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CHAPTER

Parts of a Sailboat

KEY CONCEPTS

- Monohull
- Multihull
- Centreboard
- Keel
- Rig
- Port & starboard
- Boat and sail parts

Like any sport, sailing has its own language. This new language can seem a little overwhelming at first, but as you use the new terms, they will quickly become familiar. First, let's focus on the different parts of a sailboat.

Parts of the Hull

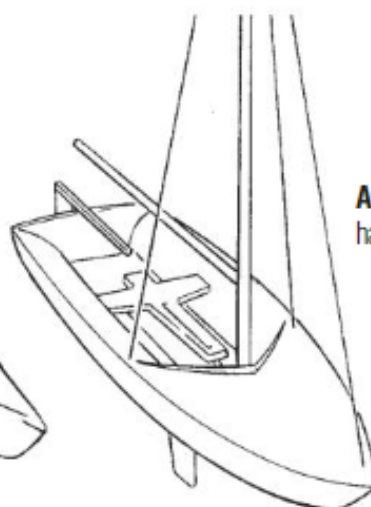
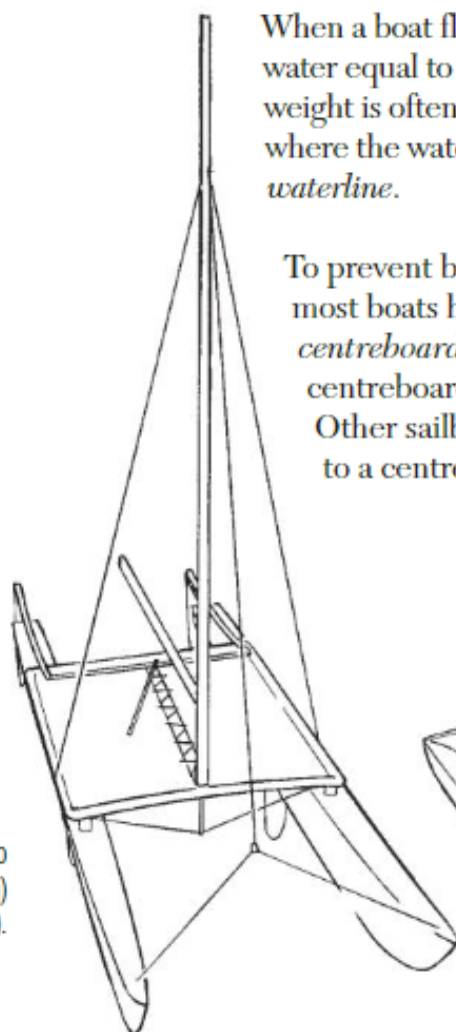
The body of the boat is called the *hull*. There are two types of hulls: *monohulls* and *multihulls*. A monohull has a single hull. A multihull will have either two hulls, called a *catamaran*, or three hulls, called a *trimaran*. Multihulls generally sail faster than monohulls.

The front end of the hull is the *bow*, and is usually pointed. The back end, called the *stern*, is wider and has a flat, vertical surface called the *transom*. Centreboarders less than 3 metres long sometimes have a squared-off bow. These are called *prams*. Three prams, often used as learn-to-sail boats for young people are the Sabot, the Manly Junior and the Optimist.

When a boat floats, it will displace a volume of water equal to the weight of the boat, so the boat's weight is often called its *displacement*. The line where the water meets the hull is called the *waterline*.

To prevent being pushed sideways by the wind, most boats have an underwater fin, either a *centreboard*, a *daggerboard*, or a *keel*. A centreboard can be pivoted up and down. Other sailboats have a *daggerboard*, similar to a centreboard but designed to move up

A multihull has either two hulls (a *catamaran* as shown) or three hulls (a *trimaran*).



A monohull has a single hull.

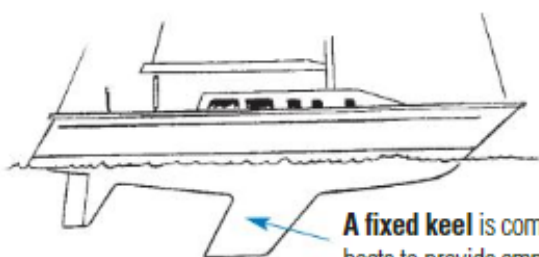
and down vertically rather than by pivoting. If the centreboard is attached at the side of the boat instead of the centre, it is called a *leeboard*.

A keel is fixed underneath the boat and is different from a centreboard because it also provides *ballast* (weight), which helps keep the boat upright by counteracting the wind pressure on the sails. On a centreboard or daggerboard boat, the weight of the sailors is used as movable ballast to stabilize the boat. Daggerboards, centreboards and keels all act to prevent the boat from slipping sideways through the water.

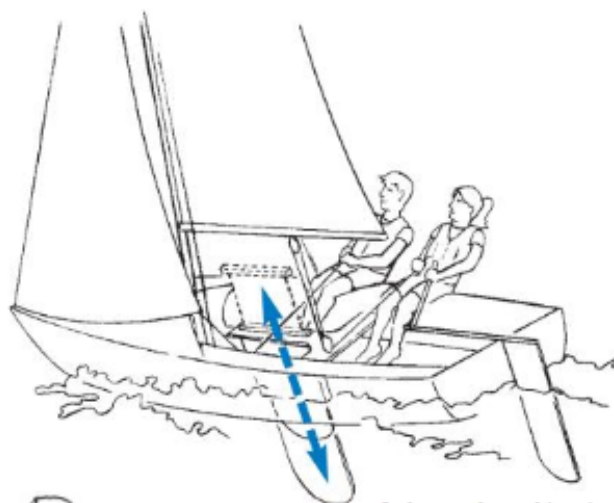
The *rudder* is used to steer the boat and is controlled by a *tiller* and a *tiller extension* which is held by the helmsman (the person steering the boat). To steer, you push or pull the tiller in the opposite direction you want the boat to go.



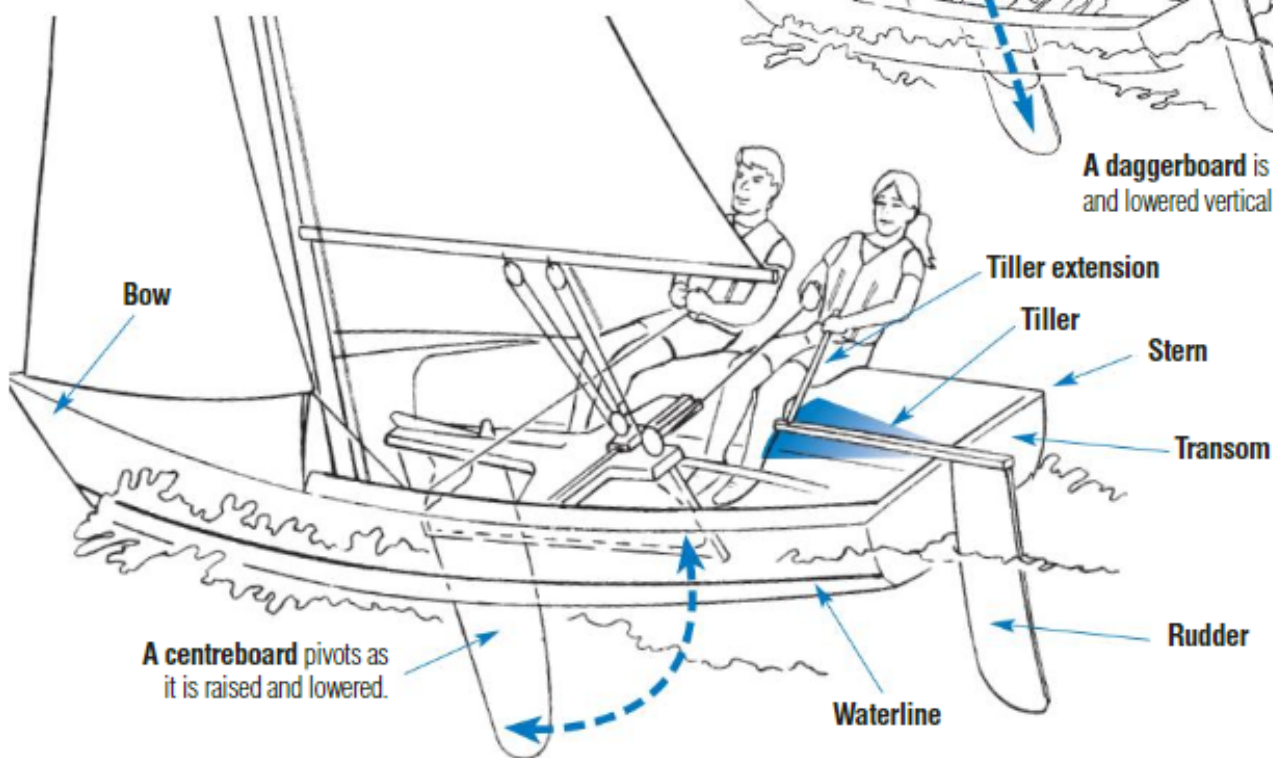
A pram is a small sailboat known for its square, flat bow.



A fixed keel is common on larger boats to provide ample stability.



A daggerboard is raised and lowered vertically.

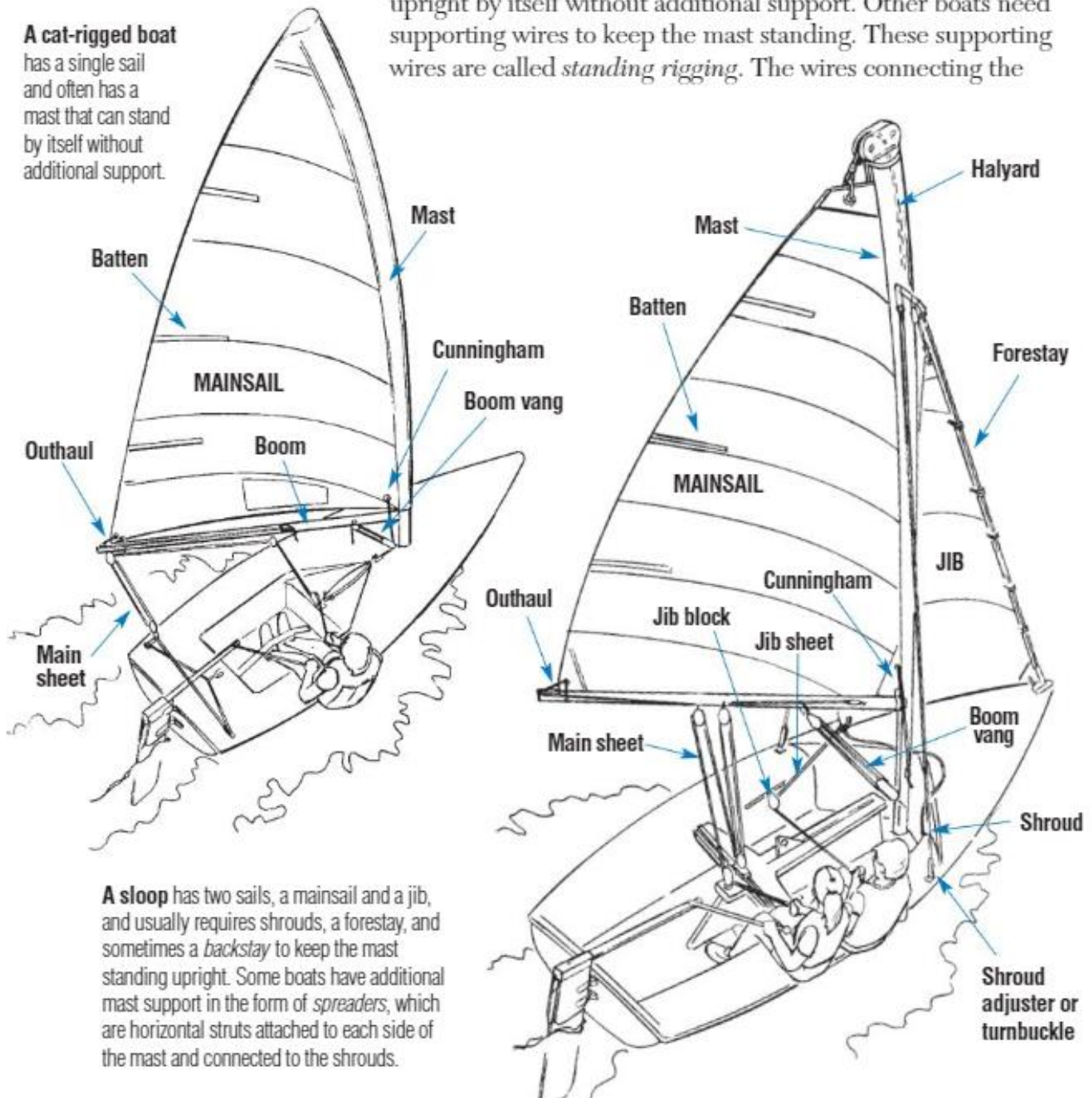


A centreboard pivots as it is raised and lowered.

Parts of the Rig

Above the hull is the *rig*, consisting of *sails*, *mast* and *rigging*. The mast holds the sails up. Boats with a single mast have either one sail called a *mainsail*, or two sails, a mainsail and a smaller forward sail, called a *jib*. A boat with only a mainsail is *cat-rigged* (not to be confused with a catamaran). A boat with both a mainsail and jib is called a *sloop*. Typical examples are shown. Other kinds of rigs are shown in the APPENDIX.

The mast on many smaller boats is strong enough to stand upright by itself without additional support. Other boats need supporting wires to keep the mast standing. These supporting wires are called *standing rigging*. The wires connecting the



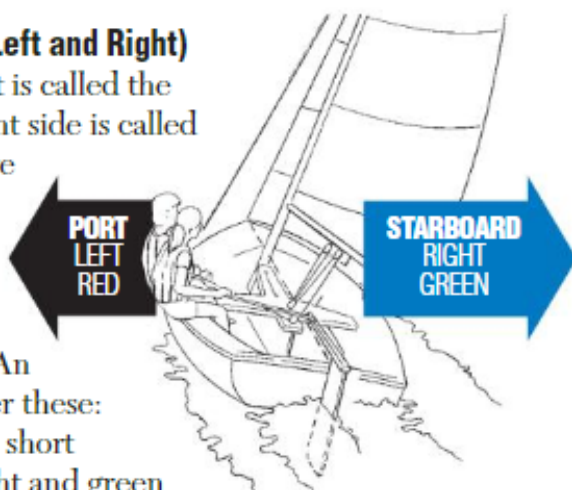
A sloop has two sails, a mainsail and a jib, and usually requires shrouds, a forestay, and sometimes a *backstay* to keep the mast standing upright. Some boats have additional mast support in the form of *spreaders*, which are horizontal struts attached to each side of the mast and connected to the shrouds.

mast to the sides of the hull are *shrouds*, the wire connecting the front of the mast to the bow is the *forestay* and the wire connecting the top of the mast to the stern is the *backstay*.

Control lines used to adjust the sails are *running rigging*. Typical control lines are *main sheet*, *jib sheet*, *outhaul*, *halyard*, *cunningham*, and *boom vang*, shown in the preceding illustration. We will explain their functions a bit later.

Port and Starboard (Left and Right)

The left side of a boat is called the *port* side, and the right side is called *starboard*. Colours are used to help identify port and starboard — red signifying port and green signifying starboard. An easy way to remember these: port, left, and red are short words. Starboard, right and green are longer words. Some beginning sailors find it helpful to put green tape in a visible location on the deck on the starboard side, and red tape on the port side.



Quick Review

- ▶ What is the difference between a monohull and a catamaran? (answer on p. 14)
- ▶ What is the primary function of a centreboard? (answer on p. 14)
- ▶ What is the difference between a keel and a centreboard? (answer on p. 15)
- ▶ On a rig with two sails, what is the smaller forward sail called? What is the larger sail called? (answer on p. 16)
- ▶ What colour signifies the port (left) side of a boat? What colour signifies the starboard (right) side of a boat? (answer on p. 17)

Think about it...

- ▶ On a centreboard boat, where crew weight is used as movable ballast to provide stability to the boat, how would a crew increase stability as the wind gets stronger?

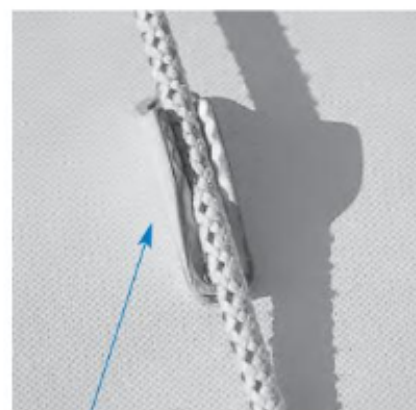


A **cam cleat** has jaws with "teeth" that are spring loaded so they press and grip a line snugly. To release the line, pull and lift. Cam cleats can be difficult to release under heavy load.

A **winch** helps you pull in and hold a sheet. The friction of wrapping a sheet around the winch drum reduces the pull needed to hold the sheet in. A winch handle can be inserted into the top of the winch to provide additional power for pulling in the sheet.



A rope (line) is often secured to a *cleat*. The **horn cleat**, is secure and easy (but slow) to release under heavy load. A line that will be left unattended, such as a mooring line, should be secured with a *cleat hitch* (shown).



A **clam cleat** is very easy to use — simply pull the line through it and let go. To release the line, pull and lift it out (this can be difficult under heavy load).

