



# How to Identify Tall Ships

## How Tall is Tall?

What do people mean when they speak of the Tall Ships?

They usually mean the square-riggers and other large sailing vessels—all those watercraft that are like swans among a flock of ducks. This article is about both the square-rigged ships that are the stars of all gatherings of Tall Ships and the big schooners and other larger-than-ordinary yachts that are featured players at those gatherings.

These ships are fairly rare. People rush to see them when the opportunities arise, all too infrequently.

Not only are viewers thrilled at the sight of the Tall Ships, but they find it a pleasant sport to identify them by rig and look up their dimensions. The material in the following pages provides easy-to-understand guidelines and dimensions.

This article does not place the Tall Ships in classes, nor does it rate them. They all deserve Class 1-A, four stars and gold medals.

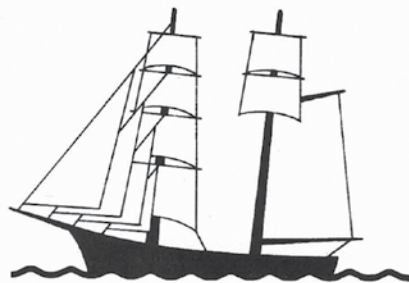
One dimension given needs some explanation—the length overall of many vessels. It may be interpreted several ways. The legal definition of “overall length” excludes bowsprits and other attachments to the hull. Most Tall Ships do have bowsprits, however, and it is pertinent to know how long the ships are, including all projections. Technically that figure is known as “sparred length.” Owners frequently report it as overall length.

The term “sparred length” is sometimes used in this article, but other terms such as “length overall” or simply “length” are also used. Unless “length on deck” is specified, the only length figure used here is sparred length. Put simply, if you were putting a Tall Ship alongside a pier, that is how much space it would require.

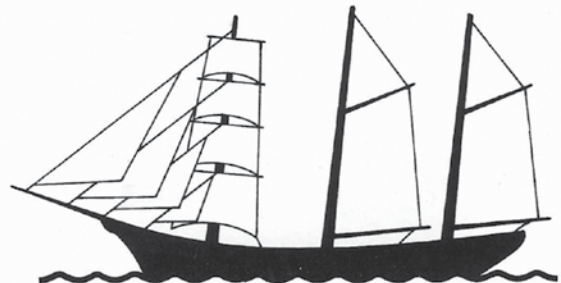
Once again, a Tall Ship is any large sailing vessel, square-rigged or not, and any square-rigged vessel regardless of size.

And finally, how large is large? How tall is tall? One need not draw an arbitrary line. Instead, the descriptions in these pages include the more interesting and unusual ships that ship watchers sometimes have opportunities to see.

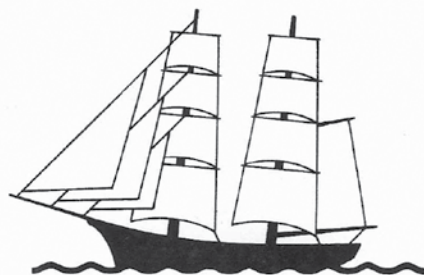
The smaller yachts that can be seen by the hundreds in any popular harbor are not listed.



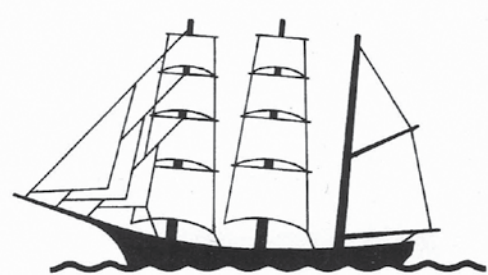
*Brigantine*



*Barkentine*



*Brig*



*Bark*



# The Types of Ships

## How Tall is Tall?

Part of the fun of seeing Tall Ships is in being able to identify them. It is the same thing with stars, birds and flowers. One enjoys being able to say, "There's Orion's belt," or, "Look at that male goldfinch," or "Here's a bloodroot."

To identify ships, the first step is to know the rig. Many of the larger, sail-training vessels in use today are barks (also spelled barques), full-rigged ships or barkentines and brigantines. \*The difference are in the number of masts they have and kinds of sails on those masts.

Does the ship have at least one mast that has nothing on it but square sails? If the answer is yes, the next step is to count the number of masts. If the vessel has three or more masts, she must be a bark, a full-rigged ship or a barkentine. If she has only two masts, she must be a brigantine or a brig.

The next step in any identification process is to see where the square sails are, and, after we understand the difference, where any fore-and-aft sails are. Square sails are sometimes fairly square but are more often rectangular. They are held aloft on yards, which are horizontal spars attached to the mast. Square sails and their yards in normal position are aligned with the width of the ship, whereas fore-and-aft sails, as the term implies, are aligned with the ship's length.



*Gaff Rigged Sloop*



*Schooner*



*Topsail Schooner*



*Fullrigged Ship*



## The Types of Ships

They are the kind of sails we see on modern sailboats, small and large-sails which, when relaxed, follow the centerline of the boat from bow to stern. These include large sails attached to the aft side of the mast and to a boom—a spar at the bottom of the sail. Suppose you are standing at the waterfront watching a parade of Tall Ships, and one comes along. You count the masts; she has three. You look at the rigging—aha! There are square sails on all three masts—that vessel is a full-rigged ship. Perhaps she's Amerigo Vespucci, Christian Radich, or Libertad. You can tell by the national flag or ensign, or you may be able to read the name with the help of binoculars.

As the ship goes by, check to see if she has a small fore-and-aft sail on her last mast, called the mizzen. She may have, but if she also has square sails on that mast, she is still considered a full-rigged ship. However if she has no square sails on the mizzen, and has fore-and-aft sails there, she is a bark like Eagle, Mircea or Sagres II. Along comes another three-masted vessel. This one has square sails on the first mast only; without a doubt she is a barkentine such as Palinuro, or Gazela of Philadelphia. A very large ship with four masts, square-rigged on only the first, would probably be Esmeralda, the largest sail-training ship in the Western Hemisphere and a rare example of a four masted barkentine.

Remember that any three-masted vessel with square sails occupying all of one or more of her masts must be a full-rigged ship, a bark or a barkentine.

Among two masted vessels with square sails, the question is how to distinguish between a brig and a brigantine. If the ship is square-rigged on both her masts, she is a brig—a rather rare rig. The Indian Navy has a brig, Varuna.

If, on the other hand, the ship is square-rigged on the foremast only and has a fore-and-aft sail on her mainmast, she is a brigantine, like the new Spirit of Chemainus. A brigantine mayor may not have a square sail above the fore-and-aft sail on her mainmast, which is the higher of the two masts.

Sometimes the term hermaphrodite brig is used: it means brigantine. The term was used long ago with the excuse that the rig is half that of a brig and half that of a schooner.

The fore-and-aft sail on the rigs just described is held up by a gaff—a slanting spar at the top of the sails. Such a sail is gaff-rigged. It has four sides in contrast to the more modern three-sided sails commonly used today. Gaff-rigged sails resemble a triangle with the top corner cut off diagonally. However, when you look at a traditional gaff-rigged sail with a smaller topsail over it, the two together look like a triangular sail in two parts, separated by the slanting gaff.

The same is true of the fore-and-aft sail at the stem of the bark or sometimes, of a full-rigged ship. That sail is called a spanker, and may be in two or three sections forming a triangle separated by one or two gaffs. The topmost section is called the topsail or gaff topsail. If a spanker is in two parts aside from the topsail, they are called the upper and lower spanker.

Does the Tall Ship you are watching have at least one mast that has nothing but square sails on it? If the answer is no, the ship is a fore-and-aft rigged vessel which may be one of at least seven types: schooner, ketch, yawl, sloop, cutter, cat or knee-rigged.

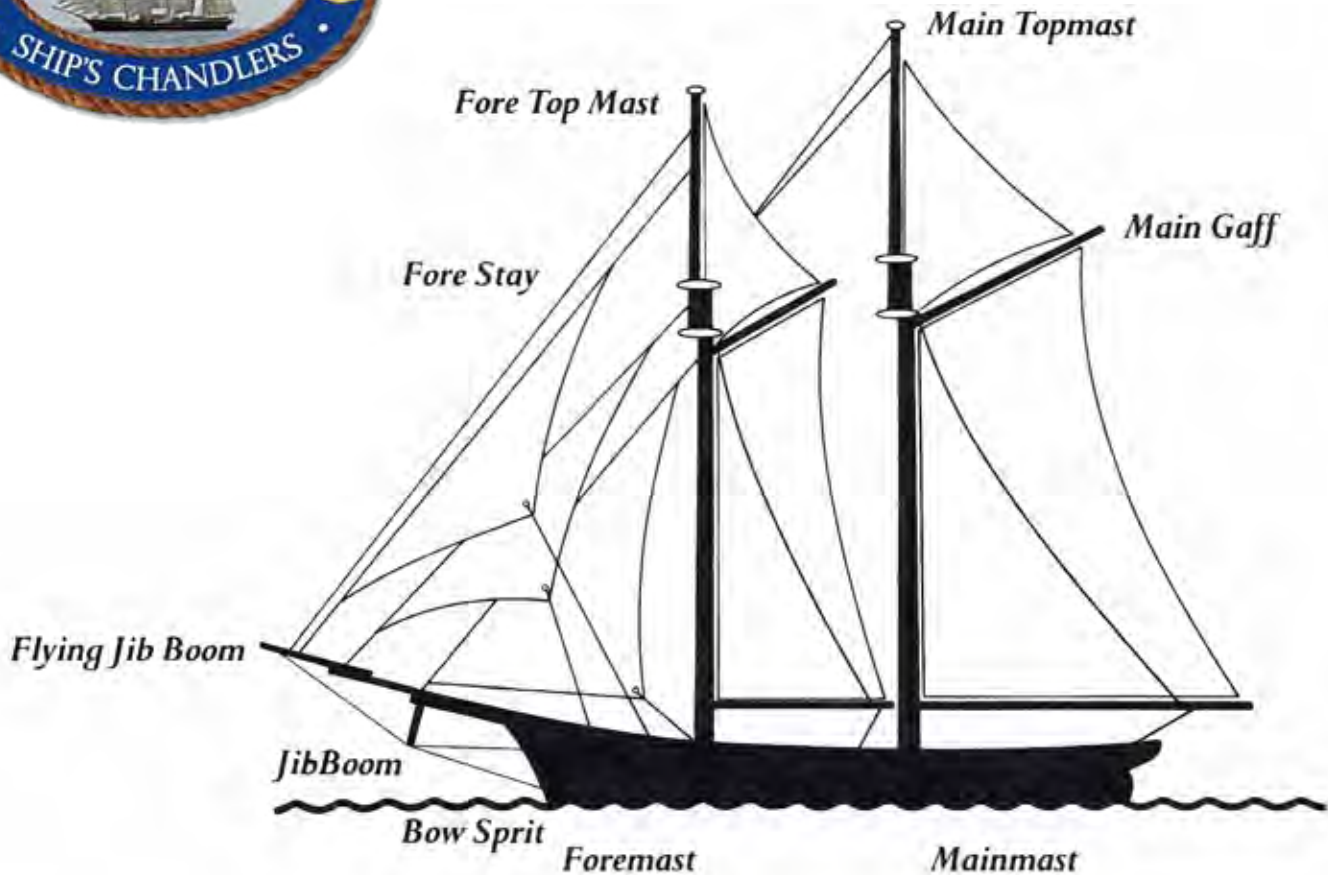
The next step in this identification sport is to count the masts. If there are four and the ship is large, the vessel is a schooner and is probably Juan Sebastian de Elcano, one of the few large, four-masted] schooners in existence. If there are three masts, the vessel is also a schooner. If there are two, she may be a schooner, a ketch, a yawl, or a cat-ketch.







## Schooner Rig



Next question: Which of the two masts is higher? If the second one is higher, the vessel is a schooner. The shorter one is called the foremast and the other is the mainmast.

Many schooners have extra sails at the top of the mast and are dubbed topsail schooners. Those that have no topsail are sometimes called bald. At times, the topsails are square sails, as in the Californian and Pride of Baltimore. This does not make the ship a square-rigged vessel.

In addition to sails on their mainmast, most rigs described in this book have sails before the mainmast, called staysails or jibs. These are triangular sails set on a stay (usually a wire) between two masts or between a mast and the deck or the bowsprit.

When the stay runs from the foremast to the bowsprit, the staysail is similar to a jib and may be one of a series of sails supplementing one or more jibs.

Suppose the two-masted vessel has its higher mast forward. Then she is a ketch or yawl rather than a schooner. Each has a tall mainmast and a shorter mizzen or jiggermast further aft. On a yawl, the mizzenmast and its sail are smaller than on a ketch of similar size, but the technical difference is in the placement of the mast. In the yawl, the mast is aft of the rudderpost; in the ketch, it is forward of that post.

There is one more two-masted vessel that is easily recognized-the cat-ketch. In this rig, both masts are usually the same size. The foremast is far forward in the ship's bow and carries the mainsail. In many cat-ketches, the masts are unstayed (no fastening lines to the deck).



# *Schooner Rig*

## **Square Sails**

Each sail on a square-rigged ship, or any other sailing vessel, has a name. When the skipper orders crew members to furl the main skysail, there can be no doubt which sail he wants rolled up and secured. On a full-rigged ship or a bark, there are likely to be from 30 to 34 different sails, each with a name indicating which mast it is on as well as its position on that mast.

If the ship has six levels of square sails on the mainmast, the lowest and largest sail is called the mainsail (pronounced mayn'sl) or main course. Above the mainsail is the main lower topsail (pronounced tops'l), and over that flies the main upper topsail. At the fourth level up from the deck is the main topgallant, followed by the main royal. All the way at the top is the top skysail (pronounced skys'I).

Today's curious dock side observer may have a casual interest in knowing something about the sails and the running rigging of a square-rigged ship, but a brief brush with the marine vocabulary may be enough. Each sail and each yard has its own set of lines coming down to the deck in what is, to the uninitiated, an extremely complex array, like a gigantic spider web. Each line has its purpose in sailing the vessel and is fastened around its own belaying pin.

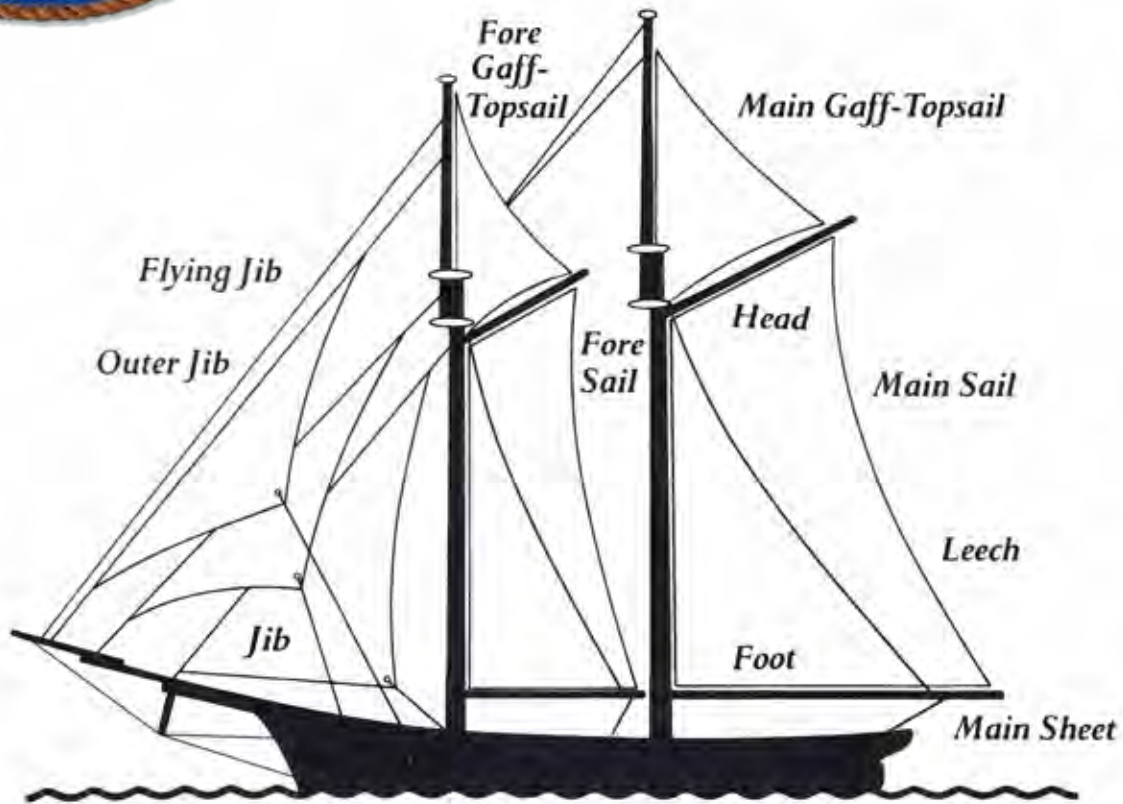
However, for the seaman working on a square-rigged ship in the old days, it was absolutely essential to "learn the ropes"-and quickly! Every crew member had to know all the lines and to be able to locate the right belaying pin for each line-in double quick time! To make sure seamen learned, it was customary for officers to devise complex drills that chased the seamen from bow to stern, locating pins as orders were shouted. Punishment, some outrageously cruel, was the lot of crew members who could not match line to belaying pin. The most inhuman punishment was the famous keel-haul, which meant tying the slow learner, throwing him overboard, dragging him under the vessel and up the other side.

## **Tonnage**

One measure used in describing the size of a ship is the figure stating its tonnage, but there are several kinds of tonnage. Figures for gross and net tonnage report on the cubic volume of cargo the ship can carry. These figures give the ship's capacity, not its weight. The displacement tonnage gives the ship's weight-how much water it displaces in floating. Where the information is available, we give the displacement rather than the capacity, to indicate the size of ships.



## Schooner Sails



### Schooner Sails

A ship with only one mast must be a sloop, a cutter, a catboat, or a lateen rigged vessel. The sloop, in addition to the mainsail, normally has one working sail—a jib—forward of the mast, whereas the cutter has two—a jib and a staysail. Also, the cutter's mast is usually closer to the center of the boat. The sloop is the most popular rig on recreational sail boats today. Many sailors contend that the sloop rig is the most efficient for sailing upwind, and a high proportion of racing boats are sloop-rigged. The cat rig employs a single mast far forward in the ship, and a single sail, often gaff-rigged.

The lateen rig uses a triangular sail suspended from a long yard, set obliquely to the mast. Many Mediterranean and Nile River craft, and many from other parts of the world, past and present, are lateen-rigged. In the United States, it is seen on the popular Sunfish and other small recreational boats .