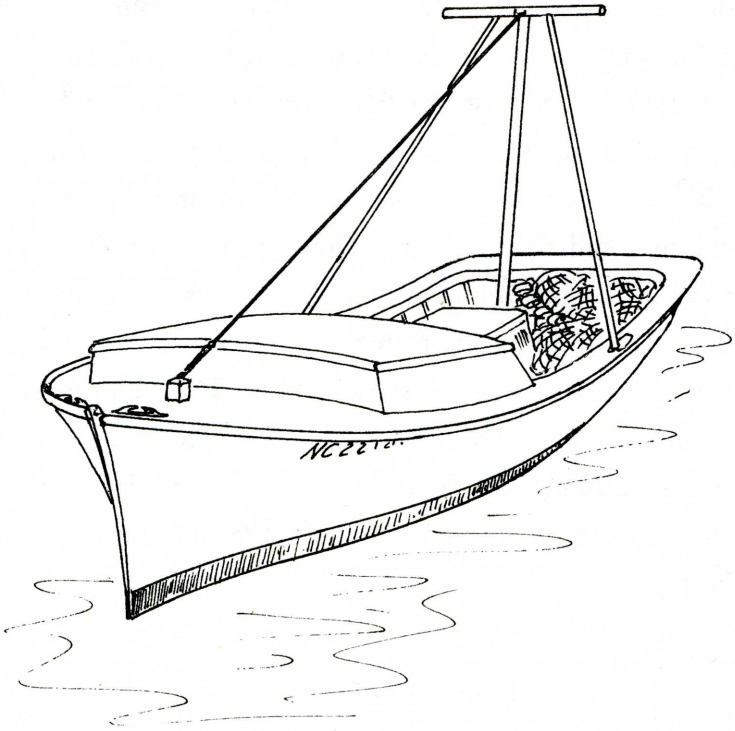

Fig. 11
*The flare bow provides a wide deck and a roomy boat, and is a distinctive feature of workboats and yachts built in North Carolina.*

## ROUNDBOTTOM BOATS

These are the most expensive and complicated kinds of boats to build. Material selection is much more critical because of the curved shapes involved, and the builder must have more specialized skills because each frame and hull plank, or strake, requires more careful and extensive shaping. Roundbottom boats have a comfortable motion in heavy seas, compared to flatbottom and deadrise hulls. Their construction permits greater control over hull shape, and therefore, can be "fine-tuned" to specific conditions or applications more so than can the boats of simple geometry like flatbottom and deadrise types. However, there are fewer people capable of building roundbottom types because the skills required for this type of construction are more specialized. For most people this meant that it was necessary to hire a builder to make their roundbottom boat. This was the economic obstacle that builders of roundbottom boats faced when competing with flatbottom-built and deadrise-built boats towards the end of the nineteenth century.

### Roundbottom Shad Boats

Dugout log boats had been the common type of boat for more than a century in many parts of coastal North Carolina, but logs of desirable quality had become difficult to find by the middle of the 1800s, and the old dugout boats were not able to do the increased

work encountered in the 1870s. This was a need experienced by fishermen throughout the coast, but it was a Roanoke Island boatbuilder named George Washington Creef who devised a combination of construction style and boat shape particularly suited to the needs of the time. He gave his boat gracefully curving frames cut from the spreading buttress roots of the white cedar tree. The mid-body was wide and full to carry large quantities of fish, and the ends were lean and fine to ride easily in the big seas near inlets.

Creef's boat, commonly referred to as the shad boat, was adopted and modified by several other builders from Currituck to Ocracoke, and Nags Head to Engelhard. It has become what is probably North Carolina's best known boat type. Widely respected for its safety and comfort in rough water, the shad boat was ideally suited to the pound-net fishery and was known for swift sailing in the open sounds. It was, and still is regarded as a very handsome work boat, a point of pride for builder as well as owner. In 1987, the North Carolina General Assembly enacted a special bill designating the shad boat the official "State Boat of North Carolina" in recognition of its role in the economy and heritage of the coast.

The construction scheme worked out by Creef combined some of the dugout building techniques with conventional plank-on-frame methods. That it was successful is born out by the survival of several of the boats that are now over a hundred years old.

The sailing rig of the shad boat consisted of the familiar sprit mainsail and jib and the addition of a topsail and flying jib when

conditions permitted. The topsail enabled the boats to work close to shorelines where trees interfered with the flow of the wind. Typically, the topsail was rigged with its own sprit separate from, and above, the mainsail where it could reach less disturbed air. It could be set or taken down without disturbing the mainsail and could even be set when the mainsail was furled (Fig. 12).

The spritsail rig has its origins in the Mediterranean at least as early as 300 B.C. It is the oldest known fore-and-aft sail and variations are found all around the world. The sprit-topsail that was used in North Carolina, however, is not known to have been used anywhere else.

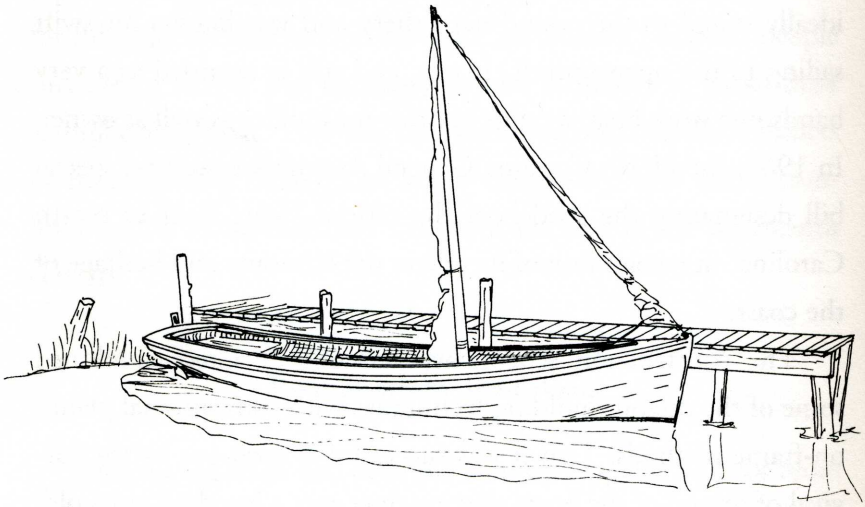

Fig. 12
*The shad boat is unique both in its shape and its construction. Its ancestry harkens back to the dugout log boats of the early settlers.*

By the 1920s shad boats were becoming expensive to build because of their rounded hull shape and the difficulty of finding suitable materials for their construction. It was necessary to search in more and more distant swamps to find Atlantic white cedar trees of the right size and characteristics from which to make the keel and frames for just a single boat.

By the end of the first quarter of the twentieth century, a v-bottom type, combining many of the desirable attributes of the roundbottom form with the economical aspects of deadrise construction, was in use. A few of the new style were built for sail but most had gasoline engines. After about 1908, more and more of the roundbottom sailing boats were converted to engine power. The deadrise boats were successful but have not lasted as well as the roundbottom form, probably because the cheaper materials used to build them were less durable. They are sometimes locally known as "round-chine" shad boats, an apparent conflict of terms because roundbottom boats do not have chines.

We have chosen to include our treatment of the deadrise style shad boat in this section because the type is essentially an adaptation of the roundbottom form, unrelated to the deadrise boats discussed in other sections of this booklet. Thus, the colloquial designation, "round-chine" may not be so inappropriate after all.

## Mail Boats

An interesting variant of the shad boat was the so-called mail boat. During Prohibition times shad boat builders found a lucrative

business in supplying boats to dealers in illegal alcoholic beverages, a great amount of which, it seems, was being produced in the wilderness of Dare and Tyrrell counties (Fig. 13). Euphemistically referred to as mail boats, these craft exhibited the typical shad boat construction style, but were usually longer, more sleek, and often adorned with a decorative round or fan-tailed stern. For obvious reasons they usually were furnished with more powerful engines than their fishing cousins.

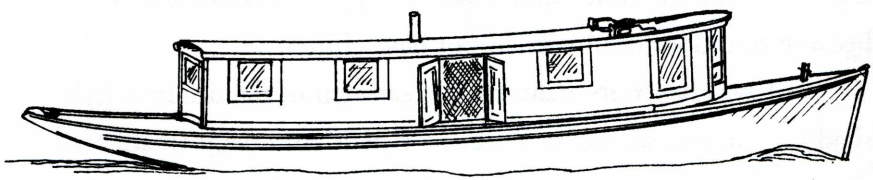

Fig. 13
*Mail boats carried mail and light cargo, but many transported illegal whiskey during the Prohibition period.*

## OYSTER BATEAUS (or BATEAUX)

An Introduction from the Chesapeake Bay

In the late nineteenth and first half of the twentieth century, two types of "foreign" boats gained some popularity in certain North Carolina waters. These were the Chesapeake Bay two-sail bateau, also known as the skipjack, and the three-sail bateau or bugeye. Both were oyster dredges and most of them were located in the Pamlico River area. A few of the skipjack type were built for a time in the Pamlico Beach area, but except for a minor difference in the way the mainsail was rigged and some structural variations, these vessels remained true to their Chesapeake Bay counterparts (Fig. 14).

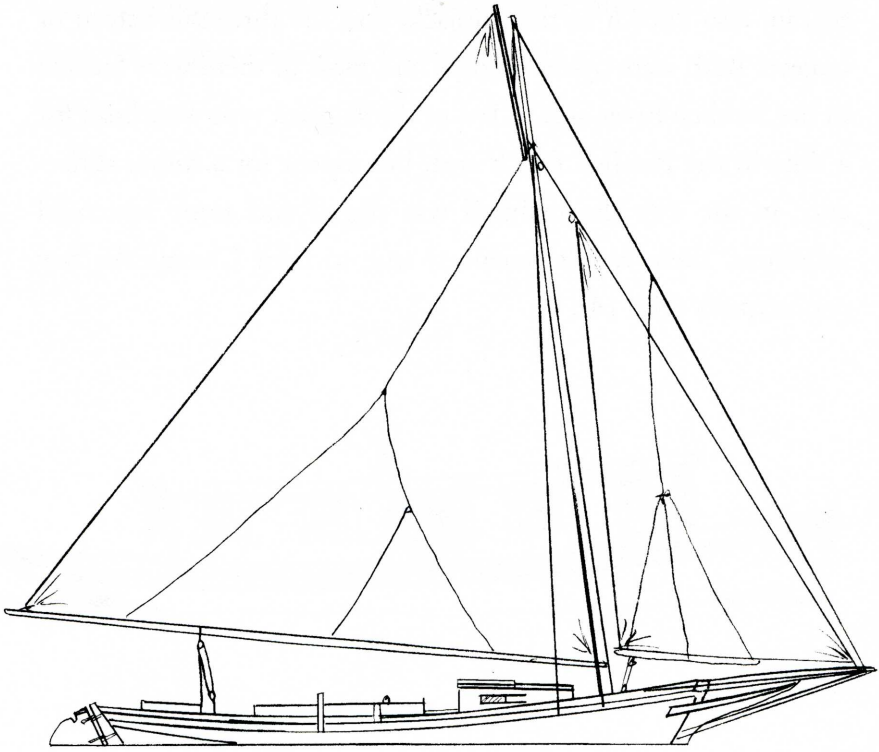

Fig. 14
*The oyster bateau was an introduction from the Chesapeake Bay that was used for a time on Pamlico Sound.*

# PART II.
# TRAWLERS AND OTHER COMMERCIAL BOATS

These are the "big boats" that North Carolina boatbuilders have produced in modern times. They range from heavy work boat types to sleek, yacht-like boats that carry parties on day fishing trips.

## TRAWLERS

Trawlers are commercial fishing boats that make their catch by pulling one or more large nets called trawls. They are almost always hard-chine (deadrise), though older vessels may be round-bottom. These heavily constructed boats can be as much as sixty-five or more feet in length and have been built from Brunswick County in the south to as far north as Currituck County (Fig. 15).

Trawlers are not built of wood very often these days because steel has been found to be a better investment as larger boats have been built and are now preferred.

Although commonly referred to as trawlers, these boats can be rigged for a variety of fishing methods and frequently vary their activities according to the season. They may fish many miles from their home port.

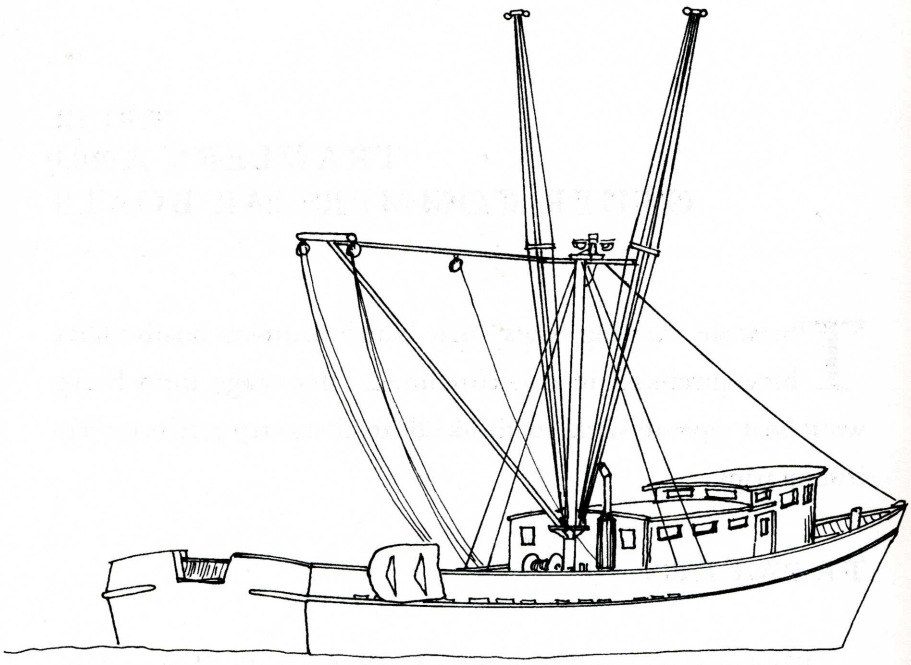

Fig. 15
*Trawlers catch fish and shrimp by dragging large pocket-shaped nets, called trawls, though the water. Larger trawlers travel long distances to fish according to season.*

The first trawler in North Carolina, the *Irene,* was converted from an existing fishing boat in Swansboro in the early 1930s.

## COCKPIT BOATS AND HEAD BOATS

Cockpit boats and head boats are built for owners from Maine to Florida who use them in the charter and party fishing business.

Such boats are built to U.S. Coast Guard regulations for vessels carrying passengers for hire. These rules contain very stringent safety requirements covering construction, equipment and operation. This class of boat is still being built of wood because it is a relatively economical material for custom boat construction, and because of the prestigious image that wood has for many owners. Although these types may be sixty-five feet long they are not built so heavy as trawlers. Some of them are quite fast and have been finished in "yacht fashion" with luxurious appointments (Fig. 16).

It is often difficult to distinguish these boats from the yachts produced by the same builders, and in fact, the only differences may be in those specialized areas covered by the Coast Guard regulations.

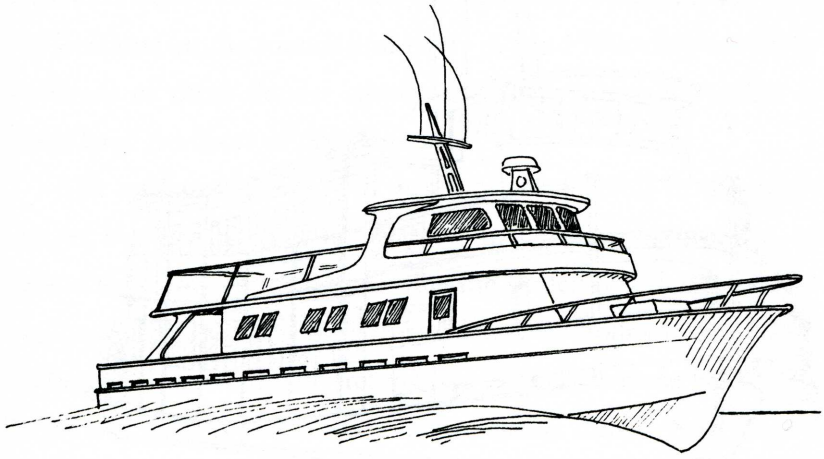

Fig. 16
*Head boats take people to offshore fishing grounds such as the Gulf Stream or artificial reefs.*

## RIVERBOAT-STYLED EXCURSION BOATS

An unusual type enjoying some popularity recently is built to resemble the well-known Mississippi riverboats, complete with colorful decorations and a mock paddle wheel for the sake of appearance. They are used for tour boats and dinner party excursions (Fig. 17).

This type represents a significant departure from the typical Harkers Island style and was developed and perfected by Vance Gillikin. They too must be built to U.S. Coast Guard regulations for passenger vessels.

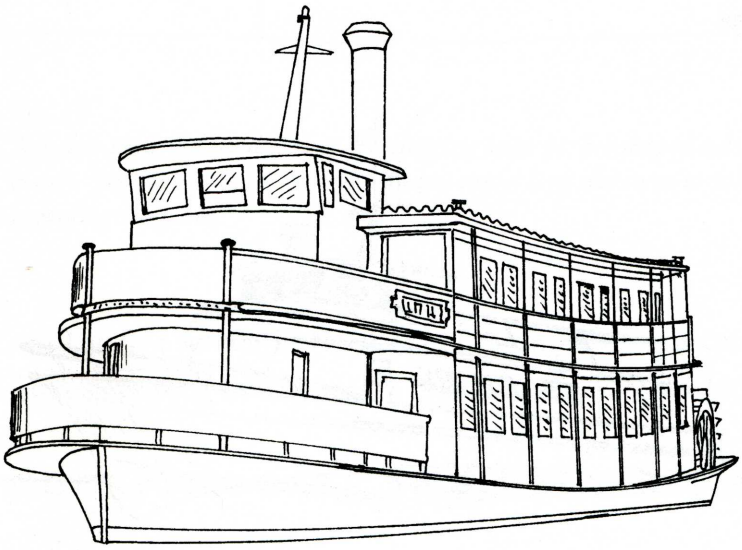

Fig. 17
*Excursion boats styled after the showboats and riverboats of the American midwest are an interesting new direction for North Carolina boatbuilding.*

PART III.

# SOME EARLY NORTH CAROLINA BOATS

Not much is known about the boats used in North Carolina prior to the Civil War. Sketchy descriptions in old records and a few fragments and archaeological remains of boats have enabled researchers to piece together a partial picture of a few important types.

## DUGOUT LOG CANOES AND BOATS

The first boats in the state were the dugout log canoes of the native American Indians. When the Roanoke voyagers made their explorations on the sounds and rivers in the 1580s they noted the swiftness of these slender canoes and their surprising ability to carry large numbers of people.

The settlers who followed were not comfortable in the native canoes but had need of small boats to navigate the network of inland waterways. Lacking sawmills and skilled boatbuilders, these resourceful individuals constructed boats by hollowing out logs. Although they are usually referred to as canoes, these boats were larger and more sophisticated than the native canoes. Settlers used their steel tools and knowledge of European boat construction to build elaborate boats by this ancient method.

They used the logs of the great cypress trees that were abundant

throughout the coastal area. In some cases they split their dugouts down the middle and added timbers to make a wider boat with more stability and capacity.

Boats were built in this manner in North Carolina for at least two centuries beginning in the late 1600s. The practice began to fall into disuse after the sharpie and shad boat became popular, but in the more remote wilderness regions the dugout method probably survived well beyond the Civil War period. They can be identified in many photographs taken toward the end of the

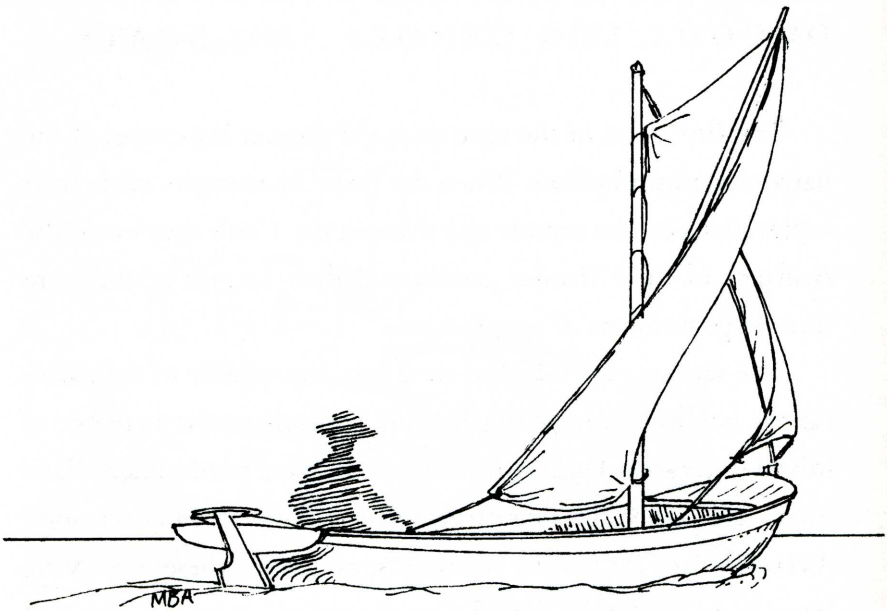


Fig. 18
*In the 18th and early 19th centuries, kunners, made of a log, or logs, had the same function as shove boats and sail skiffs in later times.*

nineteenth century, and even in some from the early twentieth century. These were the boats sometimes referred to as "kunners" by local people (Fig. 18).

A small sail, probably a spritsail, was sometimes rigged, and larger canoes had two masts, but it was probably more common to row or pole these craft. There is a saying that kunners sailed just as well "under the water as on top." That likely means that the lean, low-sided boats swamped easily, but it also indicates that swamping was not considered much of a calamity. A dugout boat has a lot of buoyancy because it has few fasteners (nails and bolts) which make up a significant part of the weight of a small plank-built boat, so that even when swamped, log boats would not be in danger of actually sinking.

## PERIAUGERS

Periaugers were between the kunner and sloop in size, and could be rowed as well as sailed. Most were 4 or 5 tons burthen and probably, at least in the earlier times, were log-built. Later, the same type of boat may have been built with planks or by a combination of the two techniques. Periaugers probably were rigged with two free-standing masts and had sails of either the short gaff type, or the Bermudian style, a type of marconi or triangular sail.

Periaugers were an important and very interesting kind of work vessel for which little information has been found, and little can be said about them. This is a common problem in much of

the research dealing with boat types that have become extinct. Boats were so ordinary and commonplace, no one thought to preserve or document them for posterity. Perhaps someday archaeologists will find a sunken or buried vessel that can be identified as a periauger, or one of the other extinct boat types, and many questions will be answered (Fig. 19).

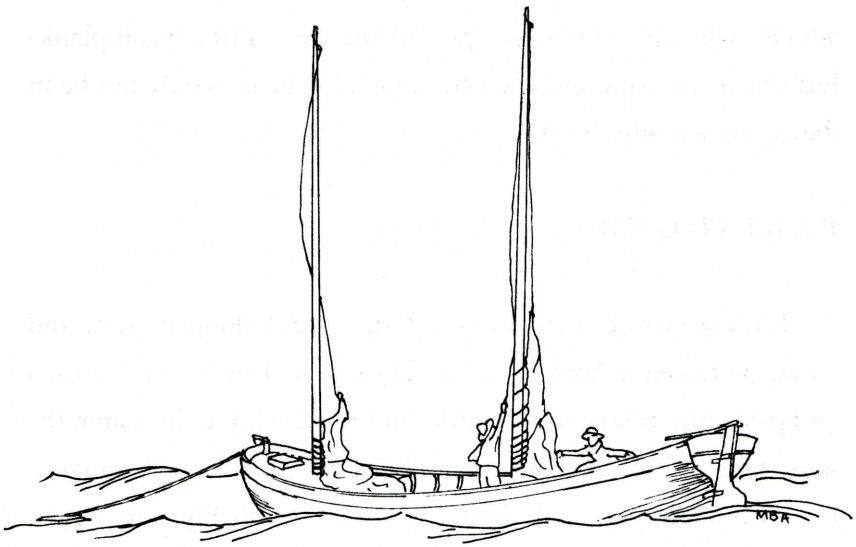

Fig. 19
*Periaugers were early boats that sailed the sounds and rivers of North Carolina.*

## SLOOPS AND SCHOONERS

Sloops were sailing boats capable of making long trips across the open sounds and even short coastal voyages. They were as small as 5 tons burthen and as large as 60 or 70 tons. They had a single mast with a gaff mainsail, and one or more headsails on a bowsprit. Larger sloops made long ocean voyages and had one or more square sails in addition to the usual fore-and-aft sails. Not much is known about these boats, but the locally built sloops probably incorporated some of the unique construction features seen in the small craft that reflect the isolation and independent nature of the Carolina boatbuilders.

Sloops, with their single mast, were eventually replaced by vessels of the schooner rig, which needed fewer crew because the sails were split between two masts and were of a more manageable size. This characteristic made it feasible to build schooners in tonnages exceeding those of the sloops. The demise of the sloop was simply a case of economics (Fig. 20).

## RIVERBOATS

By the 1830s steam-powered vessels were plying the rivers of North Carolina. Steam power was converted to motion by means of a paddle wheel usually mounted at the stern of the boat. Steamboats were economical to build and operate and were used well into the twentieth century. When fuel ran low, the riverboat captain

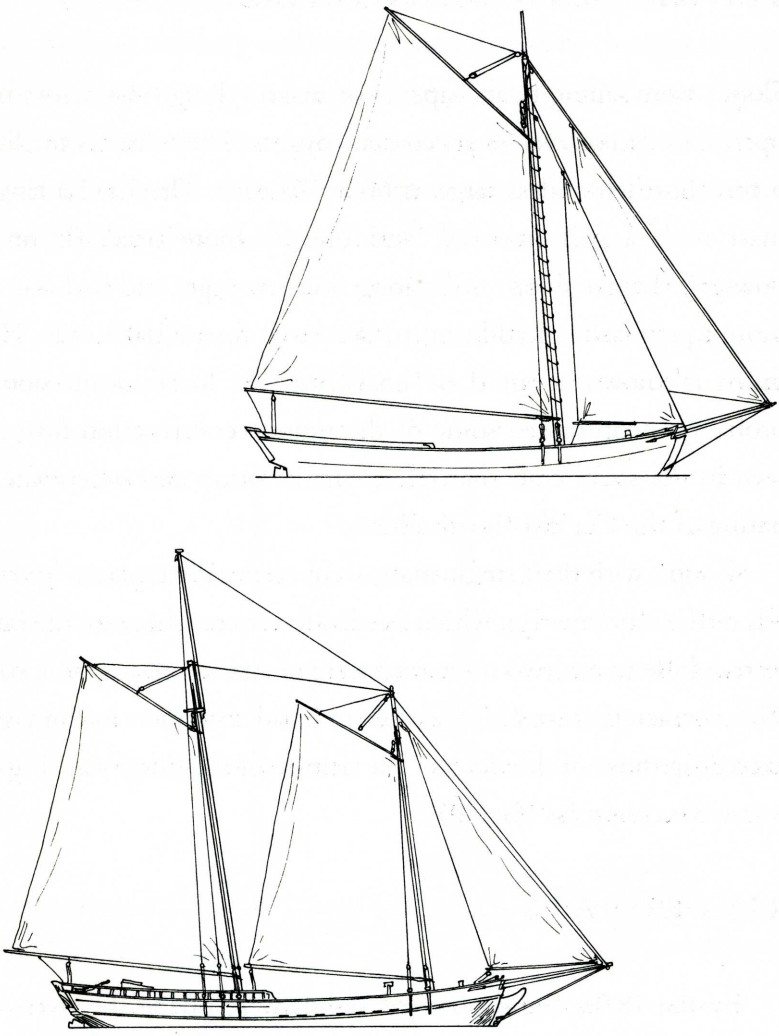

Fig. 20
*Sloops have one mast and schooners have two. Schooners gradually replaced sloops because they could be sailed by a smaller crew even though they were somewhat larger vessels.*

put his crew, and sometimes passengers, ashore on the riverbank where they could gather logs and driftwood to stoke the boiler fires (Fig. 21).

The riverboats took over the work of periaugers and flatboats on the rivers. They carried passengers, delivered mail and needed goods to plantations and river landings, and transported produce and other farm products to market.

By the latter part of the nineteenth century John Ericsson's patented screw propeller was being used on some of the riverboats in our waters. The screw propeller was more efficient but it was more difficult to repair, and the paddle wheel remained the preferred choice for most steamboats plying the more isolated rivers.

By the beginning of the twentieth century internal combustion engines had become more reliable and were sufficiently powerful to compete with steam power.

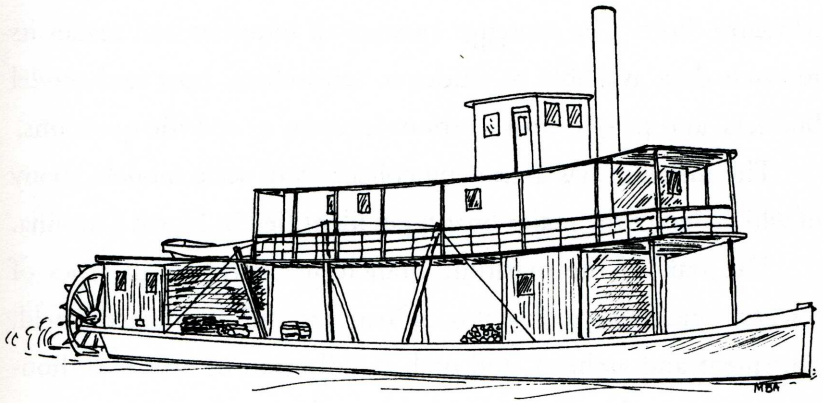

Fig. 21

*Riverboats in North Carolina were practical and basic carriers of freight, passengers and mail between coastal ports, plantations, and river towns.*

# PART IV.
# APPENDICES

## Appendix A

### Small Craft at the North Carolina Maritime Museum

Since 1980, the North Carolina Maritime Museum (NCMM) has had a full-time program to study and record the state's rich heritage of watercraft. With limited resources it has endeavored to collect significant examples of our indigenous watercraft and to document, through measured drawings, notes and photographs, threatened hulks and remains where preservation proved unfeasible. Many of the plans are currently available through the Museum Store. The museum answers all inquiries and makes its research data available to students, researchers, boat and model builders, and people with a serious interest, or specific questions.

The museum has a growing collection of scale models, many of which depict the major boat types identified in North Carolina.

The staff of the maritime branch are active in all types of research, including archaeological (surface and submerged), field, document and archival, and oral. A collection of over two thousand photographs of maritime subjects, many of which are boats and ships, has been assembled.

With completion of its new Harvey W. Smith Watercraft

Center in 1991, NCMM is one of the few institutions in this country capable of building full-sized reconstructions of the boats it researches. This facility offers programs that enable first-hand experience with basic research, documentation, construction, maintenance, repair, and operation of historical boat types. It provides the opportunity for living interpretation, in which experience can be re-created, and we can come closer than ever to bringing to life some of the less tangible aspects of our maritime heritage.

## Appendix B

### Where to see North Carolina Small Craft

North Carolina Maritime Museum, Beaufort, N.C.

North Carolina Maritime Museum on Roanoke Island, Manteo, N.C.

North Carolina Maritime Museum at Southport, Southport, N.C.

Cape Fear Museum, Wilmington, N.C.

Museum of the Albemarle, Elizabeth City, N.C.

Port O' Plymouth Museum, Plymouth, N.C.

Roanoke Island Festival Park, Manteo, N.C.

## Appendix C

### Additional Reading

Very little has been published about North Carolina boats and boat types. This list of publications is presented for those who wish to learn more about small craft of particular regions and about the origin and evolution of boats. Those containing references to North Carolina craft are marked with an asterisk (*).

*Alford, Michael B. "A Story of Shoal Waters and a Connecticut Yankee: Sharpies in the Carolinas." *WoodenBoat* No. 137, 1997.

Bray, Maynard. *Watercraft*, 1979. (catalog of watercraft in Mystic Seaport Museum)

Brewington, M. V. *Chesapeake Bay Log Canoes and Bugeyes,* 1963.

*Chapelle, Howard I. *American Small Sailing Craft,* 1951.

Faeröyvik, Bernhard & Öystein. *Inshore Craft of Norway,* 1979.

*Fleetwood, William C. *Tidecraft; The Boats of South Carolina, Georgia and Northeastern Florida,* 1995.

*Greenhill, Basil. *Archaeology of Boats and Ships*, 1995. (chapters dealing with the evolution of the boat)

Guthorn, Peter J. *The Seabright Skiff and Other Jersey Shore Boats,* 1982.

Hornell, James. *Water Transport,* 1946. (world wide survey)

Johnson, Paula, Ed. *Working the Water; The Commercial Fisheries of Maryland's Patuxent River,* 1988.

Johnson, Paula. *The Workboats of Smith Island,* 1997. *(two volumes)*

March, Edgar C. *The Inshore Craft of Great Britain,* 1970.

McKee, Eric. *The Working Boats of England,* 1983. (both a regional survey and a textbook on the study of small craft)

Morris, E. P. *The Fore-and-Aft Rig in America,* 1927.

Phillips-Birt, Douglas. *The Building of Boats,* 1979. (study of boatbuilding techniques and their origins)

Pyle, Douglas C. *Clean Sweet Wind; Sailing Craft of the Lesser Antilles,* 1981.

Warner, William W. *Beautiful Swimmers,* 1984. (contextual view of water-related cultures of the Chesapeake Bay region)

## Appendix D

### Boatbuilding Woods

The kind of wood that a boat is made from has a lot to do with how the boat is shaped and how it is built. That is true all over the world and it is true in North Carolina.

*Atlantic white cedar* is soft, easy to work, and is extremely resistant to rot. Skiffs and small boats are often built entirely from this wood and it is used extensively for the planking of larger vessels. Commonly called *juniper,* this wood has long been a popular choice for southern boatbuilders.

*Bald cypress* is also a popular wood for small boats and is used for many of the same applications as the juniper. Cypress is a little heavier and a little tougher than juniper and is high in rot resistance. It makes good bottom planking and, in earlier times, was the choice for dugout log boats.

*Yellow pine,* including the longleaf variety, is another important wood in North Carolina boatbuilding, especially for larger boats. Pine has a naturally high resin content, which keeps out shipworms (teredos) that drill into the timbers of boats and soon destroy them. For that reason and because of its hardness and strength, heart pine is favored for keels and structural members.

All of the above woods are of the type known as *softwoods,* which do not bend especially well. Consequently, boatbuilding methods in North Carolina are based on techniques in which the frames are made with angular joints rather than bent, curved shapes. This type of construction results in flatbottom and deadrise boats, i.e., boats with chines.

*White oak* and *live oak* are *hardwoods* that grow in North Carolina and are widely used in boat and ship building. However, oak does not find much use among Carolina boatbuilders today, because it is very susceptible to shipworm damage. In the eighteenth and nineteenth centuries, North Carolina oak was heavily exported to New England and Europe where it was used in ocean-going ships. It also was locally used for small coasting vessels. However, the local practice of building dugout log boats, which lasted from Colonial times until about the twentieth century, contributed to a decline in the use of oak in small craft which persists to this day.

In recent years, local boatbuilders have begun to use exotic woods such as *mahogany* and *teak,* because native woods have become increasingly difficult to obtain. Native woods are still preferred for workboats.

## Appendix E

### Glossary

**Adz.** An edged tool whose blade is set across the end of a handle, rather than aligned with the handle as in the case of an axe. It is used to dress the face of a timber.

**Aft.** Toward the stern; behind.

**Bateau.** The French word for boat. The Chesapeake Bay oysterman applies this name to oyster boats. In the French, the plural would be bateaux, which is sometimes used in this country also.

**Beam.** Nautical expression for the width of a boat.

**Boat.** Often denotes a vessel larger than a skiff and is usually either decked or half-decked and powered by an inboard engine or sails (in North Carolina vernacular use). (See "skiff" and "vessel.")

**Boom.** The rigid, horizontal spar at the lower edge of a sail. Its purpose is to extend the lower corner (clew) of the sail.

**Bow.** The forward part, or front end of a vessel.

**Burthen.** A measure of a vessel's capacity in "tons" to carry cargo, unrelated to the weight of the vessel.

**Centerboard.** Part of the sailing gear of some types of boats which aids the boat in sailing into the wind. It can be drawn up into a watertight case inside the boat to allow the vessel to pass over shoals. (See "keel.")

**Chine.** The conjunction of the sides and bottom of a vessel whose frames are made up of straight or nearly straight timbers such as in the case of flatbottom and deadrise boats.

**Deadrise.** A style of construction in which straight or nearly straight bottom frames form a v-shape when viewed in cross-section.

**Draft.** The depth of water required to float a vessel, i.e. the vertical measurement from the water level down to the bottom of the keel.

**Dredge.** A type of fishing gear that is dragged over the bottom to catch shellfish such as oysters or scallops.

**Flare.** Descriptive of side frames in the forward part of a vessel that curve upward and outward from the waterline giving the surface of the bow a concave shape.

**Flatbottom.** A type of boat construction that results in a bottom that is straight, or flat, from one side to the other (chine to chine). There is usually no keel.

**Fore-and-aft**. Generally in a direction parallel to a line from bow to stern. As applied to sailing rigs; those kinds in which the sails are attached to the masts and usually hang aft of or behind the mast.

**Frame**. The transverse member of the skeleton of a vessel, running from side to side, upon which the planking is fastened.

**Gaff**. The spar which supports and extends the upper edge of a gaff sail.

**Indigenous**. Native to; said of vessel types which develop in a specific locality in response to natural, cultural and economic factors.

**Jib**. A triangular shaped fore-and-aft sail set forward of the foremost mast of a vessel.

**Keel**. The main longitudinal member of the structure of a vessel forming its "backbone." It is the lowermost part of the structure to which are attached the frames and floors (the "ribs"). In modern sailing terms, keel refers to an appendage attached to the bottom of the structural keel which adds lateral plane and assists the boat in sailing to windward.

**Ketch**. A two-masted fore-and-aft rigged vessel in which the forward mast is taller than the one aft.

**Leg-o-mutton**. A type of four-sided fore-and-aft sail with a high peak and a special spar to extend the sail horizontally.

**Log boat**. A vessel, the better part of the hull of which is formed from one or more hollowed logs, rather than from planks of lumber.

**Mainsail**. The largest driving sail of a sailing vessel.

**Mast**. The upright spar upon which the sail is hung. A mast may be free standing or supported by standing rigging consisting of stays (fore and aft supports) and shrouds (transverse supports).

**Mid-body**. The vicinity of the largest section of a vessel between bow and stern.

**Planking**. The "skin" of a vessel. The individual planks of the planking are called strakes.

**Pots**. Traps used by fishermen to catch crabs, eels, lobsters, etc.

**Rig**. The masts, support rigging and sails, and their configuration, of a sailing vessel.

**Schooner**. A two-masted fore-and-aft sailing vessel whose forward mast is smaller than the one aft. Schooners may also have three or more masts, more or less equal in height.

**Seakeeping**. Having to do with the behavior of a vessel in a seaway, that is, in waves. It effects the relative comfort of the crew. A vessel whose seakeeping qualities keep a crew comfortable is said to be seakindly.

**Seaworthiness**. The ability of a vessel to survive at sea. It has nothing to do with comfort. (See "seakeeping.")

**Sink-net**. A type of net that is worked from a boat and is set beneath the surface of the water.

**Skiff**. A small boat, usually not decked, driven by sails, oars, or an outboard engine.

**Small craft**. A semi-legalistic name for vessels normally operating near shore or in inland waters. Sometimes, completely arbitrary criteria of size are applied which have absolutely nothing to do with performance of a vessel at sea. A handy term to separate the type vessel under discussion from the sea-going ships.

**Spar**. The rigid member of a rig; the masts, booms, yards, etc.

**Sprit**. The spar which is set from a point low on the mast and runs diagonally up and across the sail to the upper, aft corner of a spritsail.

**Spritsail**. A four-cornered fore-and aft sail named for the specialized spar that both supports the peak of the sail and extends it out from the mast. (See "sprit.")

**Square sail**. A sail set to a horizontal spar called a yard which is hung from the mast in a position generally across the vessel rather than fore-and-aft. An individual sail of a square-rigged vessel.

**Stem**. The more or less sharpened leading edge of a vessel which may be raked to provide an overhang, or upright without overhang.

**Stern**. The back end of a vessel.

**Topsail**. A sail set above the mainsail, usually not used in strong winds.

**Transom**. The structure making up the square stern of a vessel.

**Trawl**. A type of fishing net that is towed through the water, like a bag.

**Vessel**. The term of choice used to describe a waterborne craft that derives its buoyancy by means of a shell whose function is to exclude water from a relatively vacant interior, as opposed to a raft, which floats by virtue of lighter-than-water materials being used for the structure.

**Warp**. The towing line for a net that is pulled through the water.

**Well**. A box-like device built in a skiff that allows an outboard motor to be mounted and operated within the interior of the vessel instead of on the transom which is more common.

**Yard**. The horizontal spar supporting a square sail.

# AFTERWORD

The ship may be civilization's most elegant functional expression. It embraces the highest forms of both art and engineering, and historically has been the vehicle for our most adventuresome achievements.

Curiosity about the workings of ships, and fascination with the curves and sweeps that make up their shape, appear to be universal among all who come into contact with ships. Small wonder that we are not content to simply build and sail them, but also seek to study and preserve them, often against all sense of economy and concepts of reasonable behavior.

# INDEX

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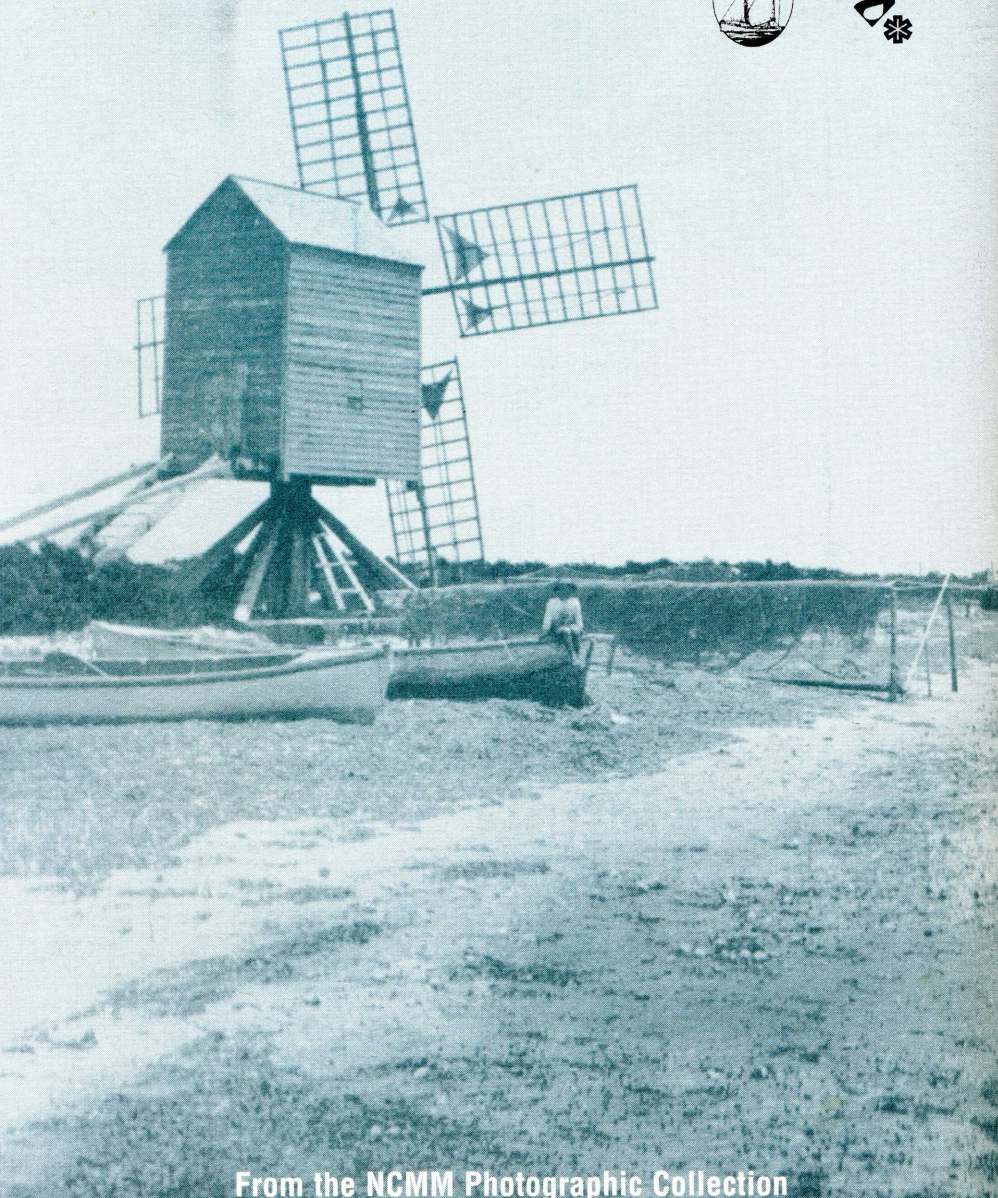
Council of American Maritime Museums

A Division of State History Museums,
North Carolina Department of Cultural Resources,
Lisbeth Evans, Secretary



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