



advantage
boating 

The logo for Advantage Boating features the word 'advantage' in a dark blue, sans-serif font, and 'boating' in a lighter blue, sans-serif font. To the right of the text is a stylized icon of a camera aperture, composed of several overlapping triangular shapes in shades of blue and green.

Section I: Part D

Wind/Boat Relationships - Concepts

Lesson Outline



- Lesson Objectives
- Introduction
- Basic wind relationships terminology
- Summary
- Quiz

Lesson Objectives



- By the end of this lesson you will be able to identify and name certain wind conditions with respect to the winds relationship to the boat.
- Knowing how to describe the wind and its impact on the boat and the sails is critical to being able to sail effectively and safely.
- The terminology presented in this lesson will be referred to throughout the program and on the water.



Since you've mastered the basic terminology of sailing, let's begin our exploration of the vessel's relationship with the wind.

In order to learn how to sail well, it is important to have an understanding of the wind, speed, direction and the effect it has on the sails.

In this lesson, you will learn key terms relating to basic wind relationships.

So let's begin!



- To get started, let's consider positions on and off the boat relative to the direction the wind is coming from.

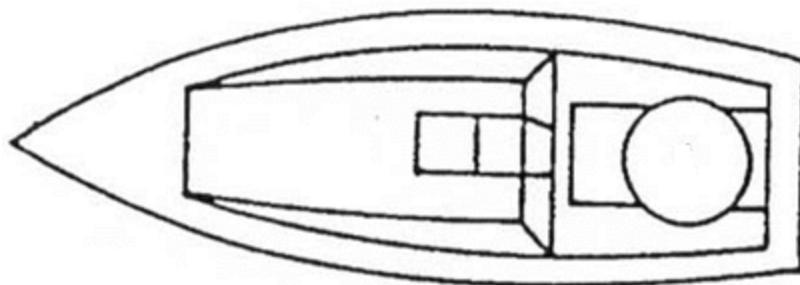
Important: Wind direction is always stated in the direction from which it originates. For example, when the wind is blowing *from* the north, it is called a north wind.

Introduction to wind/boat relationships



Direction wind comes FROM

Windward



Leeward



Introduction to wind/boat relationships

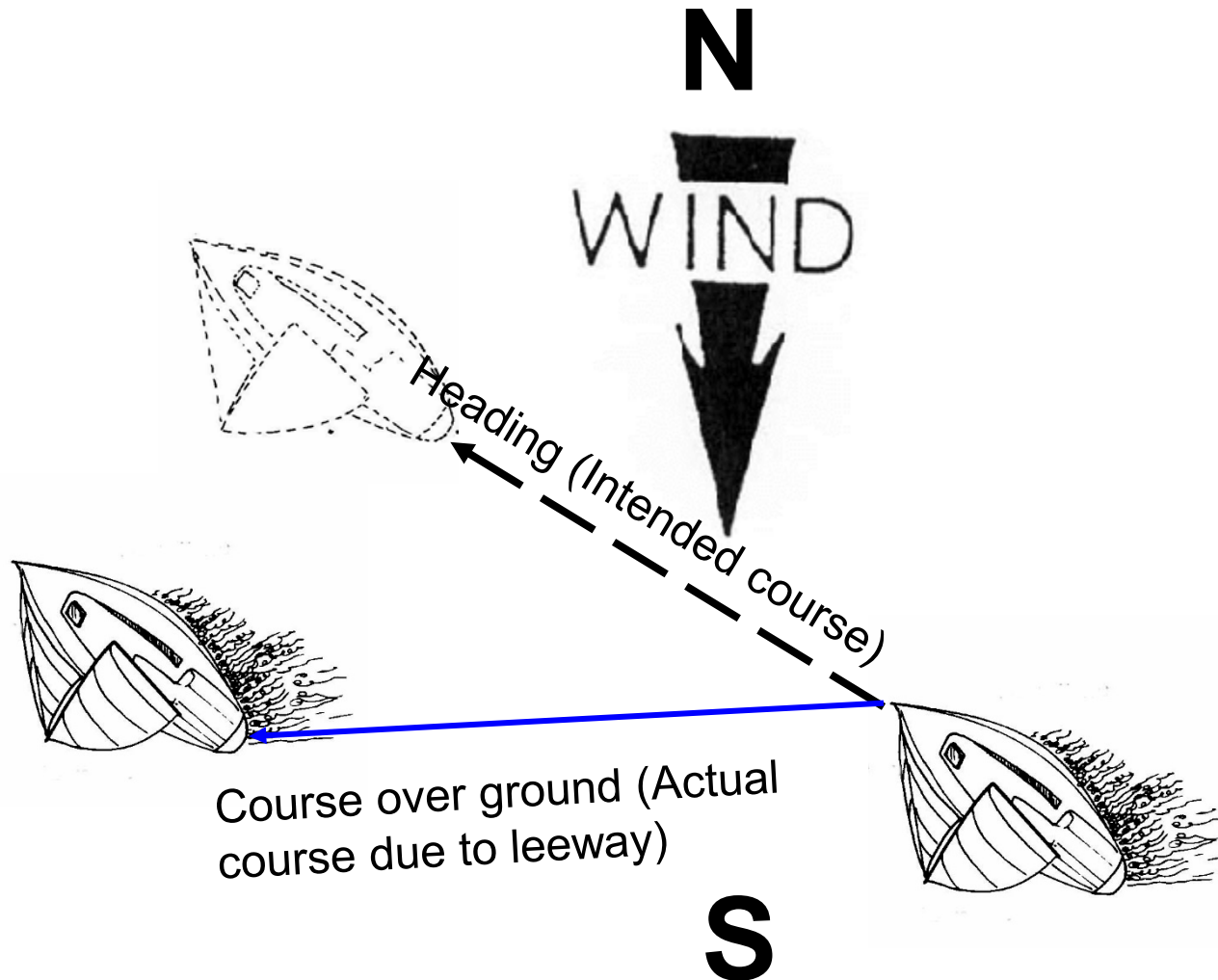


- Typically sailors refer to
 - Windward or also upwind or to weather
 - Leeward (pronounced Lew-ward) or downwind or lee
- On the boat, windward is the side closest to the wind and leeward is the side away from the direction from which the wind is blowing.
- These terms are used as reference points when sailing. So one might point out that there is an island to windward or direct someone on the boat to the leeward winch.



- When the wind applies force to the sails or the hull of the vessel there is a sideways force which over time causes the vessel to move sideways. This is referred to as leeway.

Leeway





- Prudent sailors are constantly aware of a lee shore.
- A lee shore is the shore leeward of the vessel and dangerous due to leeway

⑩ IMPORTANT!

A “lee shore” can be another boat, dock, or large buoy, not necessarily just land.

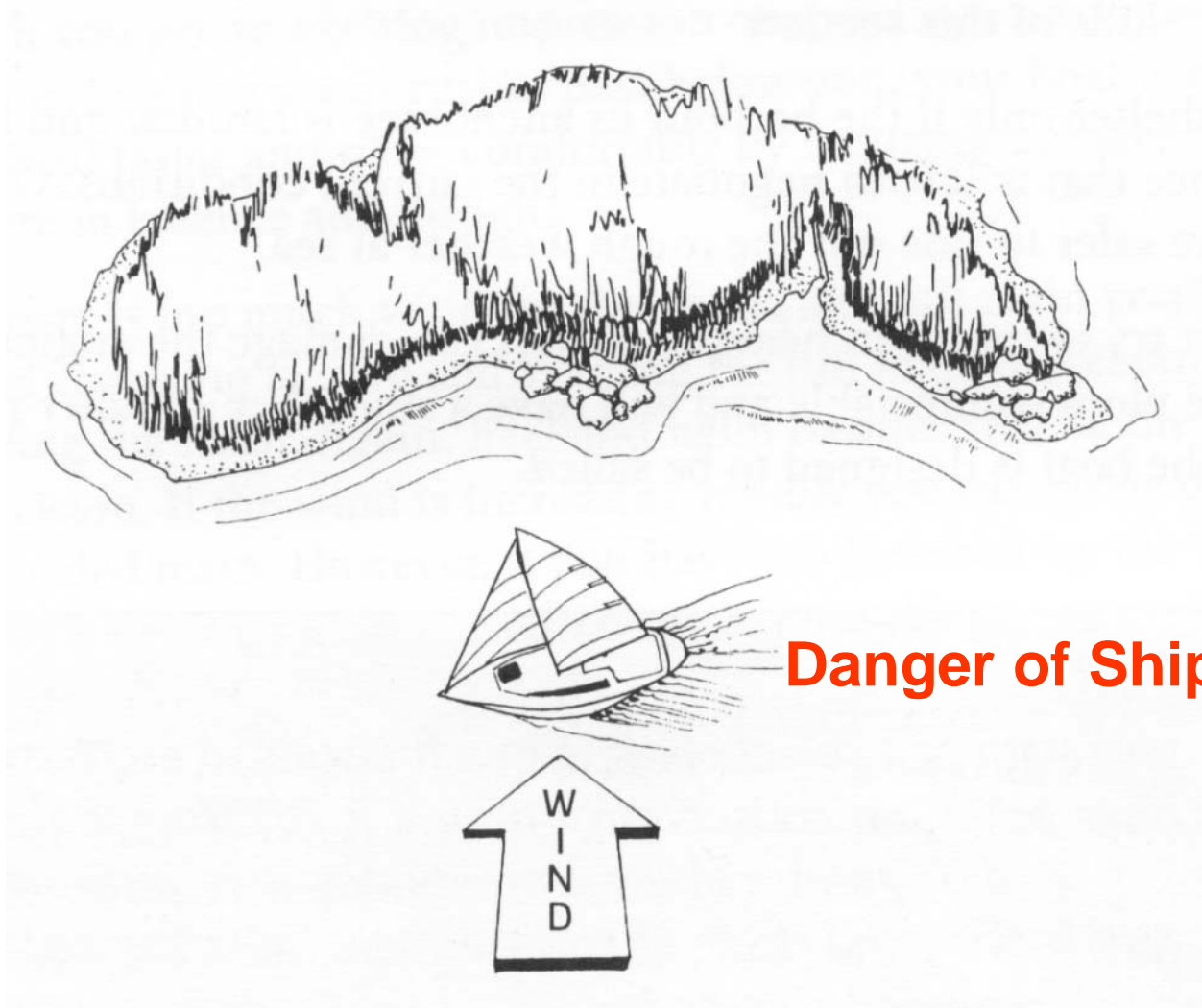
Being blown into a large steel buoy in a shipping channel or into the path of a large commercial vessel is as disastrous as being blown onto shore or a shoal.

Leeway and lee shore: key points!



- If you **are underway making leeway**, going towards an island on the leeward side of the boat, this poses a very real danger of shipwreck.
- As you get closer to land, large waves are often breaking which also push the boat (in concert with the leeway) onto the lee shore.
- Going more slowly through the water will increase the amount of leeway your vessel will make.

Lee shore / leeway dangers

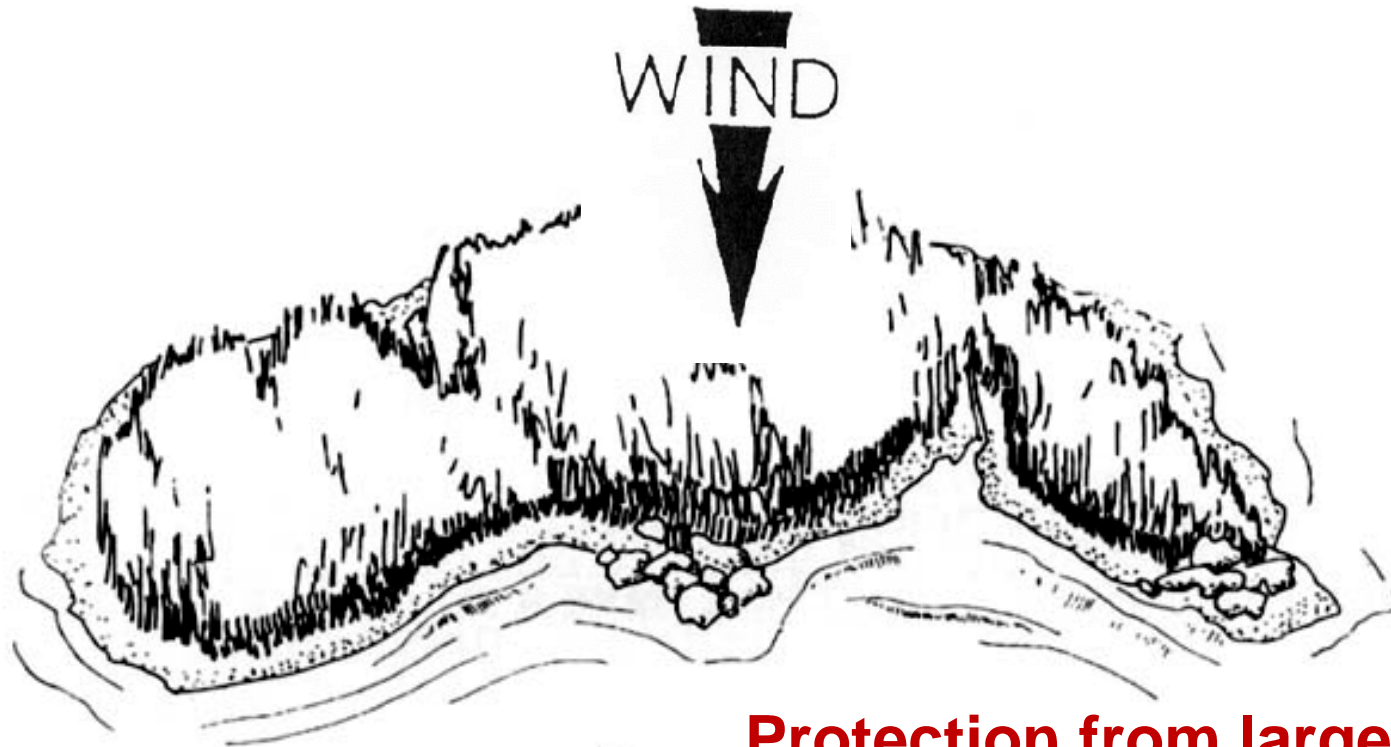


Lee **of** shore (weather shore)

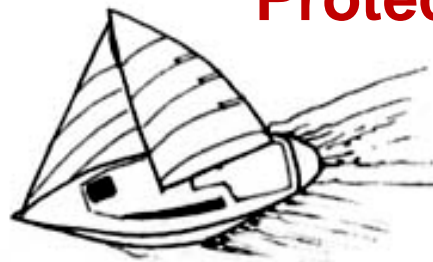


- This is the opposite of “lee shore.” When the vessel is in the lee **of** shore which affords protection from large waves. See illustration on the next slide.
- Sometimes when you are in the **lee** of shore the wind is less as well - although it can come around or over the land and from a different direction.
- Sometimes ‘in the lee of shore’ is referred to as the “weather shore”.

Lee of shore



Protection from large waves

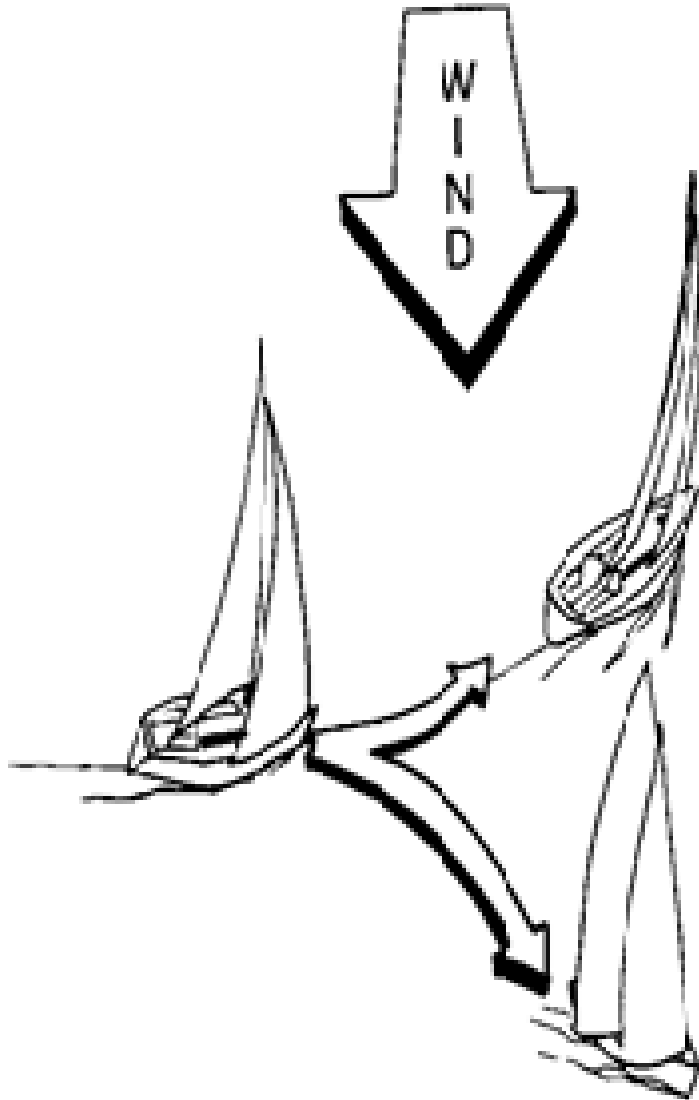


Directional terminology



- Now let's talk about changing direction of the vessel in relationship to the wind!
- If you turn the boat towards the direction the wind is blowing from (into the wind) you are “**heading up**”
- If you turn the bow of the boat away from the **direction the** wind is **from**, you are “**bearing off**”
- If you are “**heading up**” as much as possible and **can** still sail (make way), you are “**close-hauled**”

Heading up and bearing away



Heading Up

Boat turns closer to the wind

Bearing Away

Boat turns away from the wind

Lesson Summary



- In this lesson you learned about the wind and its relationship to the boat.
- You developed an understanding of the language used to describe the wind and its impact on the boat and the sails.
- You know the dangers of a lee shore.
- You learned directional terminology.

Let's practice!



- Complete the following quiz to test your knowledge of wind relationships.



- Define “heading up”
- What are the dangers of the boat being lee shore?
- Fill in the blanks: “Wind direction is always stated in the direction from which it originates. For example, when the wind is blowing _____ the north, it is called a _____ wind.
- What is the term for the following condition? “When the wind applies force to the sails or the hull of the vessel there is a sideways force which causes the vessel to move sideways.”