



**advantage**  
**boating** 

The logo for Advantage Boating features the word "advantage" in a dark blue, sans-serif font, with the "a" being lowercase. Below it, the word "boating" is in a lighter blue, sans-serif font, also with a lowercase "a". To the right of "boating" is a stylized icon consisting of several overlapping, curved shapes in shades of blue and green, resembling a camera aperture or a compass rose.

# Section VII: Part B – Seamanship: Anchors and Anchoring

# Lesson Outline



- Lesson objectives
- Introduction
- Types & characteristics of different anchors
- Scope requirements
- Selecting an anchorage
- Summary
- Quiz

# Lesson Objectives



- In this lesson you learn about the value of anchors, along with how to select a good anchorage.
- Being able to know how to select an appropriate anchorage and how to anchor properly is an invaluable skill to have when heading out on the water and stopping for lunch, a swim, bad weather, or for an overnight stop.

# Introduction



- Seamanship encompasses the knowledge and skill pertaining to the navigation, safety, and maintenance of your vessel.
- This includes knowing how to find a safe anchor and be able to anchor your boat securely and safely.
- Good seamanship and safety go hand in hand!

# Anchors: Description of Types



- **Pivoting twin fluke.** Brands: Danforth, Fortress, Hooker.



**The Danforth is the most common of these and is often used as the name for the type**

A lightweight anchor, made of steel or aluminum plate and bar stock, with a high holding power-to-weight ratio. These anchors are easy to lift, throw, and retrieve. They are ideal for sand, mud, and clay bottoms. The pivoting flukes dig in easily, often disappearing into the bottom. They are not as effective on rocks or in grass, and they tend to pick up debris easily.

The lightweight anchor, such as the Danforth or Fortress, is a burying anchor with wide sharp flukes and a stock. It holds very well under high loads in mud and sand but may be difficult to set in clay, grass, weeds, rock or shell bottoms. I recommend a lightweight as a secondary working anchor or a lunch hook. It requires more scope than other anchors and can be stored flat on deck.

# Anchors: Description of Types



- **The Plow Brands: CQR, Delta, Spade.**



The plow (or CQR) anchor is a burying anchor that has a hinged shank to keep it from breaking out if the boat swings to one side. I would use the plow as a primary working anchor. It holds well under large loads and in most bottoms, although it can be difficult to set in grass or weeds. It can be stored on the bow. The Delta is similar to a CQR, but its shank is one piece. It also holds well in most bottoms, other than large rocks and weeds, and can be stored on the bow.

Most common is the CQR and it is often used to name the type of anchor with blades that resemble a farmer's plow. A traditional anchor for cruisers, the plow is designed so it rights itself when deployed, causing the blade to plow into the bottom.

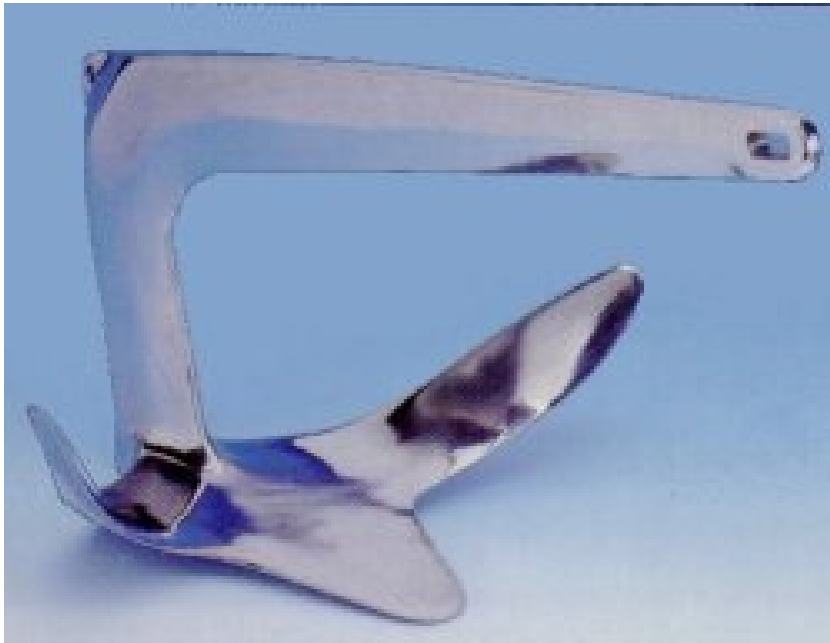
Plows perform well in grassy bottoms and also work in sand and mud, but they tend to be twice as heavy as pivoting-fluke types for the same holding power. This makes for a moderately heavy anchor, but one that stows easily in a bow roller.

# Anchors: Description of Types



- **Tri-point. Brands: Bruce, Claw.**

Checkout the latest version of the Practical Sailor



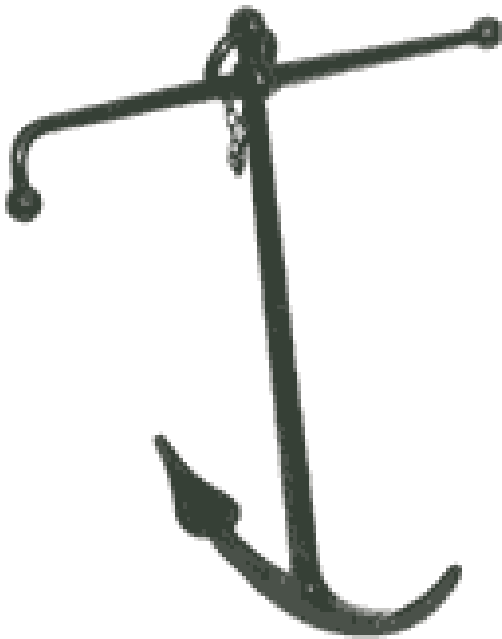
Very popular with cruisers, the tri-point has no moving parts to get jammed or that give, works with a variety of bottoms, and easily plows into softer surfaces. It features three round-edged flukes that curl out from the dogleg shank. It was invented in Scotland to secure floating oil rigs, so you know it's strong. The tri-point has high holding power and low breakout force.

The Bruce is a claw like burying anchor that sets quickly and resists breaking out without resetting if the wind or tide changes. Use a Bruce in crowded anchorages since it holds well at short scope and in most bottoms, including sand, grass and rock. It sometimes grabs loose rock and fails to set and can drag under very high loads. It can be stored on the bow.

# Anchors: Descriptions of Types



- **Kedge.** Brands: Fisherman, Yachtsman, Luke








A traditional anchor with relatively small flukes perpendicular to the stock and connected by a shank.

It is commonly used to warp a boat from one berth to another or to haul off when grounded. Its large size and heavy weight relative to its holding power have caused this anchor to fall from favor. Kedge anchors are difficult to stow, but they're great for weedy bottoms.

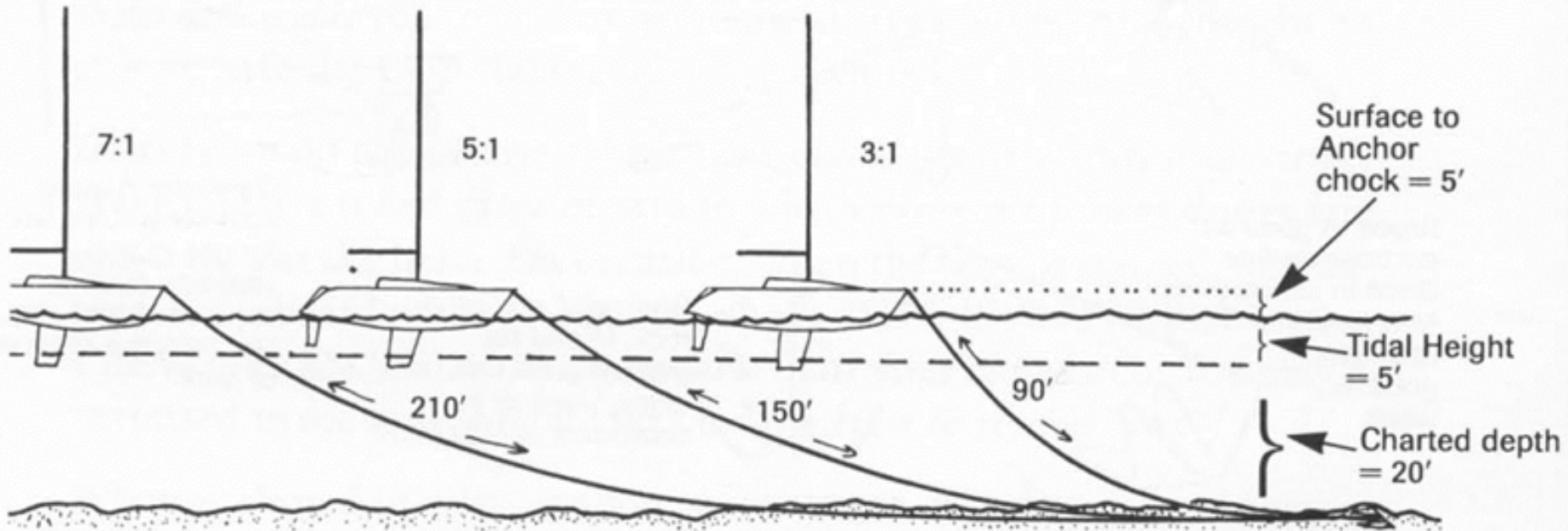


# Anchors: Holding Characteristics



Anchor	Type	Bottom Characteristics			
		Mud/Clay	Sand	Weeds	Rocks
	Pivoting Twin Fluke (Danforth)	YES	YES		
	Plough (CQR)	YES	YES	YES	
	Claw (Bruce)	YES	YES	YES	FAIR
	Kedge (Fisherman)			YES	YES
	Grapnel	Mainly Dingy Use			YES

# Anchoring: Determining Scope



**Ground Tackle:** Must be adequate for size of boat

**Rode:** Short length of chain connected to length of line

## Calculations

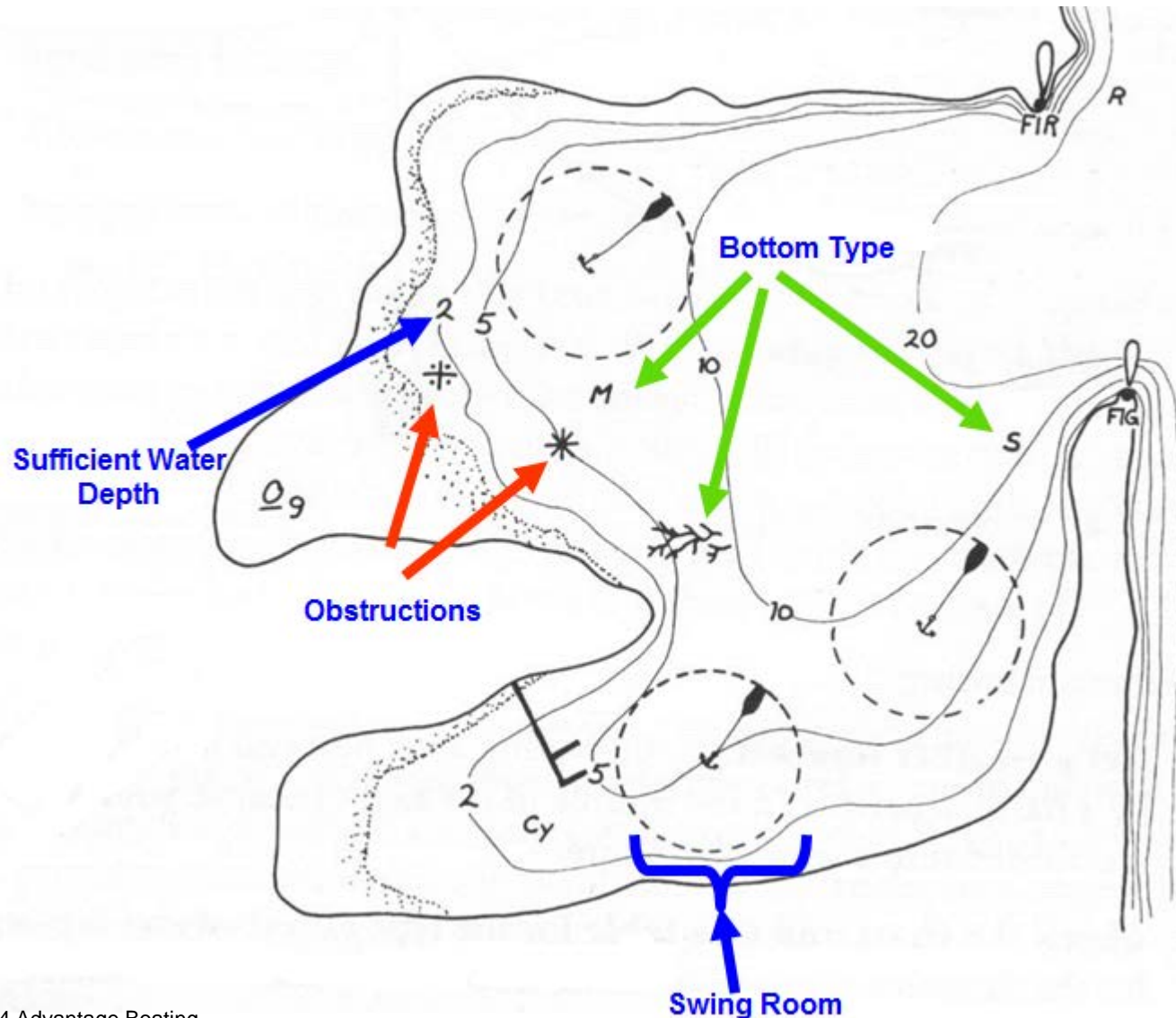
For depth: use the depth of water including the tidal range + the height of the deck above the water

For scope: use the depth x ratio (*Lunch stop x 3; overnight x 5; high wind & waves x 7*)

## Advantages of chain rode

- ✓ Creates horizontal pull on anchor
- ✓ Acts as snubber
- ✓ Abrasion resistant on bottom

# Picking a Good Anchorage



Four considerations when picking an anchorage are:

- Water Depth
- Bottom Type
- Obstructions
- Swing Room

# Consideration of Anchorage Points



- Type of bottom mud, clay are best, sand is okay, and weeds, rock & shale are **not** good
- Obstructions – for example, underwater reefs, wrecks
- Depth of water
- Protection from wind and waves & currents (this should take into account the period of time planned to anchor)
- Other things to be aware of are the type of anchoring done by boats already at anchor and also tide range



- In this module you learned about different types of anchors and their characteristics.
- You also learned what you need to consider when selecting a good (safe) anchorage.
- Knowing where and how to anchor will give you great peace of mind!

# Next Steps!



In the next lesson, you will learn about aids to navigation.

# Let's practice!



- Complete the following quiz to test your knowledge about anchoring.

# Quiz



- What are four things should you consider when selecting an anchorage site?
- Name five types of anchors.