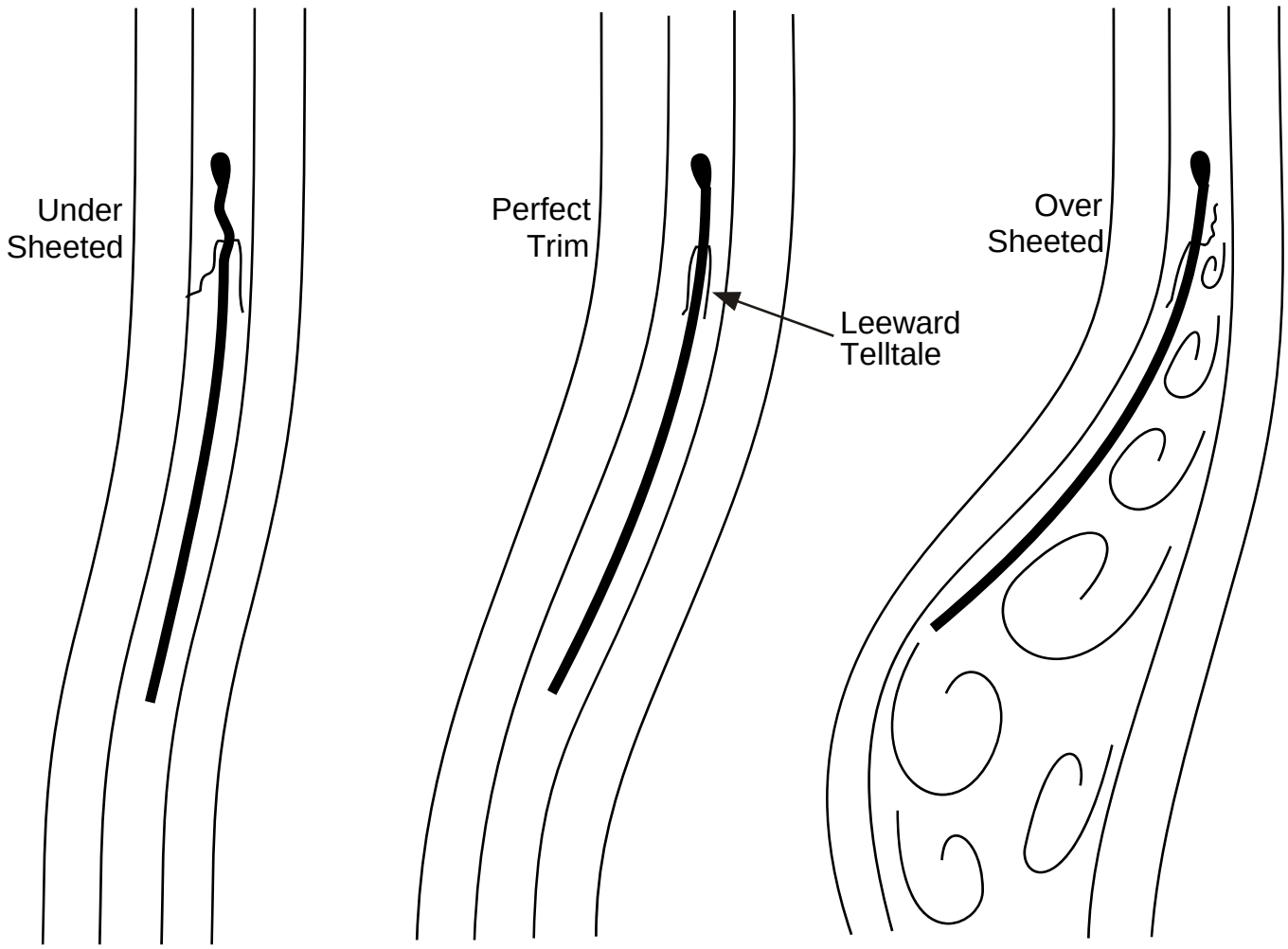
Sail Trim

Sail trim first requires that you use the main/jib sheet and traveler controls to adjusting the shape and position of the sails with respect to the wind. Secondly that you steer your boat so that the leading edge of the sails smoothly cut the wind while the rest of the sail gently bends the wind.

The left diagram, *under sheeted,* shows a sail that is soft just behind the leading edge or slightly luffing. This sail will generate very little power. To correct this situation, either bring in the trailing edge of the sail by sheeting in, or turn the boat off the wind slightly to fill the sail.

The center diagram, *perfect trim,* shows a sail that is smoothly cutting the wind and bending it to generate maximum power in the sail. Note that the tell-tails are smoothly flowing back on both sides of the of the sail. The most important tell-tails are the leeward tell-tails, usually the ones on the other side of the sail from the skipper. Keep these tell-tails flowing back at all times, the windward tell-tails may act up a little and in higher winds they will fly back and up at about a 45° angle.

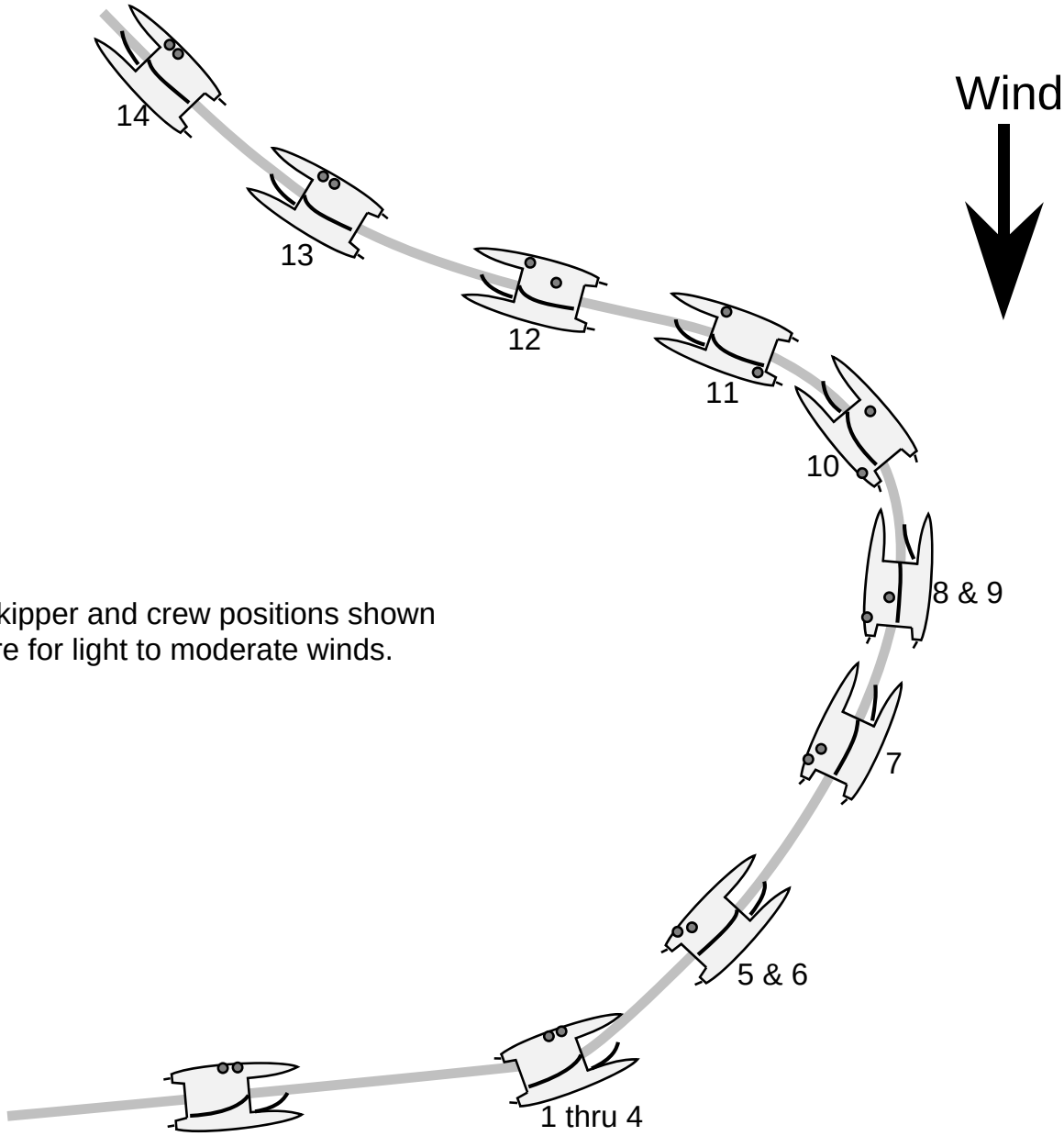
The right diagram, *over sheeted,* shows a sail which is trying to bend the air flow too much, the air flow breaks away from the sail on the leeward side and the air becomes turbulent causing the leeward tell-tails to dance forward and back. To correct this problem, either sheet out to reduce the bend of the sail, or turn the boat more into the wind allowing the air to better flow along the leeward side of the sail.



Anatomy of a Tack

Rick White's Roll Tack, Illustrated by Bob Mimlitch

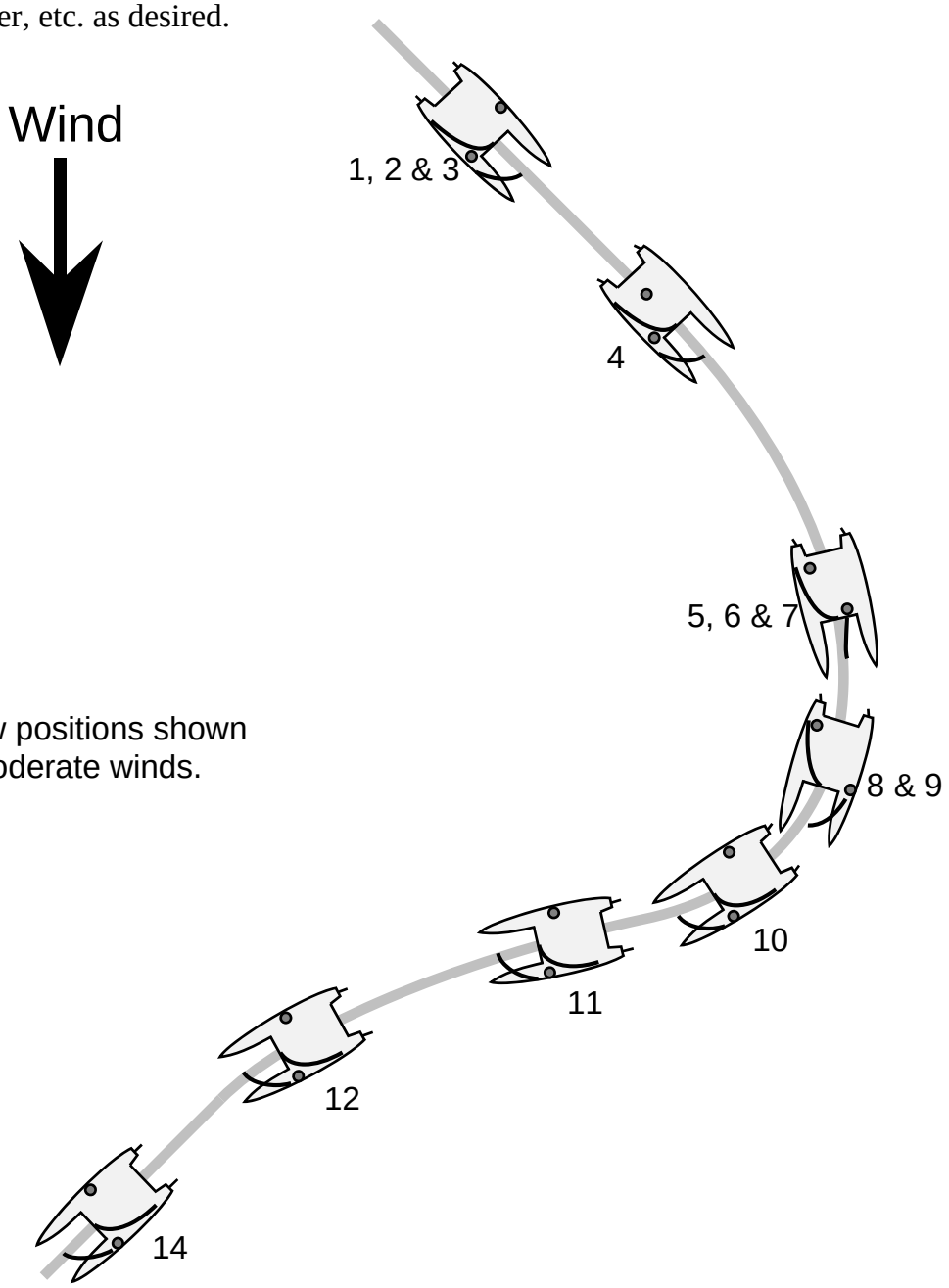
1. If not close hauled, come up to a close hauled course (traveler in and main sheeted hard).
2. Insure your speed is up prior to initiating a tack. Don't pinch.
3. Insure you are clear of traffic and will remain clear during your tack.
4. Alert the crew and await their response indicating that they are Ready to tack.
5. Push the tiller smoothly and move to the rear windward corner.
6. Crew moves to the rear, uncleats and holds the jib while removing slack from the lazy sheet.
7. As the jib starts to luff, feed out sheet and fly the jib across keeping it flowing as it goes.
8. At the same time the crew takes the lazy sheet and moves across and forward sheeting the jib.
9. As the boat comes head to wind the skipper releases 2 feet of main sheet (more for unirigs).
10. Continue increasing the rudder angle and turn beyond the desired new course.
11. Straighten the rudders, pass the tiller across, move across and forward taking excess sheet.
12. Foot to accelerate and trim the sails.
13. Shift gears (with sail shape) as you accelerate and come up to optimum course.
14. Balance the boat and take care of general housekeeping.



Anatomy of a Gybe

by Bob Mimlitch

1. Insure your speed is up prior to initiating a gybe.
2. Insure you are and will remain clear of traffic during the gybe.
3. Alert the crew and insure that you get a response.
4. Move in and pull the tiller smoothly.
5. Skipper moves to the opposite side and grabs the tiller outside the main sheet.
6. Crew moves to the opposite side and catches jib on opposite side by sheet or clew.
7. The skipper grabs the main sheets below the boom and pulls against the sail.
8. The crew trims the jib by pulling on the leech which give the boat power.
9. As the pressure on the main sail gets light, alert the crew and swing the main sail across.
10. Continue the turn until above the optimum course.
11. Trim and match your sails.
12. Shift gears (with sail shape) as you accelerate and come down to optimum course.
13. Balance the boat per conditions.
14. Pull daggers, rudder, etc. as desired.

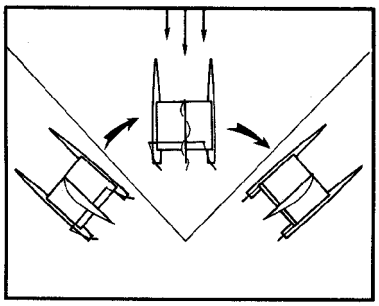


Skipper and crew positions shown are for light to moderate winds.

Tacking and Gybing by Hobie Cat USA

Turning into the Wind

Turning into the wind, or coming about, is the most common sailing maneuver: When coming about, the object is to pass the bows of the boat through the eye of wind and over to the other side. Let's refer to the clock example. Suppose you are sailing to the ten o'clock position, but wish to change course and sail to the two o'clock spot. You would first move the tiller toward the sail to move the bows through the wind coming from noon. Then you would straighten the tiller once the boat is heading on the desired course.



Here's the procedure step by step.

1. Before coming about, ask yourself what you are trying to achieve by doing so. Where do you want the boat to be when you have completed your turn? Ifs a good idea to pick a spot on land and aim the boat toward that spot for reference. Remember you must turn the boat at least 90 degrees or you may stall in the wind (put yourself in irons).

2. Push the tiller smoothly but firmly about half the distance toward the sail while letting the mainsheet out about one foot.

3. As the boom swings over duck and move to the other side, opposite the new sail position.

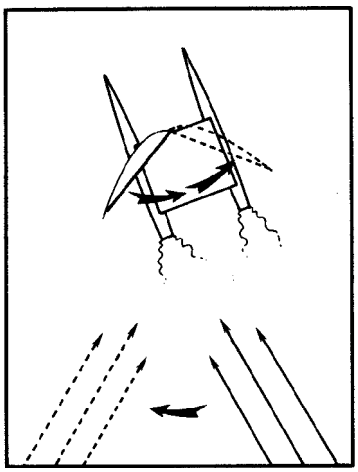
4. Exchange the mainsheet and tiller extension in your hands. The mainsheet should always be in your forward hand, the tiller extension should always be in your aft hand.

5. Straighten the tiller after you have completed your turn and the boat is moving toward your reference point.

Notes: Move the tiller firmly but avoid sudden, jerky moves. Try to carve a smooth arc in the water. Forcing the tiller all the way over will put on the brakes and put the boat in irons (or stall it). Don't let go of the tiller or the boat will straighten out before you want it to. When tacking a catamaran with a jib sail, keep the jib sheet cleated until the bows are fully through the eye of the wind. Then release the jib sheet and pull it in on the other side. This is called "backwinding."

Turning Away From the Wind

Turning away from the wind, or gybing (sometimes spelled jibing), is changing course while sailing downwind. Just think of gybing as the opposite of coming about. When coming about bows cross the wind. The sterns cross the wind when gybing. When gybing in light air you will probably have to give the boom some help in swinging across to the other side of the boat.



To gybe, just pull the tiller extension toward your body with the same smooth motion as when coming about, grab the mainsheet just below the boom, and, when the sterns cross the wind, warn the crew and swing the boom across. As soon as the sail begins to fill with wind, move to the other side of the boat and off you go.

Gybing in heavy air can be more difficult since everything will have to be speeded up correspondingly. In heavy air, the boom can snap across with a lot of force. For this reason, ifs best to come about in heavier winds until you have had a chance to practice gybing to the point where you feel confident that you can handle heavy air with dexterity. You should be especially aware of wind shifts in heavy air. If the wind should suddenly change direction as it blows across the stern of the boat, it could grab the sail and swing it far out to the other side very quickly. This is an unplanned gybe and could damage the boat if the wind is strong enough, or it could cause injury to unaware crewmembers.