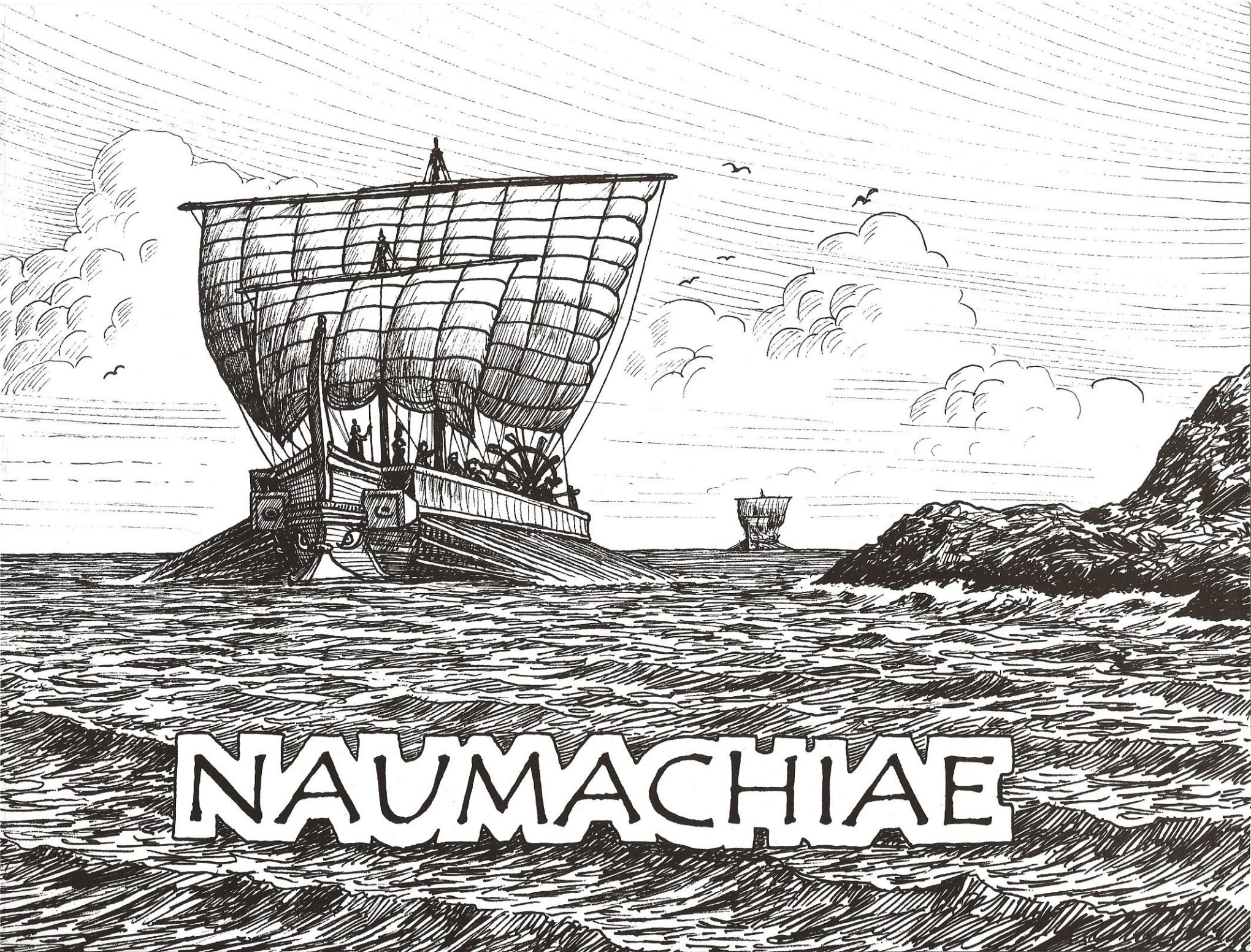
NAUMACHIAE

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Ancient Wargame Rules
3000BC - 600AD

Written by
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In conjunction with
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NAUMACHIAE

MOCK SEA BATTLES

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In recent years there has been much work performed in the field of naval archaeology. The launching of the reconstructed trireme *Olympias* has also provided a great deal of information on the performance of ancient oared warships.

These rules are intended to provide a detailed, yet playable, re-enactment of ancient naval warfare based upon the latest data.

They are primarily intended for 1/1200 scale ship models, from small engagements to large fleet actions.

The time period covered by the rules represents a singularly large sweep of history, making it possible to wargame naval actions from the Early Bronze Age to the resurgence of the Roman (or Byzantine) Empire in the east. Thus, they cover a time span of some 3,600 years from approximately 3000BC to 600AD.

In terms of ship types, the rules cater for the earliest paddled ships of the Mediterranean through to the small galleys of the Later Roman Empire. It is the period of the development, supremacy and decline of the ram equipped galley.

Martin Johncock

NAUMACHIAE (Pl.) is the Latin name used by the Romans for the 'sea battles' that various emperors staged at their games. The arena would be flooded and several galleys brought in to fight each other - for the amusement of the crowd.

We have devised here an equally amusing but I hope, less gory diversion for you.

Enjoy your wargaming.

Rod Langton

Requirements

These rules are intended for play using 1/1200 ship models on a playing area of 2 ft square at a minimum, up to 6 or even 8 ft by 4 ft. Games may be played with a minimum of about 10 ships a side, through to much larger actions involving substantial fleets.

One ship model is intended to represent one ship, though to replay some of the larger fleet actions of antiquity such as Salamis and Actium, it is suggested that one ship model represents five or more vessels.

No real attempt has been made to scale speed, time or distance, since these tend not to work well together on the wargames table. For those who feel the need for a time scale, it is suggested that each game Turn be considered to represent 15 minutes of real time.

Requirements:

- Ω 1/1200 scale Ancient ship models on bases.
- Ω A suitable playing area with terrain pieces to represent coastlines and islands.
- Ω 3 x six-sided dice (Ability dice).
- Ω 3 x six-sided dice (Events dice).
- Ω Coloured cotton wool or counters for use as fire markers.
- Ω Markers or counters to represent wreckage.
- Ω A metric ruler or measuring stick.
- Ω Pencil and paper.

The following are supplied:

- Ω Playsheets
- Ω Mariner's Compass
- Ω Turning Circles
- Ω Ability Chart
- Ω Example Fleet/Ship Data Card (Optional)

Notes on Requirements:

SHIP MODELS: These should be readily identifiable, either by means of distinctive colouration or an identification code on the underside of the ship base.

WRECKAGE: This would, in reality, represent an hazard to other vessels. Partially sunken vessels add a realistic touch.

TERRAIN: It is recommended that players read the section on Setting up Terrain.

DICE: For simplicity, one 'type' of dice is required, i.e. six-sided.

Ability dice: In every game Turn, a player throws all three dice and these remain on the table while the ship or ships to which the throw relates, complete their actions.

Events dice: These are used where additional throws are required to determine other events in the course of a game Turn.

THE FLEET/SHIP DATA CARD

For those players wishing to record information, we have devised one which will provide the most essential data. An extract of a completed example is shown at the bottom of the page opposite and a blank copy is provided which players may photocopy. This layout can be adapted to suit individual requirements.

THE PLAYSHEETS: These contain extracts from the rules and are a 'quick reference' guide to tables, calculations etc most likely to be used during the course of play.

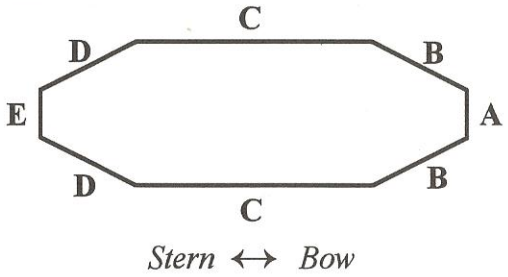
THE ABILITY CHART

This is fundamental to the rules and players are advised to read this section of the rules carefully.

SHIP BASE SIZES

Each ship model should be mounted on an eight-sided base to facilitate play. This ship base is important to the game since it allows rapid determination of the point of contact for ramming purposes.

Diagram of a specially designed base



The base should be of sufficient size to adequately fit the model and conform to the following criteria:

The bow and stern points marked A and E in the diagram should be 3 to 6mm wide, depending on the size of the vessel.

The parallel sides marked C should be slightly longer than the model's oar banks for galleys or approximately two-thirds of the hull length for sailing ships, and wide enough to allow 1 or 2mm of 'sea' to show beyond them.

The angles between sides A and B and sides D and E should be between 25 and 50 degrees, the final angle being decided by the shape of the model. The length of sides B and D should be sufficient to project sides A and E, 2mm-3mm beyond the hull.

EXAMPLE OF COMPLETED SHIP DATA - HEAVY QUINQUEREME

In this example, the vessel is carrying a normal load, i.e. the equipment/personnel aboard is within its carrying capacity.

If the owning player had opted to overburden the vessel by additional equipment, then its Movement, Straight Line Distance between Pivots and Fatigue would have been affected.

Note: where speed under sail or oar/sail combined is required, these will need to be calculated for the prevailing wind conditions and attitude to the wind (Pgs 63 & 65 and Playsheet).

(i) Pgs 7, 9
(ii) Pgs 61, 70
(iii) Pg 66 (greyed area shows static data)
(iv) Pg 71
(v) Pgs 62-64 (record changing status)
(vi) Pgs 12-14 and Pg 70

(i)

Ship ID/Type	Category	SI	Captain	Crew	Hull	Marines	Vessel's Class
H. Quinq. Red Stern	6	130	Good	Avg.	Slow	Good	C

(ii)

MOVEMENT under Oars (Speed in mm)	RAM	FAST	CRUISE	SLOW	Acc/Dec
	140	105	70	35	35

(iii)

TURNING Oars/Oars & Sail comb'd	RAM	FAST	CRUISE	SLOW	SLD btwn Pivots
	-20	-15	-10	-5	35

(iv) Fatigue Limit 30

(v) Main Sail _____ Up, Reduced, Furled, Stowed, Ashore
Boat Sail

(vi) Equipment/Extra Marines: Corvus

Notes

Example of part completed Fleet/Ship Data Card.
A blank copy is provided overleaf for players' use.

FLEET DETAILS: ☐ Admiral / Quality: ☐ Vice-Admiral / Quality: On board ship: No of ships in Squadron: No of ships in Fleet:

Ship ID/Type	Category	SI	Captain	Crew	Hull	Marines	Vessel's Class

MOVEMENT under Oars (Speed in mm)	RAM	FAST	CRUISE	SLOW	Acc/Dec
TURNING Oars/Oars & Sail comb'd	RAM -20	FAST -15	CRUISE -10	SLOW -5	SLD btwn Pivots

Fatigue Limit

Main Sail _____ Up, Reduced, Furled, Stowed, Ashore

Boat Sail

Equipment/Extra Marines:

Notes

Ship ID/Type	Category	SI	Captain	Crew	Hull	Marines	Vessel's Class

MOVEMENT under Oars (Speed in mm)	RAM	FAST	CRUISE	SLOW	Acc/Dec
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Main Sail _____ Up, Reduced, Furled, Stowed, Ashore

Boat Sail

Equipment/Extra Marines:

Notes

Turn Record & Wind Potential

ORGANISING A FLEET

Selection

- Ω Structural Integrity and Ship Categories
- Ω Ship Types
- Ω Determining a Vessel's Class
  CAPTAIN, CREW AND HULL QUALITIES

Points Costing

- Ω Individual Vessels
- Ω Additional Costs
- Ω Permitted Units
- Ω Admirals and Vice-Admirals

Special Provision

- Ω Merchant Vessels and Merchant Galleys

In this section, the attributes of the ships, captains and crews are described, so that players may decide on:
1) their vessels
2) the class of each vessel.

General
A fleet is composed of a number of elements such as hulls, crews, marines, sails and shipboard equipment, eg torsion powered artillery pieces and towers. There must be a captain for each ship.

Each fleet must be commanded by an Admiral. Fleets larger than 10 ships must be divided into squadrons with a Vice-Admiral in command of each additional 10 ships or part thereof after the first 10. In addition, any fleet detaching vessels for flank sailing must have an Admiral or Vice-Admiral with those ships as well as one with the ships deployed on table.

The following describes the attributes of the ships, captains and crews, so that players may decide on the composition of their fleet. Part Two of this section deals with the actual points costing.

Structural Integrity and Ship Categories

The Structural Integrity (SI) of a vessel is the comparative assessment of the strength of the hull, taking into account such factors as the overall size of the ship and its intended use.

The Category of a vessel is a reflection of its overall size, mass, strength and ability to carry marines.

Neither the SI of a vessel nor its Category should be taken to represent exactly the strength and displacement for the ships listed. They are game mechanisms designed to reflect the various differences between the vessels available during the vast time scale covered by ancient galley warfare.

Ship Types
The ship types catered for under these rules have been broken down into three groups, namely **Galleys, Barbarian Vessels** and **Merchants**. Their Structural Integrity (SI) and Category are listed in the charts following.

Note: Certain ship types have been omitted where their differences are too small to make a separate listing.

Players select their vessels from the lists and then note their characteristics, i.e. number of oarsmen per file and structural integrity. They will need this information later for points costing.

Notes to list of Galleys (opposite):

1)The list is not intended to cater for all the warships known to the ancients, but covers the most common types in use at varying times throughout the period. Players wishing to use vessels not listed, should select a vessel in the list which most closely equates to the ship type of their choice.

2) The column headed Basic Armament denotes the basic weapon with which the hull is fitted. In most cases this is a ram. Earlier vessels may come equipped with an 'early ram' (or no ram).

3) There is no known evidence of ships larger than a ten having been used in combat. The elevens to thirties have been included for players wishing to experiment with these ponderous behemoths. The 40 banked vessels built by Ptolemy IV Philopater has not been included, being deemed to be more of a tribute to the ship construction abilities of the ancients rather than a viable warship.

Early Rams: Contemporary accounts suggest the earlier rams suffered from several design problems. They would sometimes twist on impact or lose their protective metal coverings in combat. To reflect this, galleys with early type rams will suffer one reduction in class for every 4 they inflict.

Vessel	Oarsmen per file	Basic armament	Deck type	Structural Integrity	Category
Aegean paddle boat	1	None	Aphract	10	1
Egyptian 'punt' ship	1	None	Aphract	15	1
Egyptian war galley	1	None	Aphract	20	1
Bronze Age Greek galley	1	Early Ram	Aphract	20	1
20 oared galley	1	Early Ram	Aphract	30	2
Triakonter	1	Early Ram	Aphract	40	2
Early pentekonter	1	Early Ram	Aphract	50	2
Phoenecian bireme	2	Early Ram	Aphract	60	2
Bireme	2	Ram	Aphract	60	2
Liburnian	2	Ram	Cataphract	70	3
Hemiolia *	1	Ram	Cataphract	70	1 (3)
Early three	3	Ram	Aphract	80	3
Trihemiolia *	2	Ram	Cataphract	80	2 (3)
Light three	3	Ram	Aphract	90	3
Heavy three	3	Ram	Cataphract	100	4
Four	4	Ram	Cataphract	110	5
Light five	5	Ram	Cataphract	120	5
Heavy five	5	Ram	Cataphract	130	6
Six	6	Ram	Cataphract	140	7
Seven	7	Ram	Cataphract	150	7
Eight	8	Ram	Cataphract	160	7
Nine	9	Ram	Cataphract	170	8
Ten	10	Ram	Cataphract	180	8
Eleven	11	Ram	Cataphract	190	9
Twelve	12	Ram	Cataphract	200	9
Thirteen	13	Ram	Cataphract	210	9
Sixteen	16	Ram	Cataphract	250	10
Twenty	20	Ram	Cataphract	300	10
Thirty	30	Ram	Cataphract	350	10

GALLEYS

This group of vessels includes those ships of the Classical period equipped with rams and primarily propelled by oars, but also incorporates those vessels which led to the development of such warships.

*HEMIOLIAS and TRIHEMIOLIAS

(see also Glossary).
These small, lightly built, fast craft have advantages and disadvantages. Being light, they will move better and so for the purpose of these rules, they will be Category 3 whilst moving and manoeuvring.

In every other situation, they are Category 1 (Hemiolias) and Category 2 (Trihemiolias). These lower categories are to reflect the disadvantages of their size and lighter construction, particularly in contact situations.

BARBARIAN VESSELS

Provision is made for calculating the points cost of some of the vessels used by certain of the Barbarian nations during the period covered by the rules, as well as for the main types of merchant vessels so crucial to the trade of the ancient world.

These vessels would not have been equipped with rams. The early Scandinavian oared warship did not carry sails and the Gallic warship was a pure sailing vessel.

Note: This list is not meant to be comprehensive. It is a selection of Barbarian warship types for those players wishing to provide different opponents for their galley fleets or for the purposes of campaigns or scenario games.

Vessel	Deck Type	SI	Category
Celtic Curragh	Aphract	15	2
Early Scandinavian oared ship	Aphract	30	3
Saxon warship	Aphract	50	3
Gallic warship	Cataphract	70	4
Gothic ship	Cataphract	90	4

MERCHANTS

This group provides a selection of merchant types as used by the Mediterranean peoples. With the exception of the barge, which was towed, and the eikosoros which was a galley used as a freighter, the other vessels should be considered to be sail powered but able to carry oars as well.

Galleys were frequently used as fast transports. The selection of merchant vessels below may be supplemented by the use of galleys not equipped with a marine complement.

Merchant Vessels would not have been equipped with rams. (Please see pgs 16-17 for a more detailed description of Merchant Vessels and Merchant Galleys - their attributes, restrictions etc.)

Vessel	Deck Type	SI	Category
Barge	Aphract	40	2
Eikosoros	Aphract	60	2
Small merchant	Cataphract	60	3
Medium merchant	Cataphract	90	4
Large merchant	Cataphract	150	7

Having selected vessels, players must now decide on the vessels's class.
A vessel's **class** is based on the combination of:
Captain's Quality + Crew Quality + Hull Quality.

A description now follows, together with a chart showing how the classes are derived from the different combinations.

Determining a Vessel's Class

In these rules, a vessel's class is determined by combining the actual quality of its captain and crew, as well as the basic quality of the vessel.

The higher a class of a vessel, the better its abilities. It reflects its seaworthiness and ability to move and manoeuvre.

During the course of the game, a vessel's class may be reduced, signifying that its ability to act effectively has been diminished. The reasons may be diverse - crew casualties, damaged oars, etc - but the effect is the same, the vessel's efficiency is reduced.

Captains Qualities

GOOD - An accomplished seaman with the ability to wrest that extra effort from his crew.

AVERAGE - A capable seaman, able to perform his duties to an acceptable standard.

POOR - A seaman of limited abilities, lacking the confidence of his crew and unable to quickly react to the shifting fortunes of a combat situation.

Crew Qualities

GOOD - Experienced, professional seamen or those subject to regular training or service.

AVERAGE - Either efficient seamen not subject to regular service, or a mixed crew of good sailors and landsmen.

POOR - Inexperienced or unwilling crews.

Hull Quality

FAST - A well found, new, well built, dry or recently refitted vessel.

NORMAL - Seaworthy and adequately maintained - the vast majority of vessels,.

SLOW - A vessel which is either poorly built, old, waterlogged or badly maintained.

Captain's Quality	Crew's Quality	Hull Quality	Vessel's CLASS
Good	Good	Fast	A
Good	Average	Fast	A
Average	Good	Fast	A
Good	Good	Normal	A
Good	Good	Slow	B
Good	Average	Normal	B
Good	Poor	Fast	B
Average	Good	Normal	B
Average	Average	Fast	B
Poor	Good	Fast	B
Good	Average	Slow	C
Good	Poor	Normal	C
Average	Good	Slow	C
Average	Average	Normal	C
Average	Poor	Fast	C
Poor	Good	Normal	C
Poor	Average	Fast	C
Good	Poor	Slow	D
Average	Average	Slow	D
Average	Poor	Normal	D
Poor	Good	Slow	D
Poor	Average	Normal	D
Poor	Poor	Fast	D
Average	Poor	Slow	E
Poor	Average	Slow	E
Poor	Poor	Normal	E
Poor	Poor	Slow	E

Example

1. A player selects a 'Light Three' (aphract trireme).
2. He wishes the quality to be A class and decides to arrive at this by having a good captain, good crew and normal hull.

ORGANISING A FLEET - Points Costing

When preparing a game, the selection of warships and personnel will be in line with the overall number of points allocated to each player in the game. (If the game should be an historic re-enactment, the types of vessels and to some extent, their qualities and the abilities of their personnel will be already decided for you (see fleet lists)).

To Calculate the Points Cost of a Fleet

1. Add the total points of all the vessels comprising the fleet, **including** any equipment etc taken aboard.
2. Add the points cost for the chosen fleet admiral, depending on his quality.
3. Add the points cost for any vice-admiral(s) depending on his (their) quality.

To summarise, Fleet Cost = Points cost of each Individual Vessel + Points cost of Admiral/Vice Admiral(s).

Example:

12 vessels with a total cost	*2100 points*
Inspired admiral	*300 points*
Good Vice admiral	*100 points*
FLEET COST	*2500 points*

Individual Vessels

Players decide on their vessels, bearing in mind:
- the points cost of the vessel;
- the points cost of additional equipment;
- the 'permitted units' a vessel is allowed before it is overburdened (see pgs 13-14).

The starting point in costing your vessel is its Structural Integrity (SI). It is the base figure when calculating the cost of personnel aboard because the SI is a reflection of a vessel's size.

Points Costing of Individual Vessels

METHOD

Step 1: The SI is divided by 10 to give a workable figure.

Step 2: This figure is added to the number of oarsmen per file to give a factor.

Step 3: The factor is then used to assess the cost of Captain's quality, Crew quality and Hull quality in the following manner:

Captain/Crew	*Hull*	*Multiplier*
Good	Fast	x3
Average	Normal	x2
Poor	Slow	x1

Step 4: The results of Step 3 is then ADDED to the **original** Structural Integrity figure.

Example: costing a Later Aphract Trireme with a good captain, good crew, normal hull, where the SI = 90

Step 1:	*90 (SI) divided by 10 = 9*		
Step 2:	*9 + 3 (no of files) = 12*		
Step 3:	*Good captain (12x3)*	=	*36*
	Good crew (12x3)	=	*36*
	Normal hull (12x2)	=	*24*
Step 4:	*Add original SI*	=	*90*
	Total Cost	=	*186 Points*

A 'file' is the term used to denote the number of oarsmen vertically above each other at one station, on one side of a galley. Thus, a bireme would have 2 men per file whilst a quinquereme would have 5.

Additional Costs

These are the cost of items and personnel which a vessel may take on board. There now follows a listing, together with a description of attributes and cost (or method of costing).

Players are reminded that each item also has a unit value which relates to its weight and bulk. The carrying capacity of a vessel (see end of this section) should therefore be considered.

a) Marine complement

The quality of the complement may be good, average or poor.

Good: Experienced marines with confidence in their captain and ship, or elite foot soldiers with confidence in their own abilities.

Average: Marines of some experience or foot soldiers with acceptable training and levels of confidence. Also pirates.

Poor : Inexperienced or unwilling marines.

The higher a vessel's category, the greater their normal marine complement. This is reflected in the costings in that the larger category vessel will have a higher SI which, when added to the number of files, will give a higher factor.

On lightly built, finely balanced galleys - such as the aphract triremes, marines were trained to throw or fire their weapons from a sitting position. This was because any shifting of weight on the upper deck would have caused the vessel to list, disrupting the oar stroke.

Method of Costing Marine Complement:
As for a galley's crew, using the same factor.

b) 'Extra' Marines

All warships may carry an 'extra' marine complement. This provision reflects the ancient tactic of transporting troops as part of an amphibious operation such as the Persian invasion of Greece. Troops so carried give an additional advantage in boarding actions but can adversely affect the handling capabilities of the vessel which is transporting them by overburdening the vessel.

These extra marines will be of the same quality as the original marine complement.

Note: Players who wish to set up a 'friendly shore' (pgs 21-22) must allow sufficient points for ground troops from their total.

Method of Costing Extra Marines:
As for a galley's crew, using the same factor.

c) Sails for Galleys

Though galleys rarely had their sails set during combat, they were often used on long cruises or to reach the site of battle. An ideal galley operation would see the vessels use both boatsail and mainsail to supplement their oars on the journey from home port to combat area. Thus they would make better time and spare their crew's energy.

Once they got near their destination, the mainmast and sail and possibly the boatmast and sail would be left ashore under guard, before the ship headed into battle. There is some uncertainty as to which vessels actually carried boatsails. Certainly they would have hampered the deployment of such items as the corvus. It is most likely that some vessels would have used them on the approach to battle, stowing them aboard before contact with the enemy.

c) Sails for Galleys - continued

Under these rules, a ship may be equipped with a boatsail and/or a mainsail (adding the relevant points cost), or none of these - depending on the requirements and intentions of the player.

Generally speaking, a galley with a mainsail and a boatsail can take full advantage of suitable winds and start the battle with a rested crew. It may however, be slower under oars, less efficient in boarding actions and be at greater risk in the event of a fire. Leaving the mainsail ashore but keeping the boatsail will reduce both these advantages and disadvantages slightly.

Conversely, without mainsail or boatsail, the galley will probably be faster under oars and more efficient in boarding actions, but will start the battle with a crew beginning to tire.

Points Cost of Boatsail:
5% of the Structural Integrity of vessel.

Points Cost of Mainsail:
10% of the Structural Integrity of vessel.

Note: cost includes sail, yard and mast.

d) Towers

These may only be carried by cataphract ships after 350BC and then subject to the following limitations:

Ships in Categories 4 to 6 may carry one tower.

Ships in Categories 7 to 10 may carry two towers.

The points cost for each tower: 20 points.

e) Artillery

Artillery is divided into two classes, namely Heavy and Light:

Light artillery pieces have a limited range but will assist a vessel so equipped, in boarding actions.

Heavy artillery pieces have twice the range and can inflict more damage, but are too cumbersome to be used in boarding actions.

Artillery pieces may be carried on cataphract vessels after 350BC, subject to the following limitations:

Category	*Artillery Carried*
1-3	None
4	1 Light Artillery piece.
5-6	2 Light or 1 Heavy Artillery piece.
7-8	3 Light or 1 Heavy & 1 Light Artillery piece.
9-10	4 Light or 2 Heavy Artillery pieces.

Points Cost for each Light Artillery piece: 20 points.
Points Cost for each Heavy Artillery piece: 30 points.

f) Incendiary Weapons

An artillery piece may be upgraded to fire incendiary projectiles. If done, it must be to all pieces carried on a vessel.

Points cost of each weapon upgraded to fire incendiaries: double the initial cost of the weapon.

In addition, a ship may be equipped with a close contact incendiary weapon such as a Rhodian fire pot. Such weapons may only be carried on vessels belonging to those states which historically used them, and not before 250BC. They may act to the detriment of the ship deploying them if it is subject to an adverse result on its Ability dice score. Limit of one per ship.

Rhodian Fire Pot = 20 points.

g) Chemical/Biological Weapons

Weapons such as pots of quicklime or bees may be carried for use in boarding actions. They may work to the detriment of the ship deploying them if it is subject to an adverse result on its Ability dice score. Limit of one per ship.

Cost: 10 points each

h) Reinforced Bows

An early, light or heavy trireme of the 5th century BC may be equipped with a reinforced ramming bow. A trireme so equipped, increases its impact potential for ramming but retains its original base Structual Integrity for the purpose of calculating damage received.

Method of costing:
50% of the SI, added after other costs have been calculated.

i) The Corvus

A corvus may only be used by Roman vessels of quadrireme size and larger and then only in the period between 260 and 200BC. Each ship may only carry one corvus.

Cost: 20 points

j) The Harpago

The harpago may only be used by Roman vessels of quadrireme size and larger and then only in the period between 36BC and 50AD. It is the equivalent of a heavy artillery piece. Each ship may only carry one harpago.

Cost: 30 points

Permitted Units

The relative weight of each item of equipment is expressed in units. Each galley may carry a certain number of units of equipment, depending on its Category, before any Movement penalties are incurred. The maximum units allowed to be carried, before the vessel is overburdened, are as set out below.

- No vessel may carry more than 3 times its allowance.
- For effects of overburdening on a vessel's movement, see Movement, page 70.

CARRYING CAPACITY

Category of Vessel	1	2	3	4	5	6	7	8	9	10
Permitted Units	3	3	3	4	5	6	7	8	9	10

See overleaf for description of unit values.

Special Consideration for Merchant Vessels and Merchant Galleys.

Being designed for the transport of goods etc, these have an extra carrying capacity and so their permitted units are:

Merchant Vessels - twice the permitted units for its category.
Merchant Galleys - two more units than that permitted for its category.

Unit Value
The units used for additional marines or each piece of equipment by type is as follows:

MARINES/TYPE OF EQUIPMENT	UNITS
Marine complement on Category 1-3 vessels	1
Marine complement on Category 4-5 vessels	2
Marine complement on Category 6-10 vessels	3
'Extra' marines unit cost = cost of the vessel's complement	
Chemical/biological weapons	1
Each tower	2
Each light artillery piece	1
Each heavy artillery piece	2
Reinforced ram bow	3
Corvus	3
Harpago	3
Oars for a sailing vessel	2
Boatmast, yard and sail	2
Mainmast, yard and sail	3
Dolphins (used by merchant vessels at anchor)	2
Category 2 vessels (& below):	
Boatmast, yard and sail	1
Mainmast, yard and sail	2

All fractions should be rounded down.

Utilising a Merchant Vessel or Merchant Galley
A player may choose to pay for additional equipment or personnel for a vessel, but have certain units transported as cargo on a merchant vessel or merchant galley.
In so doing, it is the cargo carrying vessel's permitted units that are used and the 'parent' vessel that incurs the points cost.

An example now follows, in which a scenario is presented and Permitted Units are calculated.

Scenario: A Category 3 later aphract Trireme with good captain, good crew and normal hull. It is carrying average marines, main and boat masts and yards and 'extra' marines (same quality as normal complement).

The unit value for additional equipment and marines in this example is as follows:

Marine complement	= 1
'Extra' marines	= 1
Boatmast, yard and sail	= 2
Mainmast, yard and sail	= 3

Total	= 7 points

The 'permitted units' for this Category 3 vessel is 3 UNITS only and so the vessel is overburdened. This will affect its capability throughout the game.

Points Costing: Admirals and Vice-Admirals

QUALITIES

Inspired: An outstanding naval commander such as Agrippa or Demetrius of Macedon.

Good: Experienced or above-average commanders, particularly from such states as Athens and Carthage.

Average: The majority of Ancient naval commanders, competent but not inspired.

Poor: An inexperienced naval commander or one with a poor grasp of the requirements of naval warfare. Most Spartan admirals, particularly in the early stages of the Peloponnesian War, would fall into this class.

Incompetent: An individual with no experience and no naval ability. Probably a political appointee.

The points costs for Admirals and Vice-Admirals depends upon their quality as shown in the following table:

Quality	Admiral	Vice-Admirals
Inspired	300	200
Good	200	100
Average	100	50
Poor	50	25
Incompetent	25	10

Optional Method of Selection of Admiral/Vice-Admiral
Players may wish to add a variable to their games in the form of a random selection process for the fleet admiral and any vice-admirals, prior to choosing the actual ships for their fleets. To do this, each player should throw three dice and compare the result with the following table:

3 to 5	Incompetent
6 to 8	Poor
9 to 12	Average
13 to 15	Good
16 to 18	Inspired

The End
- of normal Points Costing and Permitted Units -

The rest of this section deals with
Merchant Vessels and Merchant Galleys
- Attributes, Restrictions, Points Costing -

PROVISION FOR SPECIAL CASES

Merchant Vessels are considered separately here. They had a larger carrying capacity and were used primarily for transporting goods. Their disadvantage however, was in their lack of manoeuvrability. In the rules, they are unable to close to within 100mm of an enemy warship - unless the warship is stationary or drifting.

Merchant Galleys are subject to the same restriction.

If the cargo carried by a Merchant Vessel or Galley is equipment or personnel belonging to another vessel, then the points cost of those items are attributable to the parent vessel.

Merchant Vessels - Points Cost

Calculate the cost of a Merchant Vessel as follows: Use one-tenth of the vessel's SI as the factor, to be applied to the various qualities of captain, crew and hull, as with normal points costing. (Note: oarsmen per file are excluded from this calculation).

Example: A Category 4 medium merchant (SI of 90) with an average captain, poor crew, fast hull and main and boat masts, yards and sails.

Step 1:	90 (SI) divided by 10 = 9		
Step 2:	Average captain (9x2)	=	18
	Poor crew (9x1)	=	9
	Fast hull (9x3)	=	27
	Masts, yards and sails	=	0
Step 3:	Add original SI	=	90
	TOTAL	=	144 points

The reason there is no costing of the oarsmen per file is to reflect the smaller quanity of crew required to man a vessel principally powered by sails.

There are also NO extra points costs for having a boatsail and mainsail because these are considered an integral part of these vessels.

Merchant Vessels - With Oars

Points Cost for Oars for a merchant sailing vessel: add 10% of Structural Integrity.

Although principally powered by sails, many merchant vessels also had oars - for use when the ship was becalmed, for entering and leaving harbour, and to provide additional motive power.

A player who wishes to include Merchant Vessels in his fleet, may 'spend' extra points in equipping them with oars to supplement their sail power. A deduction must also be made from the unit allowance for the addition of oars.

Restrictions

To reflect the less streamlined hulls of merchant vessels:

- Ω They may only move at slow speed when under oars alone. Even at slow speed, they are subject to Fatigue penalties.
- Ω Under sail and oar simultaneously, they are also subject to Fatigue penalties - the number dependent on the speed of the vessel (Fatigue, pg 71).

Merchant Vessels - Carrying Capacity

The player must announce what the Merchant Vessel will be transporting, before game commencement. Because of its more generous construction, merchant vessels are entitled to carry twice as much as a warship.

The player using a merchant vessel may utilise its unit allowance to transport marines, weapons or equipment for the fleet.

Merchant Vessels and Marines

If it is transporting marines (a merchant vessel would not have its own marine complement), their qualities would be as if they were on their parent vessel. If a boarding action should develop with a Merchant Vessel transporting marines, one complement only may be regarded as the vessel's temporary complement.

Merchant Vessels with Weapons
As part of its capacity, the merchant vessel can carry a variable number of weapons or equipment.

If it is transporting weapons and the opportunity presents itself, the Merchant Vessel can use these weapons subject to the following restrictions:

1) The Merchant Vessel may only fire weapons if it is also carrying marines.

2) The actual number of weapons that it could utilise from its deck, are as follows:
   Medium Merchant - 1 piece only of light artillery;
   Large Merchant - 1 piece of heavy or 2 light.

3) Any type of artillery piece being transported, is considered to be stowed below deck and will require a Long task (Alterations & Repairs) by the merchant vessel's crew, to lift it up onto the deck.

Merchant Vessels with Dolphins
Dolphins are heavy weights which can be suspended from the yardarms of a Merchant Vessel and dropped onto an enemy.

The restrictions are that the Merchant Vessel must be at anchor and it will require 2 Long Tasks (Alt & Rep) to prepare (hoist). Once prepared, dolphins may be dropped on any vessel within 5mm of the merchant's base. They may only be used once and will cause any vessel they contact, to become 'O' Class.

See Pg 54 for details of the procedure for determining the success or failure of dropping a dolphin onto an enemy vessel.

Cost of Dolphin = 30 Points

Merchant Galleys
Merchant Galleys were used primarily to carry horses, troops and stores for the fleet. Their main propulsion being oars, they were a fast, reliable means of transport - although the carrying capacity was not as great as Merchant Vessels.

Merchant Galleys - Points Cost
They varied in size but would normally have 2 banks of oars. So, for simplicity of points costing, these rules will consider a Merchant Galley a Bireme (Category 2); Structural Integrity (SI) = 60.

Merchant Galleys - With sails
Merchant Galleys can carry sails to aid propulsion, subject to the following:

i) Cost will be 5% of its base SI for Boatsail;

ii) Cost willl be 10% of its base SI for Mainsail.;

iii) A deduction from its unit allowance will be made for each sail.

Merchant Galleys - Carrying Capacity
To take account of the more rounded shape of the hull, Merchant Galleys will have an extra allowance of 2 units of equipment/ personnel.

Merchant Galleys and Marines
The same rule applies as for Merchant Vessels and Marines, opposite page.

MERCHANT VESSELS AND MERCHANT GALLEYS WOULD NEVER HAVE A RAM.

GAME - SETTING UP

- Ω The Initiating Player
- Ω Terrain
- Ω Friendly Shores
- Ω Compass Orientation
- Ω Initial Wind & Weather

GAME - Setting up

PROCEDURE:

1. **Determine the Initiating Player.**
2. **Set up Terrain.**
3. **Determine Friendly Shores.**
4. **Dice for Compass Orientation.**
5. **Dice for Initial Wind and Weather conditions.**

The Initiating Player

These rules are based upon the concept of alternate movement. In a two player game, one player will always move and act first followed by the other; the moves and actions of both players being deemed to constitute a game Turn.

Although intended for play by two people, there is no reason why multi-player or team games cannot be undertaken. In a multi-player game, one side will always move and act before the other with one nominated player from each side being responsible for all strategic dice rolls, i.e. ones which affects the whole fleet.

The player who moves first is called the Initiating Player (IP). His selection is determined before the terrain is set up: if one player has a better quality admiral than the other, then that player becomes the IP. If both admirals are of equal quality, then both players should roll 3 six-sided dice and the one with the highest score is then the IP.

Note: AFTER Initial Deployment the Initiating Player has the prerogative to make his opponent take over the role of IP for the duration of the game. This changeover can only occur before the game commences. No alteration of the IP is permitted during play.

Terrain

Organising a Fleet (pgs 5-17) must be undertaken before the setting up of Terrain.

Both players jointly generate the table on which the game will be played. This will include such factors as:

COASTLINES, ISLANDS & OTHER FEATURES

FRIENDLY SHORES

It is possible to play on a featureless blue cloth. This may provide a suitable game but would perhaps be unrealistic: ancient naval battles tended to take place near to land as ancient warfleets were very much at the mercy of the elements.

Coastlines, Islands and other features:

The minimal supplies carried by ancient warships and the limitations of navigation made nightly halts a mandatory occurrence for galleys. The presence of coastlines and/or islands as part of the table top, can provide shelter should adverse weather conditions develop as the game progresses. Also, such features as sandbars and shallows may provide hazards for the incautious player.

Method (Part 1):

A blue cloth or board of sufficient size for playing the game is used and each player selects one piece of coastline and up to two islands, plus one other feature such as an area of sandbars or shallow water. The IP places one piece first on the table, followed by his opponent. This sequence is repeated until both players have placed all their chosen pieces on the table. Coastlines are always placed first and no piece may be placed within 50mm of another. If one player does not or cannot place a piece at any stage, then he passes and his opponent may place his piece.

Restrictions:

Coastlines can be up to one table's side in length but should not have a depth greater than 100mm. Islands should have a diameter of between 100mm and 300mm. Any coastline or island that does not comply with these dimensions, may be rejected by the opponent of the player selecting it - in which case the selecting player must choose a piece that does comply, or forfeit any further selections.

FRIENDLY SHORE:

If a player wishes to have a friendly shore, it is at this point that he must choose and record it.

Method (Part 2):

Once all coastlines, islands and other terrain features have been placed on the table, they are diced for to see which will remain for the game. Rarely was an ancient admiral able to select ideal conditions to fight under and so this dicing process is intended to replicate that fact.

Each player rolls three dice for each of the terrain pieces they selected. A score of 7 or more on the dice is required to retain a coastline and a score of 9 or more is necessary to retain an island or other feature.

Type of Shoreline

It is important that features such as beaches and areas of rock or cliffs, are clearly identified. This is to allow the correct determination of any damage resulting from a vessel attempting to beach or contacting a coastline or island in other circumstances.

A player using a coastline or island, must clearly identify any beaches, areas of rocks or cliffs present. Alternatively, he must state that the piece used has a shoreline all of one type. (A piece of card under the relevant section is one method of signifying a beach.)

Friendly Shores

Ancient battlefleets often had land forces accompanying them along the shore, which on a number of occasions provided physical support for the ships. 'Friendly shores' is a mechanism which will allow players to utilise this concept without having to use troop figures. It has deliberately been kept simple and abstract as land battles do not come within the scope of these rules.

A friendly shore is defined as a piece of land in the possession of ground forces belonging to or allied to one player or the other and which supports the activities of that player's fleet. It may be any one island outside an opponent's deployment area, or a section of coastline on any table edge, except that belonging to an opponent.

Restrictions:

1) No troops can land on a piece of terrain held by an opponent, regardless of the size of the terrain or condition of troops on it.

2) If during play, a friendly shore is nullified, the owning player loses all benefits from the friendly shore.

To obtain a 'Friendly Shore'

POINTS COST

There is a mandatory requirement to having a friendly shore: a vice admiral and 200 points of missile only armed ground troops.

This cost must be paid whether or not the player is successful in obtaining his chosen friendly shore.

Rules for establishing Friendly Shores:

Ω Players reveal simultaneously their choice of friendly shore. Provided that the choices are not identical, then any friendly shore chosen becomes a game feature.

Ω If both players select the identical friendly shore, the player with the superior quality vice-admiral will be assumed to have out-Generalled his opponent and thus gained the friendly shore. His opponent loses his vice-admiral and troops.

If both have the same quality vice-admirals ashore, then the troops will be considered to have fought each other to a standstill. Neither player will benefit from the friendly shore.

Ω If it happens that the item of terrain has not been retained as part of the game, then the player loses the allocated vice-admiral and troops.

Ω If a player is successful in obtaining a friendly shore, his troops are assumed to be positioned there at game commencement and to move along the shore line in support of their fleet.

Advantages of Friendly Shores:

Ω Any vessel gains an automatic +2 on any Morale Test if it is within 150mm of a friendly shore, and +1 if over 150mm but within 300mm of such a shore.

Ω Missile fire from a friendly shore is the equivalent of fire from an average marine complement of a Category 10 vessel. It can take place when an enemy vessel is within 10mm.

Ω A vessel which contacts an opponent's friendly shore, without being destroyed by that contact,* is considered to have been captured by the opposing forces occupying that shore and may not be released, even if that vessel's side goes on to win the game.

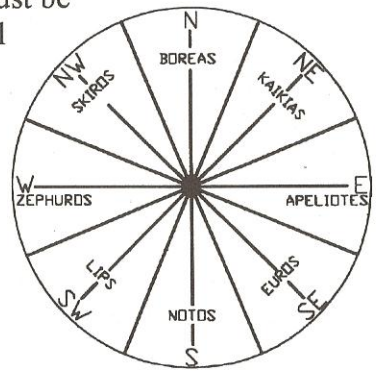
**Ship to Shore Firing:*

The rules for the firing of shipboard weapons has been adapted to reflect the conditions of ship to shore firing. See page 86 for further details, including the assessment of damage.

Compass Orientation

The Initiating Player determines which table edge represents North and uses the Mariner's Compass provided with these rules, to indicate this.

The Mariner's Compass must be visible to both players at all stages of the game.



PROCEDURE:
One player stands at his own deployment area's table edge and throws three dice to determine which table edge is North.

3, 7, 11, 15	The edge to his left.
4, 8, 12, 16	His opponent's edge.
5, 9, 13, 17	The edge to his right.
6, 10, 14, 18	His own edge.

Relevant sections - Beaching and Grounding

Wind and Weather - Initial Set Up

General

Ancient galleys relied primarily on the oar for movement but were nevertheless affected by wind conditions. Merchant vessels relied on the wind, being driven by sails, with the oar being used as a supplementary motive force.

The wind and weather conditions are initially established during the game set up. They are then reviewed at the start of each game Turn, using the Wind Potential Chart, in order to identify any changes in strength and direction. This chart has been designed to simulate the weather's unpredictability.

Wind Direction

The Initiating Player throws three dice:

3, 7, 11, 15	- wind coming from north
4, 8, 12, 16	- wind coming from the east
5, 9, 13, 17	- wind coming from the west
6, 10, 14, 18	- wind coming from the south

The result above is then moderated by a further throw of three dice by the IP as follows:

3, 6, 9, 12, 15, 18	- as first throw above
4, 7, 10, 13, 16	- veer one point
5, 8, 11, 14, 17	- back one point

Note: To 'veer' is to move clockwise and to 'back' is to move anti-clockwise.

Wind Strength

To determine the wind strength, the Initiating Player throws three dice:

3, 4, 5, 6	- light airs
7, 8, 9, 10	- light breeze
11, 12, 13, 14	- moderate breeze
15, 16, 17, 18	- strong wind

Next, the wind's potential for change is determined by the IP again throwing three dice:

3, 4	- decreasing and backing
5, 6	- decreasing and veering
7 to 14	- steady
15, 16	- increasing and backing
17, 18	- increasing and veering

The initial wind and weather conditions established, players now:

i) Make their initial deployment and write fleet orders,
OR
ii) Refuse the scenario (see overleaf); establish new wind and weather conditions, then proceed with i).

→

Tides and Currents

Provision for play using Tides and Currents has been deliberately excluded from these rules. In play tests, we found that their use always disadvantaged one player unacceptably and complicated movement too much, particularly with large fleets. (Also, the Mediterranean is almost tideless sea and so its effect on movement would have had little impact in the majority of battles.)

However, references have been left in appropriate places to indicate where tides and currents might have had some consequence - for the benefit of those players who might want to incorporate these into a particular scenario.

Scenario Refusal

After wind direction and strength have been established (and tide if used), it may transpire that a player finds himself at a disadvantage. He may refuse the scenario, in which case Wind Direction/Strength is re-diced.

Each player has the right of one 'scenario refusal' without penalty.

After that, there will be one reduction in the quality of an admiral for each refusal.

Example:

Player A finds that his fleet would have to head into a strong wind to engage the enemy. He may refuse the scenario once - without penalty. Re-dice.

Player B finds the new situation disadvantageous and he refuses this scenario - without penalty. Re-dice.

Player A doesn't like this new situation any better, but to refuse would mean that his admiral's quality will reduce by one.

END OF SETTING UP

Players now go on to make their Initial Deployment

DEPLOYMENT

- Ω The Deployment Area
- Ω Initial Deployment
- Ω Types of Formation
- Ω Fleet Orders
- Ω Signals - Sending
- Ω Signal Receipt
- Ω Misunderstood Signals
- Ω Dispatch Boats

DEPLOYMENT

DEPLOYMENT

Scenario and campaign games may set their own deployment conditions. In all other games, players should follow the rules outlined below.

The Deployment Area

The deployment area for ships on the wargames table is a zone 150mm deep from each player's table edge and extending the length of the table. Ships may be deployed in this area subject to the rules below and to any wind considerations.

Should any deployment area's table edge include a coastline that extends for more than half its total length, then the deployment area should be measured from the edge of that coastline and follow its shape.

No ship may deploy within 200mm of an enemy vessel.

Friendly vessels must be provided with sufficient room to manoeuvre and must be deployed at least their base length from another vessel. The only exception to this rule is if the vessels are at anchor, at slow speed, or drifting.

Initial Deployment

Given that a player has a deployment area of 150mm, it may not be possible for him to place all his ships on table during initial deployment. This may be particularly the case for example where the chosen formation is for 'line astern'. These 'off table' ships will come on during subsequent Turns in their original formation. (See *Movement off Table, Pg 74*)

1) Both players should initially note their chosen formation and the approximate intended location of their ships, on a sketch map of the playing area prepared beforehand.
2) Each player should then divide his 'on table' fleet into detachments.
3) The Initiating Player then deploys his first detachment, starting from his right. His opponent then deploys his first detachment, also starting from his right. Deployment then alternates, each player continuing to place a detachment until all his 'on table' ships are placed.
4) The speed of all vessels on initial deployment will be the lowest speed that their particular Fleet order allows.

Types of Formation

A player may deploy his ships in one of four possible ways. The choice is between Standard Deployment, Deployment in Line Astern, Deployment in Echelon and Flank Sailing.

STANDARD DEPLOYMENT

Vessels are placed on table in the deployment area by detachment. This will be in line or lines abreast subject to the spacing restrictions noted. One detachment may be deployed in line astern.

DEPLOYMENT IN LINE ASTERN

Ships are deployed in one or more lines astern from the forward edge of a player's deployment area, subject to the spacing restrictions noted. It is possible that only the first few ships in the fleet will appear on table at the start of the game, the remainder appearing in strict line astern as the game progresses. One detachment may be deployed in line abreast.

The normal considerations for ships 'off table' do not apply in this one circumstance, except that any ship in a line astern formation which is not yet deployed on the table, must still test for survival in adverse weather conditions - as if it were 'on table'.

Deployment in Echelon

This is also deployment in line astern, but with the ships placed diagonally on the table - subject to spacing restrictions. This formation may allow more of a player's vessels to be on table at the start of the game.

Flank Sailing

A player may elect to have part of his fleet appear at a single nominated point on one of the side edges of the playing area after the game has begun. This point must be chosen and noted before either player begins his 'on table' deployment. The remainder of the fleet deploys by detachment as normal in the deployment area at the start of the game, either in 'standard deployment' or 'line astern' or 'echelon'. Any flank sailing squadrons must be commanded by an admiral or a vice-admiral. If the admiral is in command of the flank sailing ships, then a vice-admiral must command the remainder of the fleet.

Flank sailing ships must be under 50% of the total points value of the fleet to which they belong. They may not appear before the third game Turn has been completed and they must be diced for after that as follows:

Throw three dice and modify the score as follows:

If commanded by an inspired admiral or vice-admiral	+2
If commanded by a good admiral or vice-admiral	+1
If commanded by a poor admiral or vice-admiral	-1
If commanded by an incompetent admiral or vice-admiral	-2

RESULT

3 to 9 - Ships do not appear.

10 to 18 - Ships appear on table at the beginning of the controlling player's part of Turn.

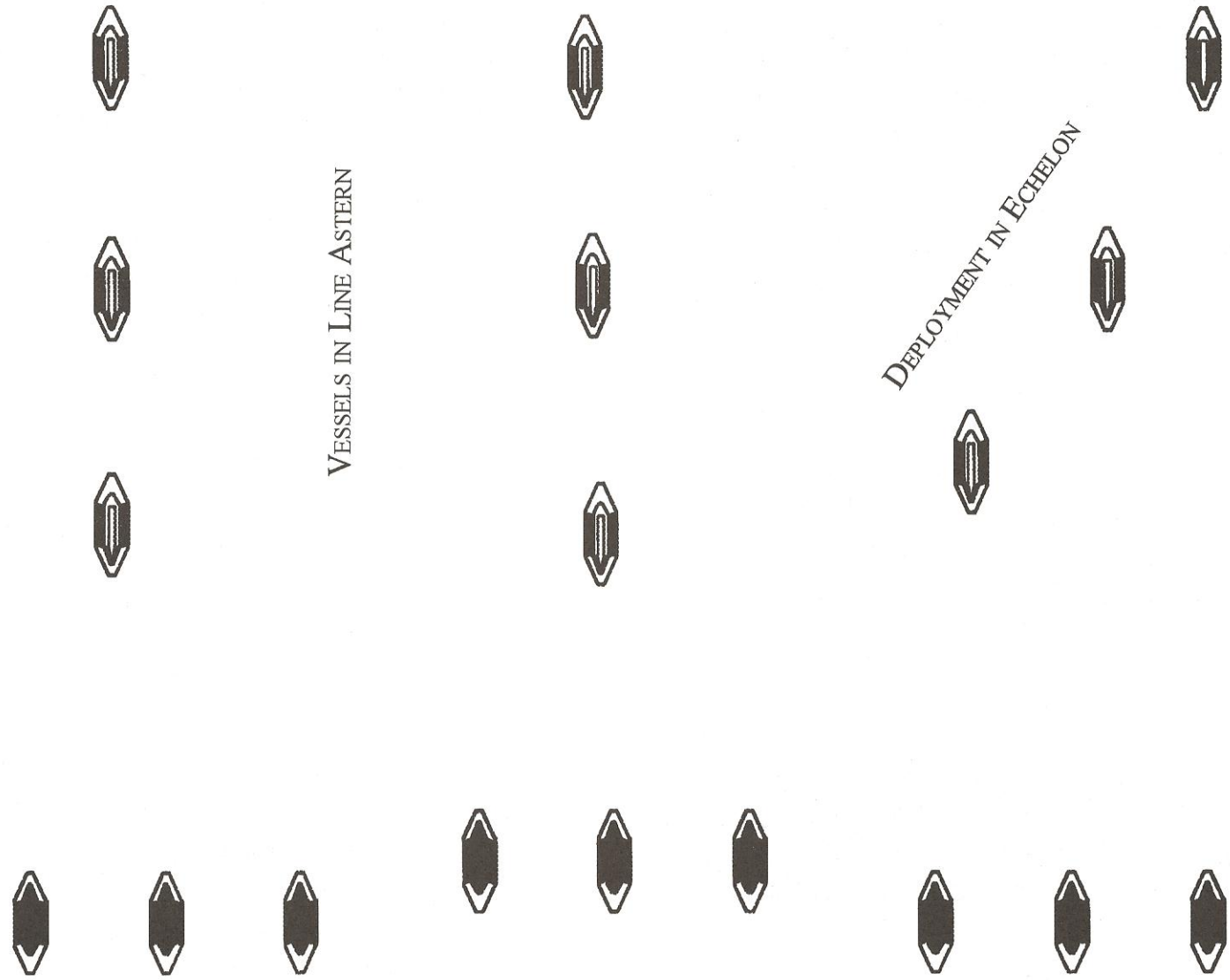
A player may make 3 attempts to bring flank sailing detachments on table, one per game Turn in any Turn after the third. If the detachments fail to appear on the third attempt, they are assumed to have become lost or delayed. No further attempt can be made and the detachment plays no part in the battle, nor in determining the result of a game.

They may arrive in any permitted formation, subject to the normal spacing and wind considerations. If in 'line abreast', all ships appear at the table edge centred around their nominated arrival point. If in 'line astern', only the lead vessels are placed on table, at their nominated arrival point, the others following in a designated order as Movement allows.

Ships arriving on table in such a manner are subject to the normal rules governing the arrival of 'off table' ships (*Pg 74*).

Special Prerogative - Initiating Player

It is at this stage, at the end of Initial Deployment, that the Initiating Player can force his opponent to take over the role of Initiating Player for the duration of the game.



Standard Deployment - Vessels in Line Abreast

Fleet Orders and Signals

Fleet orders are issued by admirals and apply to all of the ships under their command. They are initially issued after deployment, before play commences. Thereafter, the procedure for changing a Fleet order is by Signals or a Dispatch Boat.

Signals are only originated by admirals or vice-admirals. As well as changing Fleet orders, they can be used to issue new orders. The restriction being that whereas the admiral can signal all of his fleet, a vice-admiral can only signal vessels within his own command.

Note: Fleet orders are not to be confused with 'Ship Orders' which are a captain's instructions to his crew.

Orders and Signals have been kept simple: to reflect the low level of communications in the ancient world, the absence of any signalling systems such as became common in the 17th/18th centuries and the limitations imposed by line of sight visibility.

Fleet Orders

Once all 'on table' ships have been deployed, players issue general orders for their fleet. These orders govern the actions of the fleet as a whole, different orders may be given to groups of vessels and to any flank sailing detachments. The permissible orders are as follows:

Engage Enemy - Move towards the enemy at Fast or Ram speed and engage. This order may be supplemented so that an attack can be made on a particular point in the enemy line, or to specify the direction from which an attack should come. *eg Engage enemy starboard flank* or *Engage enemy to port of large island.*

This order may also be complied with by moving at Fast speed in one Turn, then at Ram speed next Turn, followed by Fast Speed in the next Turn, etc. thus maintaining a better than Fast speed.

Close with Enemy - Move towards the enemy at Slow or Cruise speed and engage if circumstances are favourable. This order may be combined with another, or include a direction, *eg Close with enemy for two moves then hold* or *Close with enemy ships near the beach.*

Delay - Advance towards the enemy at Cruise speed or above to a certain point then hold until further orders are received. This order may also be used in conjunction with another, *eg Delay until enemy contacted by vice-admiral Polybius's ships, then engage enemy.*

Hold - Maintain position until enemy reaches a certain point then act accordingly. This order should be combined with another, *eg Hold for three moves then close with enemy.*

Back Water - Advance towards the enemy at Cruise speed or above to a certain distance, then withdraw whilst facing him. This order may be moderated by one or several more, *eg Advance to a line abreast of the large island, hold until the enemy is within 250mm, then back water until further orders are received.*

Comply with Objective - Orders may be given to allow ships to comply with a scenario. These should include a starting speed plus final and intermediate objectives.

Withdraw - End combat and withdraw from the situation at the fastest possible speed. Not usually an order to be made at game commencement.

Any order may be combined with a specific tactical instruction, eg *Engage the enemy by exercising a diekplous with ship B leading,* or *Hold at position X and form a kyklos.*

Zones of Influence

Enemy vessels are considered to have a zone 200mm wide around them. When two opposing vessels are within this zone, they may disregard Fleet Orders and act as circumstances dictate.

For the purposes of these rules, land, shoals, reefs, wrecks and friendly vessels with which you are about to collide, may also be considered to have a 200mm zone of influence.

Signals

A signal may be sent by an admiral:
- to the whole fleet;
- to a single vessel under his direct command;
- to a group of vessels under his direct command;
- to a vice-admiral for transmission to his squadron.

A signal may be sent by a vice-admiral:
- to a vessel or vessels under his direct command.

Signals are used:

Ω To change Fleet Orders by replacing one with another from the list.

Ω To send a basic instruction such as 'increase/decrease speed' (within the parameters of the Fleet order); or 'change direction'; or 'set/furl sails'. These signals are permissible as long as they comply with the objectives of the overall Fleet order that the ships are obeying.

Ω Only one signal may be flying on a vessel at any one time.

Note: Whilst it is clear that terms such as 'port' and 'starboard' would not have been used by Ancients, for the convenience of players, signals such as "turn to port" may also be utilised in the permitted signals.

Pre-arranged Tactical Signal

This is used to temporarily over-ride a Fleet Order. The stricture is that the signal must be unambiguous and if shown to be misleading, then the opponent may choose which interpretation should be followed.

It is up to each player to decide on the signal most likely to be needed after he has written his Fleet Orders. (Note: a record must be kept.)

Example of a Pre-arranged Tactical Signal:
Fleet A finds that he is closing too quickly on the enemy. His pre-arranged Tactical Signal to "zig-zag for two Turns" will reduce his forward movement and confuse the enemy.

Signals Procedure

The sending of any signal is governed by the Ability Chart and is attempted at the end of a player's section of the Turn. To simulate hazards which might interfere with the sending of a signal, apply the following modifiers to the Ability Score.

Signal Moderators

Sender with a minor fire	-1
Sender in contact with the enemy	-2
Sender with a major fire	-3

Signals Procedure in Brief:
At the end of his section of the Turn, the player declares he is going to send a signal. He then

a) applies Signal Moderators to the Ability score if they are relevant;

b) reads the result off the Signal Origination column of the Ability Chart.

Signal Receipt Test

This test must be taken by any vice-admiral and any ship captain attempting to receive a signal. The signal is not received and thus cannot be acted upon, until the test has been passed. The Signal Receipt Test is taken **before** Ship Orders at the start of a Turn.

The Signal Receipt Test is subject to the rules governing visibility (if used, pg 38) and is made by throwing three dice, applying moderators, then consulting the table below.

Moderators:

Intended recipient is a different nationality	-1
For each equal size or larger vessel in line of sight between sender and receiver	-1
Intended recipient has a minor fire	-1
Inclement weather (rain, mist or fog)	-1
Intended recipient in contact with enemy	-2
Intended recipient has a major fire	-3

Using the moderated dice throw, read off the table below:

3-4	Signal is misunderstood.
5-6	All fail.
7	Inspired vice-admirals receive.
8	Good vice-admirals receive.
9	Average vice-admirals and good captains receive.
10	Poor vice-admirals and average captains receive.
11-18	All receive.

A SIGNAL MUST BE ACTED UPON IN THE SAME TURN IN WHICH IT WAS RECEIVED.

Example:

Turn 10 (end):	Admiral sends signal to vice-admiral to be relayed to a particular vessel.
Turn 11(start):	Vice-admiral takes Signal Receipt test. If successful, then sends at the end of Turn 11.
Turn 12 (start):	Captain takes Signal Receipt test. If successful, then he can act upon signal in his orders for Turn 12.

Misunderstood Signals

As per the Signal Receipt Test, an order may have been misunderstood. In such a case, the nature of the misinterpretation is determined by the throw of 3 dice, as follows:

3-5	Withdraw
6-8	Back water
9-11	Hold
12-14	Delay
15-16	Close with enemy
17-18	Engage enemy

Should the misunderstood signal coincide with the original intended signal, then the order transmitted is obeyed as if no misunderstanding had taken place.

To countermand a misunderstood signal, the admiral or vice-admiral who originated it must send a new signal in the normal way, at the end of the Turn.

Example of a Misunderstood Signal:

Turn 10(start): Player takes Signal Receipt Test and signal is misunderstood. He makes ship orders in the normal way at the start of his Turn, based on the misunderstood signal.

Turn 10 (end): Player (in his role as admiral) attempts to countermand by sending a new signal in the normal way.

Signal Examples:
Three B class triremes were initially given '*Hold*' Fleet Orders. Three Turns into the game, their admiral, reacting to changing game circumstances, decides to alter the Fleet Orders of these three ships to '*Engage Enemy*'.

The admiral's quality is 'Good', his flagship is not in contact with the enemy and is not on fire. All three triremes are of the same nationality as the admiral, and have a clear line of sight to the flagship. None are in contact with the enemy or have a fire on board.

Turn 3 (end):
The Ability score being 8, Inspired, Good and Average Admirals may send a signal.

Turn 4 (start):
Each of the three triremes must take a Signal Receipt Test. Given the scenario described, they did not have to modify their dice throw and the results are as follows:

> 1st trireme throws 9. The captain happens to be 'Good', so he can act under new '*Engage enemy*' orders from that point onwards.
>
> 2nd trireme throws 9. The captain is 'Poor', and the results chart dictates that he fails to receive the signal. He must continue acting under '*Hold*' command.
>
> 3rd trireme throws 3. This poor score determines that the signal is misunderstood. A further dice roll is made to determine the nature of the misunderstanding. The throw is a '6' meaning that the signal has been misinterpreted to '*back water*'. The captain issues orders for this particular vessel, in Turn 4, to back water.

Turn 4 (end):
The player, in his role as admiral, may now issue the order afresh to the 2nd and 3rd triremes.

If the three triremes had been under the command of a vice-admiral, the admiral would still send his signal at the end of Turn 3, but it would be directed at the vice-admiral. It would then be the vice-admiral, at the start of Turn 4, who would take the Signal Receipt Test. If he passes this test, or even if he misunderstands it, the relayed message is sent out at the end of Turn 4 in the normal way. It would then be Turn 5 before the recipient triremes tested for Signal Receipt.

Note: If it is announced prior to throwing the dice for the Signal Receipt Test, a player may make one dice throw for all ships involved.

Dispatch Boats

There is another way in which complex messages can be sent. A flagship can send by dispatch boat - specific orders to a ship or, via a vice-admiral's ship, to a group of ships.

The dispatch boat can be any vessel which is at a point within or just outside its base length of the flagship, so that a verbal order can be shouted across.

PROCEDURE
Player declares he is to send a signal by dispatch boat.

He cross references his Ability score with the Signal Origination column of the Ability Chart. If successful, the message is assumed to be passed correctly to the dispatch boat without misunderstanding and so no Signal Receipt test is required in this instance.

Next Turn, the vessel carrying the message moves at its best speed towards the recipient. Reception is automatic once the dispatch boat is within its own base length of the recipient.

PLAY

- Ω Sequence of Play
  - Summary of Procedure
  - Ship Orders
- Ω Wind Potential
  - Wind Potential Chart
  - Inclement Weather
  - Ship Survival
- Ω The Ability Chart
  - The Headings of the Ability Chart
- Ω Special Provisions
  - Ability Throw for More than 1 Vessel
  - Special Ability Throw (Defensive)

PLAY - Sequence

Play is divided into Turns in which both players make a sequence of moves alternately. Each game Turn thus consists of two sections, that of the Initiating Player and that of his opponent. Each of these sections has a number of phases.

The 'Initiating Player' will go first throughout the game. To determine which player is the Initiating Player, see page 20.

Please note that game "Turns" are referred to throughout these rules with a capital T to differentiate them from the turning (manoeuvring) of a vessel.

Setting up should be complete:
Organisation of fleets;
Terrain layout, i.e. coastlines etc;
The initial Wind and Weather;
Initial Deployment;
Initiating Player confirmed;
Fleet Orders.

For the rest of the Game:
A summarised list of actions in each Turn, for both players, is displayed. An explanation of this list follows.

Explanation of Procedure 1-5:

1. Wind Potential Chart
Diced for by the IP only (see pg 36 and Playsheet), this determines any changes to wind direction and strength.

If the potential is for inclement weather (***rare***), then two actions will be required:

(i) Modify the Ability score after throwing dice in Step 4, for either Strong Wind or Gale;

(ii) Check for Ship Survival (pg 37).

Summary of Procedure:

EACH TURN **The Initiating Player**	EACH TURN **The Opponent**
1. Wind Potential Chart	**1. Not applicable.**
2. Signal Receipt Test	**2. Signal Receipt Test**
3. Ship Orders	**3. Ship Orders**
4. Ability throw (3 dice)	**4. Ability throw (3 dice)**
5. The Ability Chart	**5. The Ability Chart**

MORALE TEST
- taken immediately it is required, throughout the game -

2. Signal Receipt Test
This reflects conditions (eg visibility) which could affect a signal being successfully received. It may even be that the signal is misunderstood. (See Pg 31 and Playsheet.)

3. Ship Orders

(i) Per individual vessel or group of vessels. Players must declare now.

(ii) Players announce their intentions for a ship in the current Turn, usually actions such as:

- movement direction and speed, including any turns;
- any alterations & repairs 'tasks';
- any rams or oar rakes, etc.

4. Ability Throw

(i) Per vessel or group of vessels.

(ii) Result to be altered only if inclement weather modifiers apply (see 1. above).

This throw establishes the 'Ability score' which governs all actions on the Ability Chart.

Note regarding Group Ability Throws:
If an Ability throw applies to a group of vessels, then the Ability score applies to all in the group, even though individual vessels may have different specific commands.

5. The Ability Chart

The Ability score is cross referenced with the headings of the Ability Chart. The results govern those activities.

For further details of the Ability Chart, see pages 38-42.

Players are provided with a separate, coated Ability Chart as this is one of the main instruments of play.

MORALE TEST

A Morale Test must be taken as soon as a situation arises. However, no vessel is required to take more than one such test per Turn.

When a Morale Test is instructed, there is usually a potentially dangerous situation and the results are very important.

For Morale Test, see pgs 116-117 and Playsheet.

Ship Orders

Once a player has announced his Ship Orders for a particular vessel, they cannot be amplified, altered, amended or cancelled. They represent the orders of the captain to his crew and must be actioned as heard. Players (captains) are only entitled to change their minds in subsequent Turns.

If an action has been announced, it must be attempted, even though it may becomes obvious that it cannot be completed in that Turn. For example, a player who has ordered his ship to ram, must manoeuvre his vessel towards the intended target - even though a poor Ability score makes it impossible to reach the target's base.

The individual orders for a ship may not contradict any fleet orders, unless a vessel is within the 'zone of influence' (200mm) of an enemy or in a dangerous area.

Wind Potential

Once Play Starts:

At the beginning of every game Turn, including Turn 1, the Initiating Player dices for Wind Potential for that Turn.

The result of the new throw is compared with that of the previous Turn (Turn 1 will compare with the throw which took place at game set up). If any of the elements in the throw duplicate any of the elements in the previous Turn, the wind will change as follows:

USE MARINER'S COMPASS

WIND POTENTIAL CHART

Previous Turn	Present Turn	Result
Veering	Veering	Wind will veer 1 compass point.
Backing	Backing	Wind will back 1 compass point.
Increase	Increase	Wind will increase to next level, eg moderate breeze becomes strong wind.
Decrease	Decrease	Wind will decrease to next level, eg light breeze becomes light airs.

If both the elements are duplicated, the wind will alter in both direction and strength. In all circumstances, the potential of the wind will be that of the latest throw.

Note: To 'veer' is to move clockwise and to 'back' is to move anti-clockwise.

The wind conditions are listed below. Increases/Decreases will adhere strictly to this sequence.

CALM
LIGHT AIRS
LIGHT BREEZE
MODERATE BREEZE
STRONG WIND
GALE

Calms

Although there are only four wind strengths achievable at game set up, a further two may arise during the course of the game, i.e. Calm and Gale.

Calm is arrived at by two potential decreases being thrown when at light airs. If the weather becomes calm, only movement under oars is allowed.

Gales

Under these rules, for simplicity, 'gale' includes all wind strengths above gale as well. Gale force is achieved when two wind potentials of increase are thrown with a strong wind blowing.

Note: When a gale force wind is blowing, all vessels must either seek shelter, beach or turn into the wind, if at sea. They must also check the Ship Survival Table at the end of each Turn that the storm lasts. See opposite page.

Inclement Weather

It is recommended that players fight most of their battles at a light breeze or less.

However, in the unlikely event of the wind deteriorating to a strong wind or gale, the following will apply. It reflects the fact that galleys were not very weatherly vessels.

Procedure in Inclement Weather:

1. Modify Ability Score for all actions on the Ability Chart, as follows:

Strong Wind	-1
Gale	-2

2. Check for Ship Survival.

Note: This is the only situation in which the Ability Score is ever altered for **all** actions on the Ability Chart.

General Considerations on Inclement Weather

Because inclement weather affects ship survivability, players will have to consider preparing for worsening conditions by either heading for shelter, beaching (pg 73), or reducing overburdening by putting marines ashore or ditching equipment.

Shelter is defined as being within 150mm of an island or coastline on the leeward side. To qualify as being in shelter, the whole of a ship's base must be to leeward of an island or coastline.

Ship Survival

ALL vessels at sea must test for 'ship survival', in each Turn that there is a Strong wind or Gale.

J CLASS vessels and below must, in addition, test for ship survival in each Turn that there is a Moderate Breeze, Strong Wind or Gale.

* *To reduce overburdening, any tower, artillery piece, corvus or harpago may be ditched subject to the rules in Alterations and Repairs.*

Ship Survival Test

Throw 3 dice and moderate the score as follows:

Modifiers:

In shelter	+4
No masts aboard	+2
Vessel carrying less than its permitted units	+2
Category 7-10 vessels	+2
Oared vessel heading into the wind or 1 point either side	+1
Vessel heading away from the wind	+1
Vessel at cruise speed or less	+1
Reduced sails set or yards lowered	+1
Cataphract vessel	+1
Good captain	+1
Good crew	+1
Fast ship	+1
Overburdened vessel *	-1 per unit
Each reduction in class	-1 per reduction
Poor captain	-1
Poor crew	-1
Slow ship	-1
Category 1-3 vessels	-1
Strong wind	-1
Carrying a corvus	-2
In a beam wind	-2
Gale	-2

As an outcome, a player's score could become reduced to below 3, even perhaps into negative amounts.

A '0' or negative result mean the vessel has sunk without trace.
A result of 1 means the vessel has incurred a Reduction in Class.
All other results - the ship has survived with no further damage.

Visibility (Optional)
Under clear skies, visibility is considered to reach to the table edge during daylight hours. However, vessels out of sight behind islands or coastal features, need not be placed on the table until it is obvious that they are in view.

If this option is to be used, then, at the start of each game Turn, when the Initiating Player throws for Wind Potential, if there is any increase or decrease in the **wind speed**, apply the following:

In calms or light airs, *whenever a decrease is thrown*, the IP will throw three dice to determine whether a mist or fog has arisen:

3 - 7	-	Mist and Fog
8-18	-	Clear

In Mist and Fog:
Visibility is reduce to 100mm.
Firing is precluded.
No visual signals may be sent.
Vessels may only move at slow speed.
Boarding actions may continue.

Each time the *wind increases*, the IP must test for rain by throwing three dice:

3 - 5	-	Heavy rain
6 - 9	-	Light rain
10-18	-	No rain

In heavy rain, visibility is reduced to 350mm.
In light rain, visibility is reduced to 500mm.

THERE NOW FOLLOWS:

The Ability Chart

This chart is fundamental to the rules.

Its features are:

- Ω It enables a large number of vessels to be used whilst reducing to a minimum, the amount of paperwork and dice throwing.
- Ω It eliminates the necessity for remembering and recording most of what a vessel did or did not do in preceding Turns.
- Ω It allows the majority of a player's actions for any one of his vessels, to be controlled by one dice throw per Turn, the result of which is the 'Ability score'.
- Ω It takes into consideration certain variables, such as the qualities of officers, crews, vessels and marines.

The Ability Chart

	FIRE FIGHTING		ALTERATIONS & REPAIRS			MOVEMENT & MANOEUVRE				OAR RAKING	SHIPBOARD WEAPONS			ADJUDICATE RAMMING, COLLISIONS, & BOARDING	SIGNALS
	Minor Fire	Major Fire	Short Task	Medium Task	Long Task	Under Oars	Under Sail	Turns using Oars	Acceleration/ Deceleration	Permitted vessels only	Short Range	Medium Range	Long Range		Origination
3	Becomes major fire	Vessel consumed	All crews fail	All crews fail	All crews fail	All classes fall off 1 point	All classes fall off 1 point	All classes double distance	All classes fail	All classes fail. Raking vessel collides with target.	~ ~ ~ ALL MARINES MISS ~ ~ ~ ADVERSE RESULT TEST				All fail
4	Becomes major fire	Vessel consumed	All crews fail	All crews fail	All crews fail	All classes fall off 1 point	All classes fall off 1 point	B -N class double distance	All classes fail	All classes fail. Raking vessel collides with target					All fail
5	Fire continues	Vessel consumed	All crews fail	All crews fail	All crews fail	B-N class fall off 1 point	All classes fall off 1 point	C -N class dbl distance	All classes fail	All classes fail	All marines miss	All marines miss	All marines miss		All fail
6	Fire continues	Fire continues	Average & Poor crews fail	All crews fail	All crews fail	C-N class fall off 1 point	B-N class fall off 1 point	D-N class double distance	B-N class fail	All classes fail	Avg & Poor marines miss. Good hit ÷ 2	All marines miss	All marines miss		Inspired send
7	Avg & Poor crews fail to extinguish	Fire continues	Poor crews fail	All crews fail	All crews fail	D-N class fall off 1 point	C-N class fall off 1 point	E-N class double distance	C-N class fail	All classes fail	Poor marines miss. Avg hit ÷ 2	All marines miss	All marines miss		Inspired & Good send.
8	Poor crews fail to extinguish	Fire continues	All crews complete	Avg & Poor crews fail	All crews fail	E-N class fall off 1 point	D-N class fall off 1 point	F-N class double distance	D-N class fail	All classes fail	Poor marines hit ÷ 2	Avg & Poor marines miss. Good hit ÷ 2	All marines miss		Inspired, Good & Avg send
9	All crews extinguish	Avg & Poor crews fail to extinguish	All crews complete	Poor crews fail	All crews fail	F-N class fall off 1 point	E-N class fall off 1 point	G-N class double distance	E-N class fail	B-N class fail	All marines hit	Poor marines miss. Avg hit ÷ 2	All marines miss		Insp'd, Gd, Avg & Poor send.
10	All crews extinguish	Poor crews fail to extinguish	All crews complete	All crews complete	All crews fail	G-N class fall off 1 point	F-N class fall off 1 point	H-N class double distance	F-N class fail	B-N class fail	All marines hit	Poor marines hit ÷ 2	Avg & Poor marines miss. Good hit ÷ 2		All send
11	All crews extinguish	All crews extinguish	All crews complete	All crews complete	Avg & Poor crews fail	H-N class fall off 1 point	G-N class fall off 1 point	I-N class double distance	G-N class fail	B-N class fail	All marines hit	All marines hit	Poor marines miss. Avg hit ÷ 2		All send
12	All crews extinguish	All crews extinguish	All crews complete	All crews complete	Poor fail	I-N class fall off 1 point	H-N class fall off 1 point	J-N class dbl distance	H-N class fail	C-N class fail	All marines hit	All marines hit	Poor marines hit ÷ 2		All send
13	All crews extinguish	All crews extinguish	All crews complete	All crews complete	All crews complete	J-N class fall off 1 point	I-N class fall off 1 point	K-N class dbl distance	I-N class fail	C-N class fail	All marines hit	All marines hit	All marines hit		All send
14	All crews extinguish	All crews extinguish	All crews complete	All crews complete	All crews complete	K-N class fall off 1 point	J-N class fall off 1 point	L-N class dbl distance	J-N class fail	C-N class fail	All marines hit	All marines hit	All marines hit		All send
15	All crews extinguish	All crews extinguish	All crews complete	All crews complete	All crews complete	L-N class fall off 1 point	K-N class fall off 1 point	M-N class dbl distance	K-N class fail	D-N class fail	All marines hit. Good - AST	All marines hit	All marines hit		All send
16	All crews extinguish	All crews extinguish	All crews complete	All crews complete	All crews complete	M-N class fall off 1 point	L-N class fall off 1 point	N class dbl distance	L-N class fail	D-N class fail	All marines hit. Avg - AST	All marines hit. Good - AST	All marines hit		All send
17	Fire fails to take hold. No penalty	All crews extinguish	All crews complete	All crews complete	All crews complete	N class fall off 1 point	M-N class fall off 1 point	All classes normal distance	M-N class fail	D-N class fail	All marines hit + AST	All marines hit. Gd & Avg - AST	All marines hit. Good - AST		All send
18	Fire fails to take hold. No penalty	Fire fails to take hold. No penalty	All crews complete	All crews complete	All crews complete		N class fall off 1 point	All classes normal distance	N class fail	E-N class fail	All marines hit + AST	All marines hit. Good, Avg & Poor - AST	All marines hit. Good & Avg AST		All send

Inclement Weather Modifiers

Ω Strong Wind -1 Ω Gale -2

Column 'Turns using Oars': 'Dbl distance' = Double distance between pivots.

Column 'Shipboard Weapons': 'AST' = Accurate Shooting Test.

Procedure for the Ability Chart

① The Ability Score

The player throws three 6-sided dice. This constitutes the 'Ability score' for the vessel in that Turn and is the basis for resolving actions on the Ability Chart. The Ability dice remain in view on the playing area for the player's section of the Turn.

Note: the Ability score column of the chart goes from 3 to 18.

THE APPLICATION OF MODIFIERS TO THE ABILITY SCORE:

In the event of **extreme weather conditions,** the Ability score will require modification. For convenience, these modifiers are listed on the Ability Chart as well as on page 37. After they have been applied, the result is the revised Ability score and affects all actions on the chart. It is suggested that players physically alter the dice so that the adjusted score is displayed.

In every other instance where a modifier is applied to the Ability score, it will be for a particular action.

② Working through the Ability Chart

This is done from left to right, under the headings of the actions that the player has announced. He uses the 'Ability score' for a specific ship to determine whether or not the vessel is successful in the completion of its intended actions.

If the result is failure to complete an action announced for that Turn, it will then be necessary to re-announce that ship order in a subsequent Turn if continuation is required. Otherwise the action is assumed to have been cancelled.

Note: the Ability Chart gives the results of actions undertaken. Players will need to refer to the relevant sections for detailed information on the performance of actions, i.e.when they are possible, any restrictions etc.

③ The headings of the Ability Chart

A brief description follows. Each heading is described in greater detail in its own section of the rules.

FIRE FIGHTING

Minor Fires:

These can be fought whilst part of the ship's company carry out a short or medium task (Alterations & Repairs).

Vessels may also move, manoeuvre, fire shipboard weapons, ram, rake or board whilst fighting one or more small fires.

Major Fires:

Ships companies fighting major fires may not simultaneously attempt any other task (Alterations & Repairs) - with the exception that they may attempt to cut or release grapples or separate from a contact.

Vessels may also move, manoeuvre, fire shipboard weapons, ram , rake or board whilst fighting a major fire - though at reduced capability, depending on the activity.

Note: Melees take precedence over fire fighting and thus fires must continue to burn whilst a boarding action is taking place. However, the results of Ability throws will still be considered in order to determine the intensity of the fire.

ALTERATIONS AND REPAIRS

There are three types of tasks: short, medium and long. The differences are explained in detail in 'Alterations & Repairs', pages 47-54.

Whilst carrying out or attempting to carry out any one of these tasks, vessels may - unless specifically precluded by the rules - move, manoeuvre, fire shipboard weapons, ram, rake and board.

③ The headings of the Ability Chart - continued

MOVEMENT & MANOEUVRE

UNDER OARS,
UNDER SAIL,
TURNING USING OARS,
ACCELERATION/DECELERATION

Under Oars

If the Ability score is sufficient, a vessel may maintain its intended course. If it is insufficient, then the vessel will be blown off course*.

Under Sail (*also*, UNDER SAIL AND OAR COMBINED)

If the Ability score is sufficient, a vessel may maintain its intended course. If it is insufficient, then the vessel will be blown off course*.

* *The mandatory turn which results from being blown off course, can push the player's vessel in the direction that he had wished to travel.*

Turning using Oars

Vessels using Oars alone, or a combination of Oars and Sail(s):

If the Ability score is sufficient, a vessel will complete all turns in accordance with its Ship Orders.

If the score is insufficient, the captain's orders are assumed to have been misinterpreted, or the oarsmen to have missed their stroke. The vessel will be required to double its normal distance between pivots, before it may turn again.

Vessels using Sail(s) alone:

An Ability Chart result of 'Double distance between pivots' will be translated to mean 'No turning manoeuvre allowed' for vessels powered by sail(s) alone, in that Turn.

Acceleration/Deceleration

If the Ability score is sufficient, a player may increase/decrease the speed of his vessel, in compliance with Ship Orders.

Deceleration during combat can be a very useful manoeuvre when executed at the right moment. For this reason, it is linked to acceleration and made as difficult on the Ability Chart.

A damaged vessel would however, find it much easier to decelerate than to accelerate. To cover this point, with both players' agreement, all damaged vessels attempting to decelerate may - on the 2nd and subsequent attempts - regard themselves as 'F' class (for Deceleration only).

OAR RAKING

This requires a high standard of seamanship and is permitted only to those vessels noted on page 88.

SHIPBOARD WEAPONS

Vessels hit, miss or reduce the effect of their fire in accordance with this part of the Ability Chart.

The varying performances of different weapons and the qualities of the marine complements are taken into consideration.

Adjudicating Ramming, Collisions and Boarding

The results of these activities are usually adjudicated after Movement & Manoeuvre and Shipboard Weapon firing.

Although not governed by the Ability Chart, the Ability score is used in the calcuation of a result - to represent an element of luck.

③ The headings of the Ability Chart - continued

SIGNALS

If the Ability score is sufficient, an admiral/vice-admiral may **send** (originate) a signal.

Note: The player must take the Signal Receipt Test at the start of the following Turn to determine whether the signal is received, fails to reach its intended recipient, or is misunderstood (Pg 31).

Alternatively, an admiral/vice admiral may summon a Dispatch Boat (Pg 32) to convey a message - no Signal Receipt Test is necessary for this method.

The successful origination of a signal is dependent on the Ability throw, in order to reflect conditions such as visibility.

Optional Method of working through the Ability Chart, for players with numerous vessels.

Movement should normally be completed for all the ships in a fleet - in the Movement phase. However, a player with a group of vessels may find it more convenient to complete one particular ship's actions right the way through the Ability Chart - before going on to the next one. There is no problem with this providing he has the agreement of his opponent.

Special Provisions

ABILITY THROW FOR MORE THAN ONE VESSEL

In some games, players may find no problem in making one 'Ability throw' per vessel. In large fleet actions, players may feel that numerous throws each Turn slows down play unacceptably; or they may just wish to reduce dice throws to an absolute minimum.

These players can opt for one 'Ability throw' to be applied to a whole fleet or to a particular squadron. Alternatively, the fleet may be formed into nominal groups of say, five vessels, and one 'Ability throw' made for each group, the result being applied to all the ships in that group. With either option, the grouping of ships should be clearly noted and the common 'Ability score' recorded against all ships in that group.

Players may alternate between taking an 'Ability throw' for a whole fleet or for a section of it, or for individual ships, in EACH game Turn - provided that their intention is announced and the vessels identified, before the throw takes place.

SPECIAL ABILITY THROW (DEFENSIVE)

The principle of the rules is that the Ability dice are thrown at the start of each player's part of the Turn, while he is the 'active' player. The **exception** to the rule is when a vessel is contacted by the active player's vessel, the non-active player is then entitled to make a Special Ability Throw. Although this takes place in the active player's part of the Turn, it enables the non-active player to participate in Defensive Firing, Colliding, Ramming and Boarding.

FIRES

- Ω Minor Fires
- Ω Major Fires
- Ω Procedure for Fire Fighting
- Ω Fire Spreading

FIRES

FIRES

In an age of wooden ships, fire was a serious threat and greatly feared. For these rules, the following will apply:

1) There will be two categories of fires, namely 'minor' and 'major'.

2) The extinguishing of fires takes precedence over all tasks, except cutting or releasing grapples and separating from a contact.

3) Fire fighting cannot take place during a boarding action (melee). (See below.)

4) A vessel may continue to move, manoeuvre, fire shipboard weapons, ram, rake or board - subject to any Ability modifiers which apply.

Minor Fires

These could be dealt with by part of a ship's company in the immediate vicinity. Thus, a crew would be able to fight a minor fire whilst performing other actions, for example, a short or medium task (Alterations & Repairs).

Major Fires

MAJOR fires require a sustained effort by a large part of the vessel's complement. So if a major fire is being fought, the ship's company may not carry out any task except cutting or releasing grapples and separating from a contact.

Fire Fighting and Melees

Although fire fighting cannot take place during a melee, the Fire Fighting Column of the Ability Chart is still consulted in each Turn to ascertain whether a minor fire has developed into a major; or if the vessel is consumed by fire.

PROCEDURE FOR FIRE FIGHTING

All Fires:

1. As soon as a player is able, after one of his vessels catches fire, he must announce as part of his Orders that he is fighting a fire.

2. His Ability score is cross referenced with the Fire Fighting column of the Ability Chart. This will determine his success or otherwise in quelling the fire; also the result may affect his ability to perform subsequent actions.

   However, the following modifiers may need to be applied to the Ability score:

   If vessel is carrying incendiary weapons of any type or artillery equipped with incendiary projectiles -1

   If vessel is carrying a boatsail or mainsail, whether set, furled or stowed. *Per item* -1

   If subject to a poor Morale result -1

Major fires:

With a major fire, a vessel must, for each Turn that the fire continues:

Ω Take an immediate Morale Test;

Ω Reduce speed by the deceleration rate appropriate to its Category ;

Ω Modify Ability Score by 'minus 2' if using any Shipboard Weapons or engaging in missile fire;

Ω Suffer one reduction in Class*

* This unrepairable Reduction in Class, comes into effect as soon as the crew fail to extinguish the fire.

Fire Spreading

Vessels in contact with a ship that has a major fire continuing, or those within 10mm of a vessel that is consumed, must take the Fire Spreading Test below. This is done in their own Fire Fighting phase and in every Turn that these conditions apply.

If both vessels happen to be part of the same fleet, then the player first performs the Fire Fighting for the vessel on fire and then the Fire Spreading Test for the other.

Fire Spreading TEST:

Throw three dice and amend score as follows, before referring to the table below.

If crew is 'good': *add 1*

If crew is 'poor': *deduct 1*

If vessel carrying incendiary weapons of any type or artillery equipped with incendiary projectiles: *deduct 1 per weapon*

If vessel carrying a boatsail or mainsail, whether set, furled or stowed: *deduct 1 per sail*

Result:	
11 to 18	Fire does not spread
6 to 10	Minor fire generated
3 to 5	Major fire generated

EXAMPLE

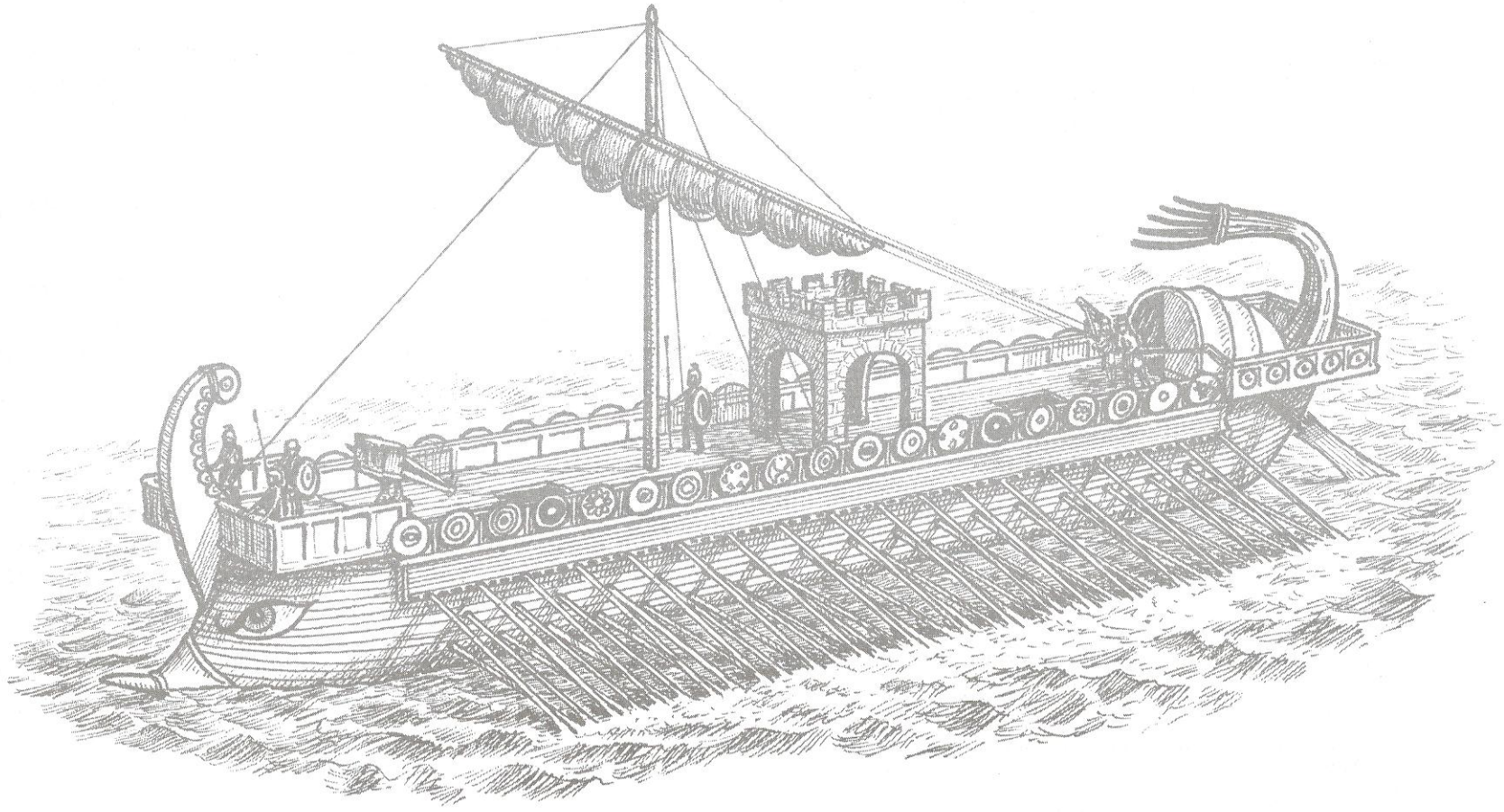
Turn 5:
A 'C' class heavy quinquereme (category 6) is hit by a heavy artillery weapon using incendiaries, causing 3 points of damage and a small fire.

In his part of the Turn, the player has an Ability score of 4, meaning that the fire develops into a major one. He takes a Morale Test which he passes.

Turn 6:
The player orders the fire fighting to continue and for the galley to decelerate.

He has an Ability score of 8 which means he fails to extinguish the fire. He immediately takes the mandatory Morale Test and passes. His vessel is reduced to 'D' class, which means that the vessel fails to decelerate.

Turn 7
The player again orders the fire fighting to continue and for the galley to decelerate. This time he has an Ability Score of 12, allowing both actions to succeed. His vessel may resume normal activities, albeit at 'D' class (a reduction in class as a result of a fire, is unrepairable).



ALTERATIONS & REPAIRS

- Procedure
- Restrictions
- Special Relationships
  - Fire Fighting
  - Boarding Melees
- Short Tasks
- Medium Tasks
- Long Tasks

Alterations and Repairs

PROCEDURE

1. Player announces task(s) to be undertaken with 'ship orders' at the start of his part of the game Turn.
2. Consult Ability Chart for each task undertaken, reading off the Ability score for that Turn.
3. Apply moderators to the score for specific tasks if they are relevant.

General

The phrase 'Alterations and Repairs' includes all shipboard activities intended to change the current status of the vessel. These take the form of 'tasks' of varying complexity and require a percentage of a vessel's crew to achieve them.

For simplicity, these tasks are referred to as Short, Medium or Long.

To simulate the hazards and uncertainties associated with many of the tasks, there are moderators which apply to the Ability score. These moderators, where they occur, are specific to a task and should not affect the established Ability score when working through any other actions or tasks.

The success or failure to complete a task may affect other actions.

Restrictions

Ω The number of tasks that may be attempted in any one Turn, depends on their duration. The following may be possible in a Turn:

2 Short tasks, **or**
1 Short and 1 Medium, **or**
1 Long task

Ω Any stationary vessel attempting a Long task, may not move until that task has been completed or the attempt abandoned.

All subject to the Ability score.

Special Relationships

Fire Fighting/Alterations and Repairs:

Ω The fighting of fires has priority over the commencement of any task, except cutting or releasing grapples and separating from a contact.

Ω A small fire may be fought in conjunction with 1 Short or 1 Medium task.

Ω A major fire precludes the commencement, continuation or completion of any task, except cutting or releasing grapples and separating from a contact.

Boarding Melees/Alterations and Repairs:

No tasks may be undertaken by a vessel that has been boarded, or which appears about to be boarded, with the exception of grapples (throwing or cutting), or breaking away from a contact - unless rammed.

SHORT TASKS

These are relatively simple or routine activities. They are described below, together with any restrictions.

1 a) **Set boatsail or mainsail.**

b) **Reduce or furl boatsail.**

c) **Raise or lower boat yard.**

d) **Augment oars with boat or mainsail.**

e) **Augment sails with oars.**

2 a) **Heave to**;

b) **Get under way**.

These are short tasks which apply to vessels under sail only. However, vessels wishing to 'heave to' when 'before the wind', must first turn to a quartering wind. On each Turn that it takes a vessel to turn into the wind, she may reduce her sail speed by 10% to allow for sail handling.

Heave to:

The vessels 'heaving to' must be at slow speed and not sailing before the wind. They may reduce their speed by their normal deceleration rate in the Turn in which 'heave to' is announced - if they are able. The vessel then drifts at the appropriate speed until the Turn in which getting under way is announced.

Whilst 'hove to', vessels may carry out tasks as normal.

Get under way:

Whilst drifting, vessels are automatically turned one compass point per Turn until they are in a beam wind.

If vessels under sail power alone, wish to 'get under way' from this position, then the principle for sailing 'in a beam wind' applies. The procedure for this is as follows:

Announce intention with orders at the start of a Turn as usual;

If the Ability score is sufficient, they may 'get under way' but are restricted:

- their total movement will be half of their 'before the wind' speed (in mm);
- they must use 50% of that movement to sail 'ahead' and the remainder, to move downwind.

3 a) **Preparing grapples for throwing.**

b) **Releasing own grapple lines.**

c) **Releasing own harpago cable.**

If the task of preparing grapples is successful, then following contact the opposing vessel is grappled.

Releasing Own Grapple Lines/Harpago Cable:

A ship may release own grapple lines, subject to successful completion of a 'short task'. If in melee, the Ability score will have to be moderated for the purpose by any current combat advantage/disadvantage. Once released, the grapple lines may not be used again for the rest of the game.

Note: A grappled vessel may not move until it has cut its opponent's grapples.

SHORT TASKS - continued

4 **Put prize crew across.**

5 **Relocate a light artillery piece.**
Any artillery piece that is relocated, may not fire in the Turn that the relocation takes place.

6 **Cutting away chemical/biological weapons.**
A chemical/biological weapon may not be recovered, once cut away.

7 **Discarding an artillery piece or harpago.**
An artillery piece may not be recovered once thrown overboard. One or more artillery pieces may be discarded as part of the same task.

8 **Ram extrication from Base Edge C, D or E after ramming from astern.**
Note: If the target was backing water, then these would be Base Edge B or C.

A vessel must be free to move, i.e. not held by enemy grapples, and able to back water. No penalties are incurred for any failed attempt.

9 **Repairing Damage from Artillery Fire.**
1 Damage Point per Turn may be 'repaired', up to a maximum of 3 during the game.

10 **Jettisoning equipment other than main mast or corvus.**

MEDIUM TASKS

A medium task, whilst routine, is more time consuming.

1 a) **Reduce or furl main sail**;

b) **Raise or lower main yard**;

c) **Set or stow boat mast;**

2 **Relocating a heavy artillery piece**.
Any artillery piece that is relocated, may not fire in the Turn that the relocation takes place.

3 **Shipping oars.**
Stowing the oars and closing the oar ports are automatically included as part of this task.

4 **Repair steering oars.**
When a steering oar is repaired, the vessel may turn normally with that oar.
See Ramming (pg 99) and Collisions (pg105) for details of restrictions to a vessel's movement with damaged steering oar(s)

5 **Setting fire to a prize**.
Personnel detailed for this task are assumed to have sufficient time to rejoin their parent vessel before the fire takes hold.

After two Turns, the fire becomes a major one and after 4 Turns, the vessel is consumed.

MEDIUM TASKS - continued

6 **Cutting opponent's grapples away.**
This may be done whilst in a boarding action but the player's Ability score will be modified as follows.

+1 For each Category that the grappling ship is smaller.

-1 For each Category that the grappling ship is greater.

-1 If engaged in melee.

+/-1 For each current advantage/disadvantage.

Once cut, the grapple lines may not be used again for the rest of the game.

7 **Separating from a Collision**
The Ability Score for this task is reduced by
(i) any current combat disadvantage if boarding was involved (Boarding, pgs 107-113) **and**
(ii) any reductions in class received as a result of the collision.

8 **Anchor.**
To anchor successfully, a player must reduce his vessel's speed to slow. In the Turn after the required speed is reached, he announces his intention in the usual way and consults the Ability Chart.

Once this task is successfully accomplished, he may then veer cable until his vessel (which will be moving at drift speed) is three base lengths, downwind from the spot where he dropped anchor.

Notes:
a) If the vessel is drifting at higher than Slow speed, it will be unable to anchor.
b) If tides are being used, then their effect should be incorporated into any cable veering.

9 **Prepare and pass tows.**
Tows may only be passed if the following conditions are met:

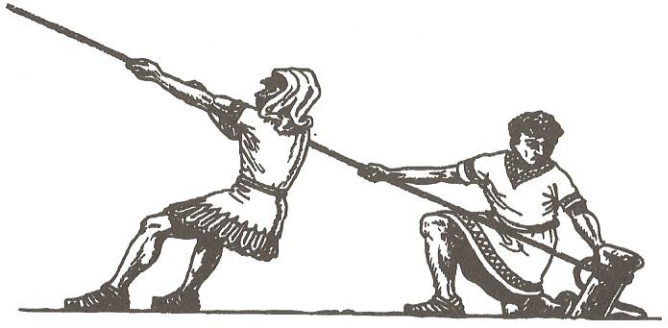
- vessels are not more than 50mm away, nearest base edge to nearest base edge;
- the vessel to be towed is stationary, or at Slow speed or drifting; or both vessels are at the same speed and heading.

MEDIUM TASKS - continued

10 **Oar replacement or repair.**
A vessel oar raked may regain one lost Class for each oar repair successfully completed. However, such repairs when carried out at sea are subject to the following:

- it may only repair up to a maximum of three lost Classes whilst at sea;
- it can only repair/restore its performance, to one Class less than that with which it started the game.

11 **Ram extrication from Base Edge B, C or D, after ramming from abeam.**
A vessel must be free to move, i.e. not held by enemy grapples and able to back water. Any failed attempt results in one reduction in Class.



LONG TASKS

These are long and/or complex tasks requiring either a large proportion of the ship's crew to accomplish, or specialist attention.

1 **Repairs to Hull**
A vessel damaged in a ram, collision or grounding may, when clear, regain one lost Class in each Turn that a hull repair is successful.

However, such repairs when carried out, other than in harbour or on a beach, are subject to the following restrictions:

- the vessel must be stationary or drifting;
- it may only repair up to a maximum of three lost Classes whilst at sea;
- it can only repair/restore its performance, to one Class less than that with which it started the game.

2 **Sinking a prize.**
Personnel detailed for this task are assumed to have sufficient time to rejoin their parent vessel within the Turn.

The prize will become a partially submerged hulk, three Turns after she has been holed.

3 **Raising a corvus after use.**
Whether or not the deployment was successful in its intention, in order to raise the corvus after use, this task must be completed.

The vessel (or both vessels if the deployment was successful), must be either at anchor or drifting, and they should not be in melee.

LONG TASKS - continued

4 **Jettisoning a corvus or main mast.**

5 **Cutting away an opponent's harpago.**
It is assumed that the shaft and first part of the cable of an harpago was armoured. If a vessel's harpago cable is cut, the weapon is assumed disarmed for the remainder of the game.

6 **Refloating a Beached or Grounded Vessel**
The first attempt to refloat a beached or grounded vessel may be made the Turn after the vessel beached or grounded. Other than that, players may choose on which Turn they attempt to refloat.

Any attempt is subject to the following modifiers to the player's Ability score:

If vessel was deliberately beached	+4
If vessel is subject to a favourable wind, tide,or current*	+2
Calm or light airs	+2
Any item jettisoned while beached or grounded	+2
Vessel carrying less than its permitted units	+2
Vessel is overburdened (per unit)	-1
Vessel is carrying a corvus	-1
Vessel is Category 4, 5 or 6	-1
Each reduction in class caused by the beaching/grounding	-1
Vessel is Category 7, 8, 9, 10	-2

* In 'Refloating a Beached or Grounded Vessel', there is a favourable wind, tide or current if:

- vessels have a terrain feature between them and the wind or tide;
- vessels leave an area of shallow water with the wind or tide.

If the vessel passes the long task, it is refloated.

To avoid grounding again whilst over the same obstruction:

- it must maintain Slow speed and achieve an Ability score of 6 or more, per Turn, until the vessel has passed the obstruction.
- at any other speed, it requires an Ability score of 11 or more per Turn, to get past the obstruction.

7 **Step or Stow Main Mast**
This may not be attempted in a strong wind or gale. In all other cases, the player must modify his Ability score by -2 (for this task only).

8 **Transferring Troops or Equipment from or to a Vessel**
Each complement of marines or extra marines will constitute 1 task per vessel.

Note: Long Tasks 7 and 8 may only be attempted when vessels are drifting, at anchor, beached, or in harbour.

LONG TASKS - continued

9 **Ram extrication from Base Edge B or C if from ahead**
(or Base Edge C, D or E if target was backing water).

A vessel must be free to move, i.e. not held by enemy grapples and able to back water. Any failed attempt results in two reductions in Class.

10 **Relocating an artillery piece from a merchant vessel's hold**.

11 **Weighing Anchor**
This requires three long tasks.

In each of the Turns that it is attempted, the player must announce 'weighing anchor'.

The vessel moves one base length in the direction of any prevailing winds and/or tides in each of these Turns (if successful).

In the Turn that the 3rd long task is completed, the vessel will drift. In the turn following, it may move

If under oars - at the normal acceleration rate (applying any relevant modifiers).

If under sail - at 50% chart speed.

12 **Preparing dolphin for use**
This provision is for Merchant vessels at anchor only. The requirement is two long tasks.

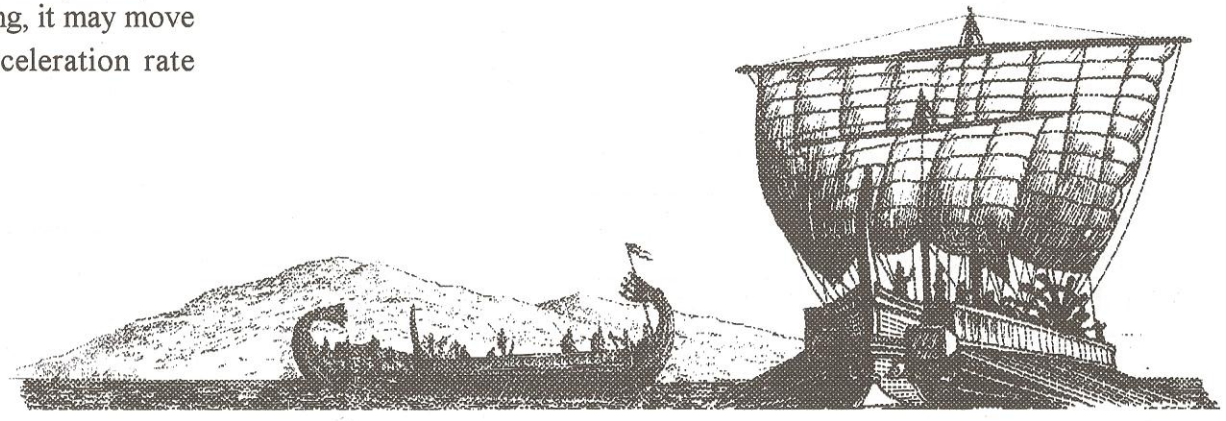
Once successfully prepared, a dolphin may be used on an enemy vessel within 5mm of the merchant vessel's base.

To determine the success or failure of its deployment, throw three dice as follows:

3-5 The dolphin misses and falls on the parent (merchant) vessel - which then is reduced to 'O' class.

6-9 The dolphin misses and falls into the sea - no other effect.

10-18 Dolphin strikes the enemy vessel which which then becomes reduced to 'O' class.



Movement & Manoeuvre

Part 1

General section applicable to all vessels, whatever their method of propulsion.

- Ω **Movement Procedure**
- Ω **Permitted Spacings**
- Ω **Turning Circles**

Part 2

- Ω **Movement under Oars**
- Ω **Movement under Sails**
- Ω **Movement under Oars and Sails**
- Ω **Turning**

Part 3

- Ω **Other Movement Considerations**

Parts 2 and 3 have their own introductory page outlining their contents.

Movement & Manoeuvre

Movement & Manoeuvre - Part 1

Introduction

Ancient vessels used oars, sails or a combination of both, to propel them through the water.

- Ω Oared vessels, being less reliant on wind, tended to be faster over shorter distances and more manoeuvrable. Their limitations were: relatively poor sea-keeping qualities and less space for cargo and supplies which tended to restrict them to coastal waters.
- Ω Sail powered vessels required less crew and their rounded shape made them more seaworthy; they had a greater cargo carrying capacity.
- Ω In the main, vessels which used a combination of sails and oars, would utilise one as a supplement to the other. There were however, some vessels designed to operate under both systems.
- Ω Galley warships generally carried a large mainsail located amidships and a smaller boatsail located forward to supplement their oars. The mainsail and the boatsail were, however, an encumbrance during combat and were often left ashore prior to action.

Note regarding early cessation of Movement

A vessel involved in a contact, ends its movement for a particular Turn. This contact could be due to a ram, collision, grounding or beaching. However, it must continue with the procedure for any damage assessment and Morale Test that may be required.

The exception to this rule is where a rammer shatters its target.

Procedure for Movement & Manoeuvre

All movement is subject to the Ability Chart.

A player announces his intention for a vessel at the start of his part of the Turn. This will include for example, whether a vessel is to accelerate/decelerate, turn etc.

During the Movement & Manoeuvre phase of the Ability Chart, the player cross references his Ability score with the appropriate columns, i.e.

a) Movement under Oars;

b) Movement under Sail*;

c) Turning;

d) Acceleration/Deceleration.

** Vessels propelled by a combination of sail and oars, read off this column of the Ability Chart to determine whether they may move as per their ship orders or if subject to a mandatory turn.*

Restrictions

All measurements for movement are taken from the edge of a vessel's sea base.

If both sides agree, any or all distances may be measured in advance.

Vessels sailing in formation are restricted to 'permitted spacings', to reflect the difficulties experienced by fast moving vessels within a formation that is too close together.

Permitted Spacings

A formation which is too tight can cause disorder with vessels colliding, especially when moving at speed.

This rule relates to friendly vessels only. It does not apply with opposing vessels coming into combat, where the objective is to close.

~~ **RULE** ~~

Friendly vessels are considered too close together if they are ordered to move or are moving at Cruise speed or above, whilst within their own base length of another moving, friendly vessel.

At the start of a game Turn, vessels that are too close together must modify their Ability score for Movement & Manoeuvre. They will apply 'minus 1' - **for each vessel in the formation which is too close together**.

These vessels must dice individually.

Example:

In a formation of eight vessels, there are four which are too close together. These four vessels will **each** suffer a 'minus 4' modifier to their Ability score for their Movement & Manoeuvre phase. Any negative result as a consequence of modifying the Ability score, will be taken as an Ability score of 3.

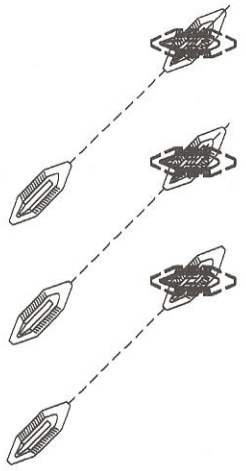
Guide to Maintaining Permitted Spacings

Because bases have a greater length than breadth, players wishing to turn from line abreast to line astern - and maintain the same speed throughout their fleet - will need to have the gap between their line abreast vessels increased by approximately 25mm to ensure there is sufficient distance between each vessel after they have changed to line astern.

eg: Using the base sizes allocated in the rules, the optimum distance between triremes is 70mm (base length of 44mm + 25mm = 69mm).

Another method of maintaining the correct spacing between ships turning in formation, is for some ships to move slower than others.

In this example, 3 galleys are at the correct spacings in line abreast (indicated by dark outline). As they turn, they become too close together (light outline) and will be penalised.



Turning Circles

Under these rules, a sailing vessel's speed and, to some extent, the course of all vessels, however propelled, is governed by the wind speed and direction.

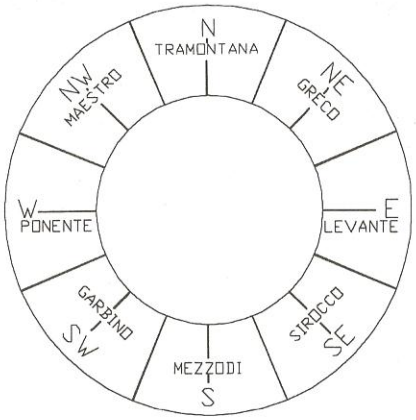
When a vessel is to make a turn, whether through choice or mandatorily, the turn will be by degrees or 'points of turn'. Turning Circles and a Turning Aid are provided to assist players in making these points of turn in a consistent and precise manner.

When a player's vessel needs to 'fall off 1 point', he should move his vessel 1 'point of turn' away from the wind before continuing on his course. If the vessel is heading directly towards or away from the wind, or it is calm, then the player's Ability score in that Turn will decide direction as follows:

Odd score to starboard;

Even score to port.

Diagram 1:
Wind Direction Indicator (WDI)



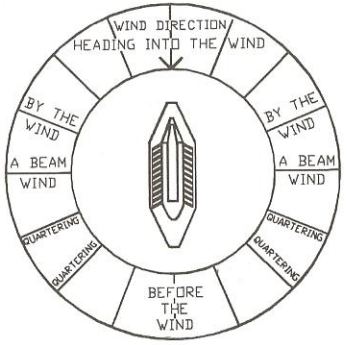


Diagram 2:
Attitude to the Wind Indicator (AWI)

To use the Turning Circles

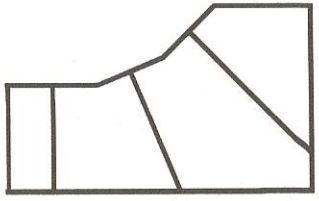
Two Turning Circle are provided (they are used together):
Diagram 1 - Wind direction indicator (WDI)
Diagram 2 - Aspect to the wind indicator (AWI)

Place the WDI over the vessel and orientate it to the table. Then place the AWI on top of the WDI, orientated to the wind direction. This will enable the vessel's attitude to the wind to be determined.
When altering course, move the vessel so that it lines up exactly with a point on the circles.

Full scale Turning Circles and Aid are provided.
These are explanatory diagrams only.

To use the Turning Aid

For situations where the use of a turning circle may not be practical (eg because of density of models), an alternative turning aid is included.



With this method, the device is placed squarely at the vessel's base edge E and then the vessel is repositioned with its base edge E on the 1st sloping face of the turning aid. If a second point of turn is required, the vessel's base edge is moved to the second sloping face.

Summary of Procedure for Calculating Speed (distance in mm).

Under Oars:
Read off the 'Movement under Oars Table' pg 61. This gives you the distance in mm for the various speed bands.

Under Sail:
See the 'Movement under Sail Table' on pg 63 which takes into consideration the sail(s) set, wind conditions and attitude to the wind.

It will tell you which speed band to read off from the 'Movement under Oars Table' pg 61.

Under Oars and Sail combined:
See the table on page 65 which takes into consideration which sail(s) are being used and the attitude to the wind.

It will tell you what percentage increase/ decrease to apply.

Apply to the Under Oars speed or the Under Sail speed, whichever is the current method of propulsion.

Part 2

- Ω **Movement under Oars**
  - **A vessel's speed 'under oars'**
- Ω **Movement under Sail**
  - **Sail settings**
  - **Speed Table**
  - **Reducing Sail**
  - **Sailing Restrictions**
- Ω **Movement under Oars and Sail**
  - **Restrictions**
  - **Advantages/Disadvantages**
  - **Percentage increase/decrease in speed**
- Ω **Turning**
  - **General**
  - **Turning using Oars**
  - **Straight Line Distance between Pivots**
  - **Turning vessels under sail alone**
  - **Mandatory turns**
  - **Turning whilst Stationery**

Movement under Oars

Under ideal conditions and with a fresh, trained crew, a galley could achieve a speed in excess of 7 knots for a considerable period of time. This is based upon historical evidence supported by the capabilities of the recently reconstructed ancient trireme *Olympias*. This speed will vary depending on type.

The galley under oars alone will be lighter, faster and more manoeuvrable. Its fighting area will be less cluttered, thus providing an advantage to its marines, and it will be less vulnerable to fire. However, it will not be able to benefit from favourable wind conditions and its crew will be subject to fatigue.

What appears to be the crucial factor in ancient naval warfare is the manoeuvrability of vessels, coupled with their ability to accelerate and decelerate. Under these rules, vessels under oars may move at one of four speeds as follows:

Ram Speed - The fastest possible speed. It is used to inflict maximum damage during a ram by ships so equipped. Crews may only maintain this speed for short periods due to the physical strain involved.

Fast Speed - A combat speed allowing a vessel to accelerate to maximum speed in the shortest possible time but capable of being maintained for quite long periods.

Cruise Speed - A speed capable of being maintained for extended periods, though with some fatigue for the crews concerned.

Slow Speed - A steady speed, designed not to tire the crews.

A Vessel's Speed 'Under Oars'

The speed of a vessel is expressed as distance in mm, per Turn.

The optimum distance a vessel covers in a Turn, is dependent on a number of variables, which are taken into account in the Movement under Oars Table opposite.

In order to arrive at the various movement speeds - Ram, Fast, Cruise and Slow - we allocated a multiplier to the Acceleration Rate. This was Ram (x4), Fast (x3), Cruise (x2) and Slow (x1).

Thus, a Category 1 vessel's Ram speed of 120mm was derived from the acceleration rate of 30 multiplied by 4.

Players must adhere strictly to the speeds arrived at using this method. The table only alters if and when there is an enforced change in the acceleration/deceleration rate of a vessel, eg overburdening.

The procedure would in that circumstance be, to use the relevant multiplier against the new Acceleration/Deceleration rate, the resultant figure becoming the altered speeds - exactly.

So if the acceleration/deceleration of a Category 1 vessel became 20 for example, then its Ram speed would become 80mm (20x4).

FATIGUE

Vessels using oars alone, or a combination of oars and sail(s), are subject to the rules relating to Fatigue (pg 71).

MOVEMENT UNDER OARS TABLE

Vessel's Category	Ram Speed	Fast Speed	Cruise Speed	Slow Speed	Acceleration/ Deceleration
1	120	90	60	30	30
2	140	105	70	35	35
3	180	135	90	45	45
4,5	160	120	80	40	40
6,7	140	105	70	35	35
8,9	120	90	60	30	30
10	100	75	50	25	25

Speed is expressed as distance in mm per Turn.

Note:

Players will establish and note these distances at the outset of the game - for all of the speed bands, i.e. Ram, Fast, Cruise and Slow. This should be updated if at any time there is a change in the acceleration/deceleration rate when a recalculation needs to be done. It will be particularly useful when changing from oared to sailing speeds.

Acceleration/Deceleration

Altering speed must be by progression, thus a vessel at Cruise may only go to Slow or Fast.

The exception to the above rule is that Fast 'A' class ships with good or average crews in Categories 1 to 3, or light 5's, may accelerate from stationary at double the acceleration rate noted above, for one move only, incurring 2 Fatigue penalties in the process. This is to replicate the tactic employed by some light galleys, of bursting out of a defensive formation to attack an unwary opponent attempting a periplous.

Movement under Sail

Ancient sailing ships with their large square sails and simple rigging systems, were nowhere near as capable of taking advantage of shifts in the wind as the sailing ships of today which incorporate all the advances in sail technology since the 15th century.

Ancient ships had to run before the wind and, given their high sterns, were probably at their best when moving in a quartering wind.

Although tacking (changing direction by heading across the wind) was theoretically possible, as recent evidence from the Olympias suggests, the ancient galley would have rowed across the wind rather than tacked. We know that ancient merchants often used oars to supplement their movement and manoeuvres and there is no reason to believe that a galley under sail would not do the same.

Galleys under sail(s) alone would be able to move, subject to their attitude to the wind, without their crew becoming fatigued. Thus, under these rules they will not incur any fatigue penalties.

Sail Settings

Three sail settings are possible, namely:

Boatsail
Mainsail
Full sail (use of both boatsail and mainsail).

Move Distances for Vessels under Sail

The move distances (speed) and acceleration/deceleration rates for ships under sail are based upon those in Movement Under Oars. The same applies to vessels and wreckage drifting with the wind.

All movement under sail is thus dependent upon the category of the vessel involved. Wreckage should be treated as a Category 1 vessel for game purposes.

To calculate the permitted move distance for a vessel under sail or for a drifting vessel or piece of wreckage:

1) Using the table opposite, cross reference the current Turn's wind condition with the sail setting. This will give you a Speed Band as expressed by 'cruise', 'fast', 'ram + 20%' etc.

2) To translate this to speed as expressed in mm (in order that movement can take place), you apply the current oar speed* for that vessel under the relevant band.

   * If a player has previously moved under oars, then he will have read the Movement Under Oars section and as advised, made a note of these speeds and have them to hand. If not, then the player must now read the Movement Under Oars section relating to a vessel's speed as it is from this table that the sail speed is derived.

EXAMPLE

The speeds for a Category 3 vessel under oars where the acceleration/deceleration rate is 45 as in the Movement Under Oars table, will be:

Current Oared Speed (mm)			
Ram Speed	Fast Speed	Cruise Speed	Slow Speed
180	135	90	45

To determine its Speed under Sail:

If the same Category 3 vessel were under sail in a Strong, Quartering Wind and had its mainsail only set, then its speed as per the Movement under Sail Table above would be Ram Speed. This translates to 180mm as per the Oared Speed table.

MOVEMENT UNDER SAIL TABLE

	Drifting	Boatsail only	Mainsail only	Full Sail
Light Airs				
In a Beam Wind	N/A	N/A	N/A	N/A
Quartering Wind	N/A	N/A	N/A	N/A
Before the Wind	N/A	N/A	N/A	N/A
Light Breeze				
In a Beam Wind	Ψ	Ψ	Ψ	Ψ
Quartering Wind	33% Slow	Slow	Cruise	Fast
Before the Wind	33% Slow	50% Slow	Slow	Cruise
Moderate Breeze				
In a Beam Wind	Ψ	Ψ	Ψ	Ψ
Quartering Wind	50% Slow	Cruise	Fast	Ram
Before the Wind	50% Slow	Slow	Cruise	Fast
Strong Wind				
In a Beam Wind	Ψ	Ψ	Ψ	Ψ
Quartering Wind	Slow	Fast	Ram	Ram + 20%
Before the Wind	Slow	Cruise	Fast	Ram + 10%
Gale				
In a Beam Wind	Ψ	Ψ	Ψ	Ψ
Quartering Wind	Cruise	Ram	Ram + 20%	Ram + 25%
Before the Wind	Cruise	Fast	Ram + 10%	Ram + 20%

Ψ Vessels 'in a beam wind' must:
- divide their 'before the wind' speed in half;
- move one part ahead and one part downwind.

The calculated speeds for Movement under Sail are mandatory for any vessel using sail as its primary means of propulsion, where those sail(s) are completely set. This means that the full appropriate movement distance must be travelled each Turn.

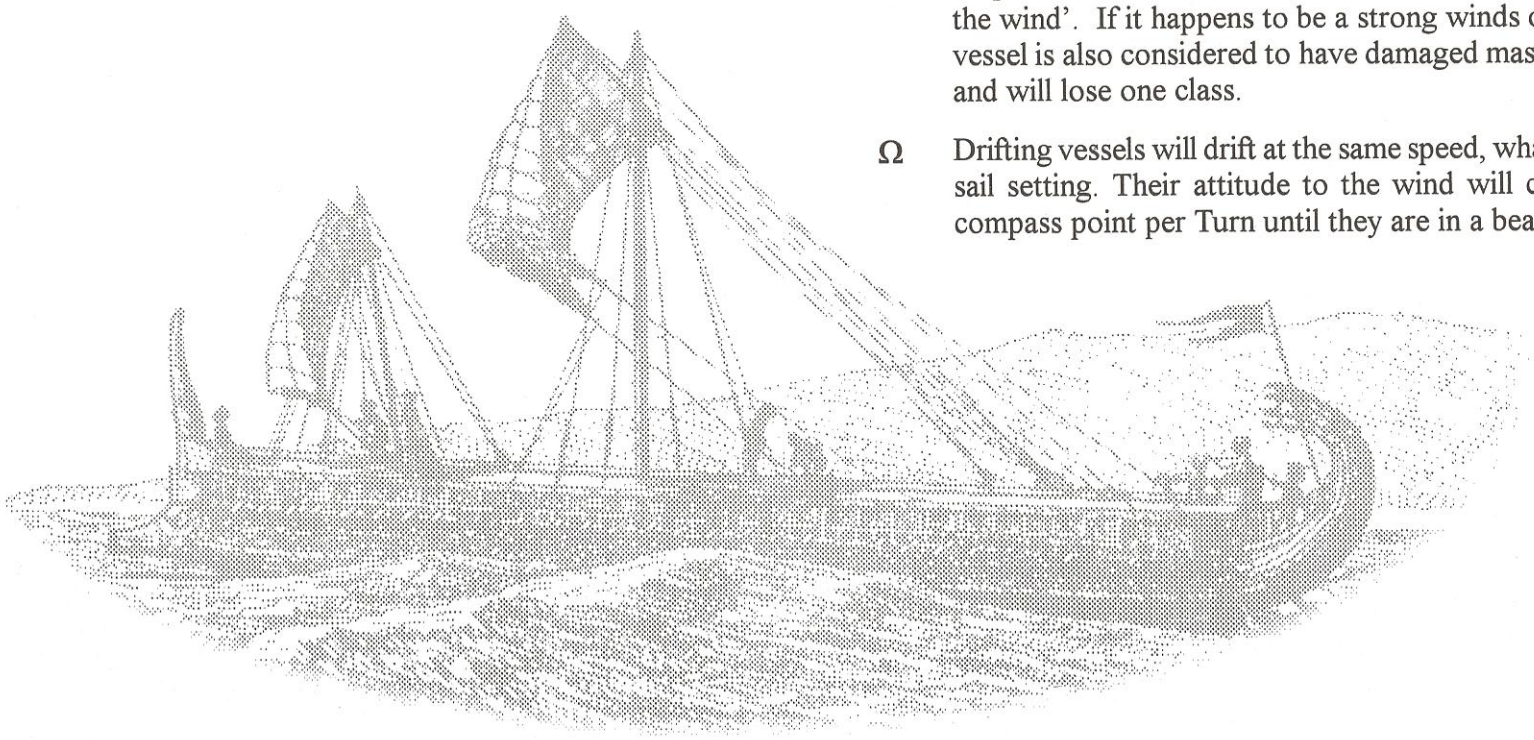
Reducing Sail

A player may choose to move his vessel under reduced sail (subject to successfully carrying out the task under Alterations and Repairs).

- Ω Whilst at reduced sail, its movement distance will be reduced by 50%.
- Ω Vessels attempting to reduce sail that fail Ability, will continue at previous speed.

Sailing Restrictions

- Ω Ships that move by the wind must either drift with the wind until it changes or alter course to bring the wind under their beam.
- Ω Ships under sail in a beam wind, maintain their heading. They will use their 'before the wind' speed; however, only half of the distance will be moved ahead, the remaining distance must be used to move away from the wind.
- Ω Ships under sail that go into the lee of land masses, must revert to oar power alone. If a vessel has no oars, then it must anchor or be towed.
- Ω Ships that head into the wind automatically go back to 'by the wind'. If it happens to be a strong winds or gale, the vessel is also considered to have damaged masts and sails and will lose one class.
- Ω Drifting vessels will drift at the same speed, whatever their sail setting. Their attitude to the wind will change one compass point per Turn until they are in a beam wind.



Movement under Oars and Sails

A vessel using oars and sail simultaneously:

Ω will be able to add to its speed - depending on its heading to the wind;

Ω will be able to continue to move under oars when in the lee of land masses.

Restrictions

Ω Vessels go from sail to oar, oar to sail, or augment one with the other, subject to Alterations & Repairs on the Ability Chart.

Ω Ships under sail and oar, in a beam wind, maintain their heading. They will use their 'before the wind' speed; however, three-quarters of this distance will be moved ahead, while the remainder must be used moving away from the wind.

Movement Advantages/Disadvantages

Ω A vessel using oars and sail simultaneously has a movement advantage when going with the wind or wind and tide in the same direction.

Ω If going against the wind, with sail(s) set, the disadvantage is that the vessel must revert to 'by the wind'.

If it happens to be a strong wind or gale, the vessel is considered to have damaged masts and sails and will also lose one class.

It follows therefore that a player would not readily choose to have sail(s) set against the wind and so the combination of oars and sails would mainly be used when the wind was favourable.

These advantages/disadvantages are expressed as percentage increases/decreases to the vessel's oared or sailing speed (whichever was the main propulsion), as expressed in mm, as follows:

Galleys	With the wind	Against the wind
Using a boatsail and oars	+10%	-10%
Using a mainsail and oars	+15%	-15%
Using full sail and oars	+20%	-20%
Merchant Vessels	**With the wind**	**Against the wind**
Using a boatsail and oars	+1%	-1%
Using a mainsail and oars	+5%	-5%
Using full sail and oars	+10%	-10%

These percentage increases/decreases alter the speed of a vessel as expressed in mm. They do not affect the Speed Band of the vessel, i.e. Ram, Fast, Cruise or Slow.

Any speed advantages should be considered as bonuses and the rules relating to the original method of propulsion continue to apply, i.e. any oared vessel supplementing its movement by the use of sail, will continue to turn its incremental pivots interspersed with straight line movements* as if under oars alone.

* see overleaf

Consideration for Vessels supplementing Movement under Oars with the use of Sails:

If sails are furled and/or stowed and the vessel reverts to oars, its speed may not be as fast as the galley under oars alone that has no sail(s) aboard. Also, the stowed sail(s) and mast(s) will hamper the actions of its marines to a certain extent and make the vessel more vulnerable to fire.

Turning

General (all vessels):

Players must announce their intention to turn, in the same way that a captain of a ship would prepare his steersman and crew. However, the player is not obliged to give details of his intentions as to the number of turns, in what direction, by how many compass points of turn or the distance between turns.

The turning manoeuvre:

A turn is a course change made in 'increments', during a vessel's move. As a basic rule, each increment pivots the vessel up to two compass points.

Turning using Oars:

Oars alone or Oars and Sail(s) combined

These vessels are allowed to make a number of pivots in a Turn. However, each incremental pivot in the manoeuvre, must be interspersed with straight line movement. This is to replicate the turning circles of Ancient vessels. It follows therefore that the number of pivots will be reliant on sufficient movement allowance.

Each incremental pivot will reduce the move distance of the vessel concerned, as follows:

Reduction in Move Distance on the execution of a Pivot:

At Slow speed - reduce by 5mm.

At Cruise speed - reduce by 10mm.

At Fast speed - reduce by 15mm.

At Ram speed - reduce by 20mm.

Straight Line Distance between Pivots

This applies to vessels under oars or a combination of oars and sail(s).

The spacing between turns reflects the respective manoeuvrability of the various ship types and each incremental pivot is made about the vessel's centre.

The distance to be moved between pivots for the various categories of ships in these rules, are as follows:

Vessel Category	Straight Line Distance Between Pivots
1	30mm
2	25mm
3	20mm
4	25mm
5	30mm
6	35mm
7	40mm
8	45mm
9	50mm
10	55mm

Doubling the Straight Line Distance between pivots is used in the rules to simulate the effects of a poorly executed turn:

Under oars this could be caused by a loss of cohesion in the stroke as the rowers adjusted to the new movement of the sea occasioned by their galley's changed aspect to wind and tide.

The rule mechanism effectively changes the radius of a series of turns from a relatively small circle - into a much larger one.

To turn a vessel at the start of the Movement phase:

Strictly speaking, in order to begin a Movement phase with a turn, a sufficient straight line movement should have been made at the end of the player's previous Movement phase.

To minimise record keeping, providing both players agree, this convention may be dropped and each player may commence the Movement phase with a pivot - whether or not they ended their previous move with sufficient straight line movement.

Example: Reducing Movement Allowance whilst Manoeuvring

A light Category 3 trireme at fast speed has a movement allowance of 135mm.

Having thrown a sufficiently high score, it turns 2 points to port (reducing overall movement by 15mm for turning at 'fast'), then moves 20mm on this heading (its minimum straight line distance). It turns 1 more point to port (less 15mm) and travels 45mm in this direction. Then it makes a turn 2 points to starboard (less 15mm) and finishes its movement by going 25mm on its latest course.

135-15-20-15-45-15-25 = 0 movement distance remaining.

Example: The straight line movement restriction over two Turns - where it is enforced.

A Category 8 vessel at slow speed has a movement allowance of 30mm, wishes to turn by 3 compass points, to port. Its minimum straight line distance between pivots is 45mm.

Turn 1: It turns 2 compass points (-5mm for 'slow'), then moves 25mm on this course which completes movement for the Turn.

Turn 2: The galley must move a further 20mm on its course before being able to turn to port (-5mm). It may then move 5mm on the new course.

Turning for Vessels under Sail alone:

To reflect the sluggish nature of the broader hulled sailing ship and the limitations of galleys moving under sail alone:

Ω ONLY ONE PIVOT PER GAME TURN IS ALLOWED.
The number of compass points allowed in that pivot are:

Hull Quality	No of Compass Points	
	Turning into the wind	Turning Away from the wind
FAST	1 or 2	2 or 3
NORMAL	1	2 or 3
SLOW	1	2

Ω Vessels under sail alone that end a Turn with a turning manoeuvre, may not start the following Movement phase with another turn.

Ω Reading off the Ability Chart column "Turns using Oars", **translate** 'Double Distance between pivots' to read 'No turn allowed'.

Exemptions - FOR VESSELS UNDER SAIL ALONE

Ω There is no reduction in move distance as a result of the pivot.

Ω Hemiolias and Trihemiolias under sail alone, may perform the turning manoeuvre as for 'vessels under oars or sails and oars combined'. This is to reflect the fact that they were designed to operate equally well under sail or oar, or both in combination.

Mandatory Turns

Ancient craft, because of the lack of even a rudimentary keel, would have found it impossible to maintain a straight line course over an extended period - in anything short of a dead calm.

This slow incremental drift off course, is interpreted in the rules by a mandatory turn occasioned by a poor Ability score.

The Ability Chart, has the headings 'Under Oars' and 'Under Sail'. When cross referenced with the Ability score, certain classes of vessels will be instructed to fall off a compass point. This constitutes a mandatory turn.

> Note: vessels which are using both oars and sails, will read off the heading 'Under Sail'.

A vessel falls off, either down wind or away from the direction of the tide. If the wind/tide is from ahead or astern, or, if they are not being used in the game, then the way a vessel will fall off during a mandatory turn will be as follows:

> Odd dice scores - to starboard.
>
> Even dices scores - to port.

Vessels pushed off course in this way may also have to move double their distance between pivots before they may correct their direction of travel. This correction - back to their course - does not require an order as it is assumed to be a sequence of minor corrections to maintain position.

> A player who has ordered his ship to turn, then becomes subject to a mandatory turn in the desired direction, is not required to correct his course.

In extreme cases, the vessel may not be able to complete its double distance between pivots, before the end of its move. In these instances, the vessel in question should complete its straight line movement in the next Turn, before going on to make any course corrections. (Unless players had decided to waive this convention - pg 67).

Example of mandatory turn:

A category 5 'C' class Quadrireme at cruise speed under oars has an optimum movement distance of 80mm. It wishes to accelerate to 'fast' and turn 1 compass point to port.

The result of an Ability score of 5: it must 'fall off 1 point', fails to accelerate and must move double the straight line distance between pivots.

The wind is on the port bow so it must fall off 1 compass point to starboard (-10mm for turning at Cruise). It must then move 60mm on this heading (double its normal distance between pivots), before being able to turn 2 points to port (-10mm), thus finishing on the desired heading although out of position.

Turning Whilst Stationary

A stationary oared vessel may pivot about its centre through up to three compass points per Turn, provided that it has freedom of movement. This pivot could end in contact with another vessel. Such a contact is NOT a collision (see Collisions) because turning whilst stationary is at Slow speed.

Exceptional cases:

When turning whilst stationary, 'A' class vessels may increase such movement by 1 compass point; Class 'E' vessels (and below) must reduce such movement by 1 compass point.

SUMMARY

Vessels overburdened:
This applies to all vessels.

Vessels under oars and oars/sails combined: will be affected by a reduction in their acc/dec rate and the straight line distance required between pivots when turning. Their initial fatigue limit is also further reduced while under oars.

Vessels under sail power alone: will be affected by a reduction in their acc/dec rate. Their initial fatigue limit is not affected while under sail propulsion.

Fatigue
All vessels have a Fatigue Limit. This may be increased by certain attributes (pg 71).

While under oars or oar/sail combined, this limit will be decreased by being overburdened.

If during the course of the game vessels accrue fatigue penalties, it will be while under oar propulsion.

When fatigue penalties exceed the fatigue limit, a vessel suffers reductions in class.

Part 3

- Ω **Vessel Overburdened**
  - **- Jettisoning Equipment**
  - **- Carrying less than Permitted Units**
- Ω **Fatigue**
  - **- Fatigue Penalties**
  - **- Reducing Fatigue Penalties**
  - **- Fatigue Limit**
- Ω **Backing Water**
- Ω **Immobilised Vessels**
- Ω **Towing**
- Ω **Beaching**
- Ω **Partially Submerged Hulks**
- Ω **Adjustments to the Playing Area**
- Ω **Movement Off Table**

Vessel Overburdened

Each type of vessel is capable of carrying a certain number of units. This is described in detail on pages 13-14. No vessel may carry more than 3 times its allowance.

Whatever its propulsion, if any vessel exceeds its unit carriage allowance, it will be considered 'overburdened' and will suffer penalties as follows:

If the excess is between one unit and under half its allowance:

Reduce its acceleration/deceleration rate by 5mm
Increase its straight line distance between pivots by 5mm*.

If the excess is half or more but no more than twice the allowance:

Reduce its acceleration/deceleration rate by 10mm and
Increase its straight line distance between pivots by 10mm*.

If the excess is twice its allowance or more:

Reduce its acceleration/deceleration rate by 15mm and
Increase its straight line distance between pivots by 15mm*.

* applies to vessels under oars or oars/sails combined .

IN ADDITION: A vessel under oars or a combination of oars and sail(s) will reduce its Fatigue Limit by 1 for each excess unit.

Jettisoning Equipment

A player may lessen Movement penalties by jettisoning sufficient equipment during the course of the game (Pg 50, Alterations and Repairs).

Vessels which jettison the extra units that caused them to be overburdened, may revert to their original acceleration/ deceleration rates and distances between pivots.

Carrying less than Permitted Units

Any galley not carrying its permitted units, may increase its acceleration/deceleration rate by 5mm and decrease its straight line distance between pivots by 5mm. Also the Fatigue Limit will be increased by 1 for each unit of its normal allowance not carried.

Note: players should remember that changes to the acceleration/ deceleration rate will affect a vessel's overall speed.

Suggestion for speeding up play/simplifying record keeping:

Make a note of Movement under Oars speed, acceleration/ deceleration rates and straight line distances between pivots for the ships in a fleet, prior to start of play. This can be done on a piece of paper, or on the Fleet/Ship Data Card, and kept close at hand. Through the course of the game, as changes occur, this will need to be updated.

Example of the effect of a vessel overburdened

A 'C' class heavy 5 (category 6) is permitted 6 units.

It has: A normal marine complement	= 3
A corvus	= 3
A tower	= 2
Total units carried	= 8

These 2 units of overburden mean that:

- the crew's fatigue limit is reduced by 2 points;
- the galley's speed becomes 30mm slow, 60mm cruise, 90mm fast and 120mm ram.
- distance between pivots is increased to 40mm.

Fatigue

Fatigue Penalties - Galleys

Movement under oars or oars and sail(s) combined - at Ram, Fast and Cruise Speed:

At Ram Speed:
Galleys incur 2 Fatigue penalties for the first Turn and two additional penalties EACH consecutive Turn that it remains at that speed.

eg *1st Turn* = *2 Fatigue penalties*
2nd Turn = *4 Fatigue penalties*
3rd Turn = *6 Fatigue penalties*
and so on.

At Fast Speed: accumulates 2 Fatigue penalties per Turn.

At Cruise Speed: accumulates 1 Fatigue penalty per Turn.

Movement under oars or oars and sail(s) combined - at Slow speed:
There are no Fatigue penalties when moving at slow speed, for galleys which are using oars or a combination of oars and sail(s).

Fatigue Penalties - Merchant Vessels

Under oars alone:
2 Fatigue penalties per Turn are incurred, even at slow speed, to reflect the bulkier hulls and fewer oarsmen.

Under oars and sail(s) combined:

At Slow Speed: 1 Fatigue penalty per Turn.

At Cruise Speed: 2 Fatigue penalties per Turn.

At Fast Speed: As for Galleys under Ram Speed above.

The effect of wind and tide on Fatigue
Wind strengths above 'light breeze' affect fatigue as follows:
Add 50% to Fatigue penalties if the wind or tide are in opposition.
Double the penalties if both are against the vessel.

Reducing Fatigue Penalties
A ship may reduce its FPs at the rate of two per game Turn, if the crew is allowed to rest. This may be accomplished, if the vessel is:

- not moving under oars
- not in contact with the enemy
- not under fire.

Crews that successfully ram or rake another vessel, causing 5 or more reductions in class, and are able to extricate from the ram or move away from the rake, may reduce their Fatigue by two. This is to reflect the elation they feel at their achievement.

Fatigue Limit
Each quality of crew has a Fatigue limit*. When the total Fatigue penalties exceed the limit for a particular quality of crew, then exhaustion is setting in and the performance of that crew will diminish. For each Fatigue penalty in excess of the allocated limit, a ship will reduce its class by one (see Reductions in Class).

The Fatigue Limits for the various qualities of crews:
Good =33; Average = 30; Poor = 27

Good captains increase the Fatigue limit of their crew by 3 and Poor captains will decrease the Fatigue limit of their crew by 3.

Fast ships also increase Fatigue limit by 3, whilst Slow ships decrease it by the same amount.

Extra items of equipment will decrease Fatigue limits, at the rate of 1 Fatigue limit per unit over the vessel's allowance.

* Fatigue limits may be adjusted to meet the game requirement.

Backing Water

This is only possible for vessels moving under oars alone:

They may move backwards

If Fast ships with Good crews - at Slow, Cruise or Fast speeds.

In all other cases - at Slow or Cruise speed

Backing Water/Mandatory Turn

When backing water, it will be the vessel's stern that is pushed downwind.

Restrictions to Backing Water

- Ω Backing water at Ram speed is not permitted.
- Ω In order to back water, a vessel must have first brought its own forward movement to zero and come to a halt.
- Ω A vessel may not back water in order to increase its rate of deceleration.
- Ω Any modifiers relating to forward movement will still apply.
- Ω All straight line distances between pivots should be increased by 5mm.

Immobilised Vessels

- Ω A vessel that becomes immobilised will drift with the wind until it is either taken in tow or repairs are made (see Alterations and Repairs).
- Ω Vessels in calms, light airs, or in the lee of land masses, will remain stationary.

Effects of Wind and Tide on Immobilised Vessels

In a game with winds of light breeze or above, or one where tides are used, immobilised vessels will be subject to drifting. They will be subject to the drift speeds given on the 'Movement under Sail' table (pg 63). To simplify play, only one drift speed is used for oar or sail powered vessels or wreckage.

Drifting vessels will also turn one point per Turn until they are in a beam wind. This over-rides the mandatory turn rule which applies to vessels moving normally.

Towing

One or more vessels may take another in tow, whatever the size differences of the vessels concerned.

The act of towing involves movement, which is why it appears in this section of the rules. However, it is subject to Alterations and Repairs for the actual tasks involved in the performance of the act. Players with vessels in need of a tow, must therefore also refer to Alterations and Repairs.

Towing Penalties:

Towing vessels may only move at 50% of the towed vessel's speed.

However, if being towed by more than one vessel, the above penalties are halved.

Vessels towing under oars, double their fatigue penalties.

If the vessel(s) doing the towing, wish to move more quickly, once the tow is established they may accelerate - but only at 50% of the towed vessel's acceleration rate.

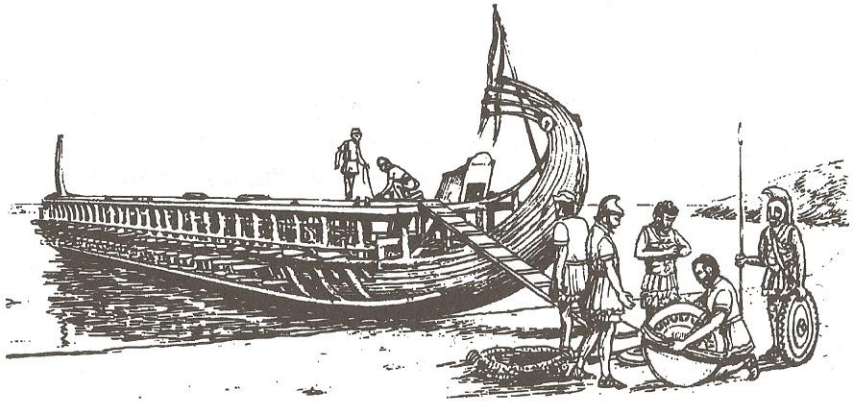
Beaching

Beaching is a deliberate act of putting a vessel onto a designated beach, at Slow Speed. If at any other speed, whether deliberate or not, it will be considered a 'grounding'and must follow the procedure for Grounding (pg 120).

Beaching automatically ends a vessel's voluntary movement. Its speed is brought to zero.

In the event of a vessel beaching on an opponent's friendly shore, whether intended or not:

- it surrenders, without firing;
- it is excluded from the rest of the game;
- it cannot be refloated by its captors;
- it will count as a prize in determining the game result.



A vessel deliberately beached in order to carry out repairs.

Refloating a Beached Vessel

Vessels that beach may be refloated subject to a long task (Alterations and Repairs).

As the conditions are similar to that of refloating a grounded vessel, the details appear together on pg 53 under the heading 'Refloating a Beached or Grounded Vessel'.

Players must look to this page for details of restrictions, modifiers, etc.

Partially Submerged Hulks

With Towing

Partially submerged hulks may be towed at double the towing penalties - see Towing, opposite page.

Passing tows to partially submerged hulks is a medium task (Alterations and Repairs) which is subject to a reduction of 'minus 2' to the Ability score for the purpose.

With Grapples

A galley which is attached to a submerged hulk or wreckage, may only drift until grapples are released.

With Corvus/Harpago

A galley which is attached by corvus or harpago to a submerged hulk or wreckage, may only drift until the corvus is lifted or the harpago cable is cut.

Adjustments to the Playing Area

There may be times, during the course of a game, when players find that their 'on table' vessels will be congregated at one edge of the table. As a result, movement may become difficult, and sometimes one player may find himself at an unacceptable disadvantage.

In these circumstances, all the 'on table' vessels should be moved by agreement - a specified amount in the same direction - away from the table edge.

Obviously, at the same time, any fixed objects such as coastlines, islands etc should be moved the same distance. This effectively slides the playing area under the ship models.

Should players notice that this intended adjustment will push an isolated vessel or two, off another table edge, the owner of the vessel(s) in question should be given sufficient time to move his vessel(s) before the general adjustment takes place. If it proves impossible for him to get his vessel(s) sufficiently far away in time, his vessel(s) may be moved 'off table' by the same distance as 'on table' vessels.

Movement Off Table

Any vessel that moves 'off table' - either as a result of an adjustment to the playing area, or during the normal course of its movement - may not return to the table edge until the end of the Movement phase of the third game Turn after it left (also provided that it is not immobilised).

This return is automatic and there is no adjustment made for any damage to the vessel. Any returning vessel must return within 50mm of either side of the point on the table edge at which it left, subject to the condition that it may not come into contact with another vessel in so doing.

Whilst off table, a vessel may attempt to make any necessary repairs. It can therefore continue in the usual Turn procedure, i.e. Orders, Ability throw, etc.

Vessels commencing the game 'off table' either as a flanking squadron or the rear vessels in a line astern formation, will appear 'on table' subject to the rules of deployment.

The normal considerations for ships 'off table' do not apply in this one circumstance, except that any ship in a line astern formation which is not yet deployed on the table, must still test for survival in adverse weather conditions - as if it were 'on table'.

SHIPBOARD WEAPONS

- Ω General
- Ω Procedure for Firing
- Ω Types of Weapons
- Ω Arcs of Fire
- Ω Weapons Ranges
- Ω Damage Effects of Shipboard Weapons
  - DAMAGE TEST
  - ACCURATE SHOOTING TEST
  - ADVERSE RESULT TEST
  - GROUP ABILITY SCORE & FIRING
- Ω Ship to Shore Firing
  - **Firing to and from Friendly Shores**
  - **Assessing damage to shore.**

Shipboard Weapons

General

The principle of the rules is that a Turn is divided into two parts giving each player in sequence, the role of 'active player'.

The firing of shipboard weapons is an exception to the rule: If a player's non-active vessel is contacted by an 'active' enemy vessel, it may fire defensively.

The procedure set out here details offensive firing and relates to all the types of weapons carried on an ancient galley.

To fire defensively, is basically the same procedure, taken from Step 2 and using the 'special Ability throw'.

- Ω Firing can take place at any time during the active player's Movement phase but there is only ever one round of firing per vessel per Turn.
- Ω The result of firing is normally adjudicated after Movement has finished.
- Ω If there has been a ram, rake or collision, any contact damage is assessed AFTER firing damage.

  In the event of defensive firing, contact damage is assessed after both sets of firing damage.

NOTES ON THE PROCEDURE FOR FIRING:

Movement and Firing

The firing of Shipboard Weapons takes place during Movement (although the results aren't calculated until the Shipboard Weapons phase). Thus, a player can for example move his vessel 80mm, fire shipboard weapon at an enemy vessel, then move a further 40mm.

Damage Points

If the Ability score result shows a 'Hit', then the target vessel must assess damage received. These are known as Damage Points and are cumulative - therefore a record needs to be kept.

See *Damage Effects of Shipboard Weapons* (pg 82) for the details of the number of damage points per type of weapon.

Damage Test

After a vessel has accumlated Damage Points, equal to its Category, it must take a Damage Test (Pg 82 and the Playsheet).

Accurate Shooting Test

In certain cases, the result of firing is a 'Hit' plus 'Accurate Shooting Test'.

The rules allow a form of 'bonus' for players firing shipboard weapons, who have a high Ability score (15 to 18). This 'Accurate Shooting Test' is to see whether - as a bonus - the player has made an accurate hit. The target vessel will be subject to the result of this test as well as the Damage Test. The Accurate Shooting Test appears on Pg 84 and on the Playsheet.

PROCEDURE FOR FIRING:

1. Player announces with orders at the start of the Turn, that he intends to fire. He may add a rider to this order, that only those weapons 'in range' will fire

2. He uses his Ability score, modified for the purpose if he has been affected by a major fire or a poor Morale Test.

3. The player cross references his Ability score with the Shipboard Weapons column of the Ability Chart (depending on whether the firing took place at Short, Medium or Long range).

4. If there is an 'Adverse Result' the firing player takes the Adverse Results Test.

5. If the result is a Hit **with** the proviso to 'divide his fire by 2', then the target vessel will only receive half the normal damage points (round down remainders).

6. If the result is a 'Hit', then damage is assessed immediately as follows:

   The target vessel checks how many Damage points it has received (page 82 and Playsheet).

   - if these points do not exceed its category, they are merely noted;

   - if they do exceed its category, then the *Damage Test* is taken (page 82 and Playsheet).

7. If the result is a 'Hit + an Accurate Shooting Test', then:

   a) The target vessel assesses how many damage points it has received;

      - if these points do not exceed its category, they are merely noted.

      - if they do exceed its category, then the Damage Test is taken.

   b) the firer takes the Accurate Shooting Test and further damage is apportioned to the target vessel.

PROCEDURE FOR DEFENSIVE FIRING:

If this occurs (only allowed when contact is made), the procedure is the same. The non-active player declares at contact if he wishes to return fire and makes a Special Ability Throw (pg 42) for the target vessel - modifying the score if it has been affected by a Major Fire or a poor Morale Test.

The restrictions to this defensive fire are:

- Only the vessel contacted may fire in this manner and then only at the vessel contacting it.
- There can be no fire in support of the contacted vessel, by other friendly vessels.

Types of Weapons

There are three types of shipboard weapons, described below. They may only be fired by marine complements.

Artillery Weapons:
There are two kinds, namely light and heavy artillery.

Light artillery:
These include bolt shooters and the lighter catapults.

Heavy artillery:
These include the heavier types of catapults and stone throwers.

All artillery weapons are effective against the marines, officers and deck crew of all vessels and against the oarsmen of an aphract vessel (as with Missile Weapons, but at a longer range). They also have a limited anti-ship capability.

Artillery pieces equipped with incendiary devices also have the potential to start fires aboard an enemy vessel. Each hit with a device of this nature, starts a small fire.

Any vessel firing incendiary weapons that scores a 'divide by 2' result, will not cause a fire.

Missile Weapons:
Javelins, bows or slings used by all or part of a vessel's marine complement. They are effective against the marines, officers and deck crew of all vessels and against the oarsmen of an aphract vessel. They have a maximum range of 10mm.

Missile weapons may also be fired from a 'friendly shore' at any enemy vessel approaching within 10mm.

Boarding Weapons:
This encompasses weapons and equipment intended for use when contacting the enemy:

a) to give an advantage in a boarding action; or

b) to disrupt/damage the enemy (eg biological/chemical weapons and Rhodian Fire Pots).

A description of these weapons and their attributes now follows:

Boarding Weapons Restrictions:
Only one boarding weapon may be carried per ship.

The successful use of a Boarding Weapon is assessed by referring to the Shipboard Weapons column of the Ability Chart (Short Range) and adapting it as follows:

Ability Chart	Boarding Weapon result
HIT	= HIT
MISS	= MISS
HIT with 'divide by 2'	= MISS
Adverse Result	= (see Adverse Results)

Accurate Shooting Test is only applicable to a corvus equipped galley being oar raked.

Boarding Weapons - continued

THE CORVUS is a contact weapon which was used to hold an enemy vessel alongside and facilitate boarding by the corvus equipped vessel's marines. Once lifted from the deck of the target vessel, the corvus may be used again. However, the use of the corvus is restricted by the proximity of the opposing vessel and the point of contact.

The weight and position of the corvus means that it will be a hazard to the galley during inclement weather. This is reflected in the Ship Survival Test.

THE HARPAGO is a short range weapon, the main function of which is to haul an opponent into boarding range and hold it alongside, to facilitate boarding by the harpago equipped vessel's marines. The advantage of the harpago is that the vessel carrying it need not manoeuvre closer than 25mm of its target, for the weapon to be deployed (even where the Special Ability Throw is used).

The Corvus and the Harpago may be used offensively/defensively, in either player's part of the Turn. With defensive use, the Special Ability Throw applies.

Damage caused by the Corvus or Harpago

Any damage caused by or reduced as a result of the use of the Corvus or Harpago, be it in Ramming, Collisions, Oar Raking or Boarding, is dealt with in those specific sections of the rules.

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Each **type** of shipboard weapon has a different arc of fire.

Arcs of Fire are described overleaf.

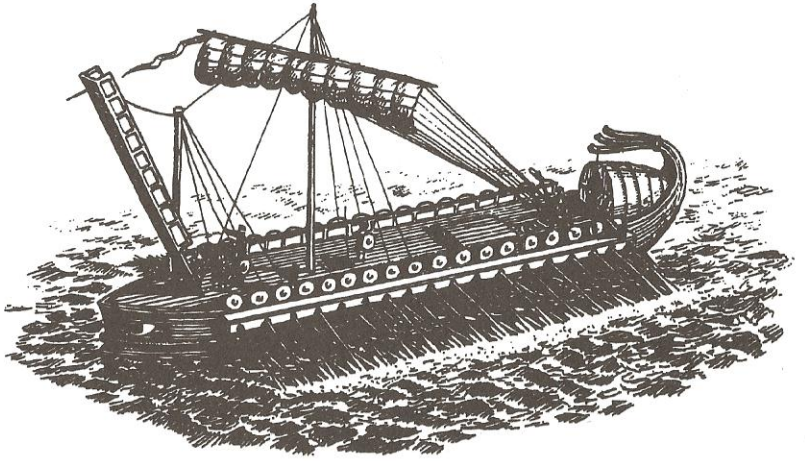
Boarding Weapons - continued

The following will cause the target vessel to have reduced capability in boarding actions (see Boarding).

BIOLOGICAL WEAPONS:
eg Swarms of bees.

CHEMICAL WEAPONS:
eg Pots of quicklime.

RHODIAN FIRE POTS.
If a vessel equipped with Rhodian Fire Pots scores a hit, then a small fire will break out on the target vessel.



Vessel with Corvus
~~~~~~~~~~~~~

ARCS OF FIRE

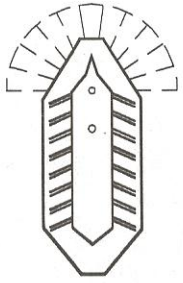
Each type of shipboard weapon has a different arc of fire. The Ship Base acts as an arc of fire indicator as follows:

Artillery Weapons - Any artillery piece may fire in the arcs as shown in the diagram opposite. Each piece may target a different enemy subject to the target priorities listed. Any artillery piece may be relocated to fire from the after end. (Relocation is a task under Alterations and Repairs).

Missile Weapons - These may be fired from any base edge. To simulate the limited effect of missile armed troops, vessels may only engage one target with missile weapons in any game Turn.

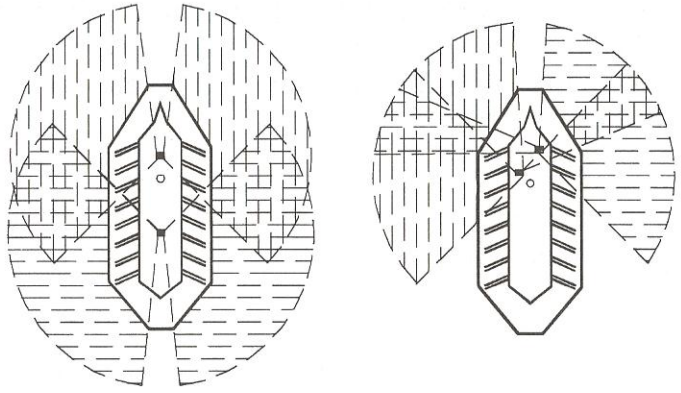
Boarding Weapons - Chemical weapons and Rhodian Firepots are always assumed to operate from base edges A or B of the ship base of the vessel carrying them - and only if either of these base edges is in contact with an enemy. These boarding weapons may only be used once and, having been used, are considered expended.

The corvus and harpago, however, may be used repeatedly during the course of a game but only against one target at a time.



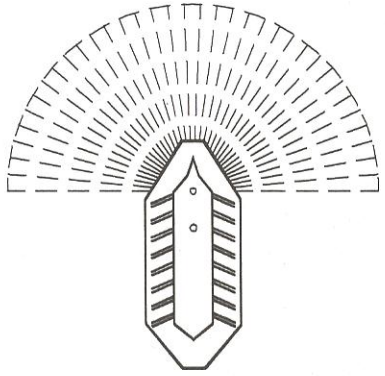
Angle of Attack of a Corvus
(Contact only)

Firing Arcs of Artillery Weapons



■ Permitted positions of Artillery Pieces

The angles of the arcs above are:
Main arcs 130° Smaller arcs 22.5°



Angle of Attack of an Harpago
(Maximum range: 25mm)

Firing at a Target for the first time:
The effect of each artillery weapon being fired at a new target, will be subject to a modification of -1 on the Ability score.

Target Priorities
An enemy ship may only be designated as a target if it is not in contact with a friendly vessel and if there is clear line of sight between the firing ship and the target.

A priority list has been compiled:

- to prevent players whose ships are equipped with a large number of artillery pieces from unrealistically selecting targets;
- to prevent a large number of ships from unreasonably firing at one target.

The Priority List

1. Any vessel that is to be the target of a ram or oar rake by the firing ship.
2. The nearest Ship Base edge of an enemy vessel as measured from the Ship Base edge of the firing ship. If two or more enemy vessels are equi-distant, a ship may split its artillery fire, provided that it is carrying more than one artillery piece and subject to the restrictions noted under Arcs of Fire.

WEAPONS RANGES

There are three weapons ranges allowed under these rules. For simplicity, they are referred to as Short, Medium and Long.

All weapons ranges are measured from ship base to ship base.

Boarding weapons, with the exception of the harpago, have no range as they can only be used when vessels are in contact. Their effectiveness however, is still governed by the Ability throw. To determine results, see page 78 .

The following is a summary of ranges of the various shipboard weapons:

Weapon Type	Short Range	Medium Range	Long Range
Missile weapons	10mm	n/a	n/a
Boarding weapons	Contact	n/a	n/a
Harpago	0-25mm	n/a	n/a
Light Artillery	0-25mm	26-50mm	51-75mm
Heavy Artillery	0-50mm	51-100mm	101-150mm

Restrictions:

Ω Weapons firing capability is reduced on vessels that
a) currently have a major fire;
b) are subject to a poor Morale result.

Ω Vessels engaged in boarding melees may not fire weapons at all.

Damage Effects of Shipboard Weapons

Naturally, the following only apply if the player has scored a 'Hit'.

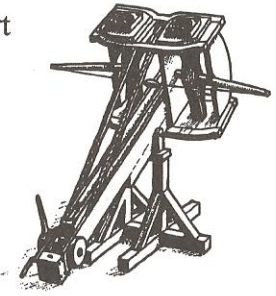
DAMAGE POINTS

Artillery Weapons

For each hit, whether or not the firing vessel was equipped with incendiary projectiles:

Per Light Artillery Piece	2 Damage Points
Per Heavy Artillery Piece	3 Damage Points

Damage Points caused by an incendiary projectile from an artillery piece, will start a small fire when a full hit is made.



Missile Weapons

1 Damage Point - for *each* category of the vessel firing.

Boarding/Contact Weapons

These do not inflict Damage Points but have an effect on boarding actions or may affect the calculation of raking damage.

The Rhodian fire pot automatically generates a minor fire in the target vessel and causes the target vessel to have reduced capability in a boarding action.

Biological Weapons will also cause the target vessel to have a reduced capability in a boarding action.

Reducing Damage Points

Short task (Alterations & Repairs pg 50). Limit of one per Turn up to a maximum of three such repairs during the game.

DAMAGE TEST

Each time that the cumulative Damage Points of a vessel becomes equal to that of the vessel's Category, this Damage Test must be taken immediately. The test determines the nature of the damage received and once taken, in effect it wipes out the number of Damage Points at which the test became necessary.

Any Damage Points insufficient to generate a test, or which are in excess of the vessel's category, are carried forward.

Target vessels throw three dice:

3-4	All vessels reduce by 1 Class. Senior officer dead. Major fire if incendiaries used.
5-6	All vessels reduce by 1 Class. Steersman dead.
7-8	Aphract vessels reduce by 1 class. Cataphract vessels fired on by heavy artillery, will reduce by 1 class. Cataphract vessels fired on by other weapons - a) lose the use of one weapon or piece of equipment carried, for the duration of the game chosen by the firer; b) if carrying no weapons or equipment, then marine casualties; c) if carrying no weapons, equipment or marines, then the deck crew become casualties.
9-10	Casualties in the deck crew.
11-18	No discernible effect.

Notes to Damage Test:

Ω If sufficient Damage Points are incurred, a vessel may be required to take more than one test in a particular Turn.

Ω With a throw of 3-4, there will only be a major fire if an incendiary device is being used in the Turn in which the Damage Test is taken.

Ω With a throw of 7-8, if the firing vessel (at the time the Damage Test is taken) is equipped with both Heavy and Light pieces, players should always assume that the Heavy weapon has caused the damage.

Explanation of Unfavourable Test Results:

Senior Officer Aboard Dead

The vessel concerned having lost its senior officer, must take a Morale Test followed by the procedure for a 'Senior Officer Aboard Dead' (Pg 119). It must continue straight ahead during its next Movement phase and will not be allowed to accelerate or decelerate during that time.

Major Fire

The vessel with a major fire must

- immediately take a Morale Test (Pg 116 & Playsheet);
- reduce speed (subject to the rules of acceleration/ deceleration) whilst the fire burns;
- modify its Ability score by 'minus 2' if engaged in any firing whatsoever;
- announce attempt to fight fire with next Ship Orders, modifying Ability score if there were Deck Crew Casualties.
  (Note: this is in addition to other modifiers which may be relevant, eg if vessel is carring a sail or an incendiary weapon).

Steersman Dead

The vessel must drop off two compass points during its next Movement phase, the direction being determined by a dice throw (odd scores - starboard; even - port). It must continue on this new heading for the whole of that Turn though it may accelerate or decelerate.

A replacement steersman is assumed to be at the helm by the end of the Movement phase in which the vessel suffered such restrictions so the vessel may act normally next Turn.

Reductions in Class

Any vessel so affected will respond to this reduction in Class immediately. (Update Fleet/Ship Data Card if used.)

Loss of Tower, Artillery Piece or Boarding Weapon

If the target vessel is equipped with one or more towers or artillery pieces or a contact weapon, then the firing player can choose which of these has been damaged or rendered inoperative.

Marine Casualties

This will cause the complement of marines to be reduced in numbers to that of a vessel which is one category lower.

If there are extra marines on board (additional to normal ship's complement), then rather than reducing the marine complement, consider all the extra marines 'wiped out'.

Deck Crew Casualties

The vessel will moderate its Ability score by 'minus 2' for any Fire fighting or Alterations and Repairs from that Turn until the game end.

Accurate Shooting Test

Use this test only when you are referred to it by the Ability Chart. The occasion for its use is when a player who fires a shipboard weapon, has a sufficiently high Ability Score to qualify for the bonus of having made an accurate shot.

There can only be one Accurate Shooting Test per Ability throw.

Note: If a 'Group' Ability score is being used, only one vessel will qualify for the Accurate Shooting Test (see page opposite).

Firer throws 3 dice.

The result is the effect on the target vessel and should be applied immediately, in addition to any penalties incurred in the Damage test (Pg 82):

3-6 Casualties in deck crew.

7-10 Aphract vessels reduce by 1 class.

Cataphract vessels fired on by heavy artillery, will reduce by 1 class.

Cataphract vessels fired on by other weapons,

a) lose the use of one weapon or piece of equipment carried, for the duration of the game (firer chooses);

b) if carrying no weapons or equipment, then marine casualties;

c) if carrying no weapons, equipment or marines, then the deck crew become casualties.

11-14 Steersman dead. Reduce by 1 class.

15-18 Senior officer dead. Reduce by 1 class. Major fire if using incendiaries.

Adverse Results Test

Vessels sometime suffer self-inflicted damage. This might be due to the misfiring of an artillery weapon, or the failure of a contact weapon during an attempt against an enemy vessel.

This reality is reflected in the rules by particular circumstances on the Ability Chart, i.e. the combination of a poor dice throw relative to the range of a specific weapon. When directed to do so by the Ability Chart, therefore, the player must test to see whether there has been such an accident, creating an 'adverse result'.

Note: If a 'Group' Ability score is being used, then this test will only apply to one vessel (see page opposite).

Throw three dice:

3 to 14	Adverse result.
15 to 18	No appreciable effect.

Explanation of Unfavourable Test Results
← *(see previous page)* ←

Adverse Result:
If there is an adverse result, then a particular weapon (subject to the priority table below) has malfunctioned. It may not be used again during the course of the game.

- Ω If it is an incendiary weapon, a Major Fire results on the firer's vessel.
- Ω If it is a chemical or biological weapon, it now affects the carrying ship and not its intended target and the vessel will suffer one reduction in Class.
- Ω If it is a Corvus, then it is considered to be locked in position and incapable of use.
- Ω If it is artillery or an harpago, the weapon has malfunctioned and there are casualties among the marines. This will cause the complement of marines to be reduced in numbers to that of a one category lower vessel; and the weapon to be unserviceable.
- Ω If missile troops only, they have expended all their weapons.

The priorities for the selection of the malfunctioning weapon are as follows:

1. The only weapon aboard able to fire.
2. Any artillery piece firing incendiary projectiles.
3. A contact weapon (if being used).
4. Any other artillery piece.
5. Missile weapons.

Group Ability Score and Firing Shipboard Weapons

In Turns where players have elected to make one Ability throw for groups of ships, squadrons or a whole fleet, rather than individual ships, then the Accurate Shooting Test and Adverse Result is applied to one ship in the group, squadron or fleet that fired. To make the selection of that one ship, consult the priority listing below.

Choice of Vessel for Accurate Shooting Test

1. Vessel with the highest quality marines.
2. Vessel with the highest quality captain.
3. The better class vessel.
4. Vessel with the least reductions in Class.
5. Vessel not firing for the first time.

Choice of Vessel for Adverse Result

1. Vessel with the most reductions in Class.
2. Vessel with the lowest quality marines.
3. Vessel with the lowest quality captain.
4. The lowest class vessel.
5. Vessel firing for the first time.

Ship to Shore Firing

Firing to and from Friendly Shores

The procedure for firing is very similar to that from one vessel to another. The range will be 10mm.

As mentioned in the section on Friendly Shores (Pgs 21-22), there are advantages to a friendly shore, as well as restrictions:

- Ω If an enemy vessel is within the 10mm range, a player - in his part of the Turn, may fire offensively from his friendly shore.
- Ω If an enemy vessel, during its Movement phase, enters the 10mm zone then it **must** fire at the troops on the island, if able. The troops on shore, as with a target vessel, can return fire, using the *Special Ability Throw.*
- Ω Damage is assessed as per the Shipboard Weapons column of the Ability Chart (short range).
- Ω For the purposes of calculating Damage Points, the 'shore' will be the equivalent of a Category 10 vessel, firing missile weapons only.
- Ω If the friendly shore becomes nullified (is reduced to the equivalent of a Category 5), the owning player loses the benefit for the rest of the game. It will also lose any value in determining the result of the game.

To assess damage to the troops ashore, the rules have been slightly amended as follows:

If sufficient Damage points have acccumulated to warrant a Damage Test, then follow the one below.

Damage to Shore Test:

3-4 Senior Officer dead.
Reduce by 2 categories. (No Morale Test needed).

5-10 Marine casualties. Reduce by 1 category.

11-18 No discernible effect.

An 'Accurate Shooting Test' will go by the following

Ship to Shore Accurate Shooting Test:

3-14 Minus 1 category.

15-18 Senior officer dead.
Reduce by 2 categories.

If a shore becomes reduced to the equivalent of a Category 5 vessel, it loses his status as a 'friendly shore'.

If the shore troops are firing, then the results (as per the Ability Chart) will be interpreted as follows:

ADVERSE RESULT = The shore troops have expended all their weapons.

A 'Hit', and 'Accurate Shooting Test' result will affect the target vessel's Damage Points in the normal way.

Oar Raking

- Ω General
- Ω Procedure for Oar Raking
- Ω Calculating Result of an Oar Rake
  - Full Oar Rakes
  - Partial Oar Rakes
  - Incomplete Oar Rakes
- Ω Raked Vessel's Enforced Manoeuvre
- Ω Oar Replacement or Repair
- Ω Use of Corvus in Oar Raking
- Ω Use of Harpago in Oar Raking

Oar Raking

OAR RAKING

An oar rake is an attempt to damage an enemy ship by destroying all or part of the oars along one side of that vessel. This attempt can only be made by a galley which is under oars alone.

Oar rakes required a high standard of seamanship to be successful and the Ability Chart reflects this, allowing only ships in Classes A to D a chance of success.

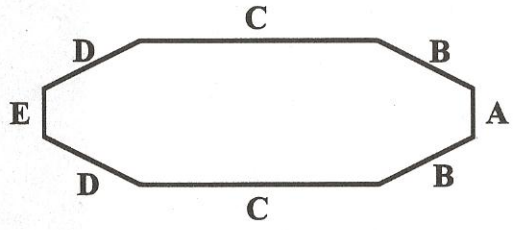
All oar raking attempts that fail become collisions, Side B to Side B or Side B to Side D.

Oar rakes may only be attempted by triremes, quadriremes and light quinqueremes.

An oar rake may be performed from either 'ahead' or 'astern' of an opposing vessel though since this action is dependent upon the combined momentum of both the vessels involved, a stern oar rake is unlikely to generate significant damage to the target vessel.

- Ω Should any vessel attempting an oar rake come into contact with another vessel other than its intended target, then the normal rules relating to collisions apply, regardless of which base edge it contacts.

- Ω Should any vessel attempting an oar rake come into contact with its target, other than at base edge B or D, then it is also subject to the normal rules relating to collisions.



Stern ↔ Bow

PROCEDURE FOR OAR RAKING

1. The attacking player must announce his intention and his target, with his ship orders for that Turn.

2. He reads off the Oar Raking column of the Ability Chart. Based on his ability score, if he is successful he then moves his galley, noting the distance expended, so that his ram bow (base edge A) touches the target galley as follows:

   - at target's base edge B if oar raking from 'ahead'

   - at target's base edge D if oar raking from 'astern'

The procedure continues as follows:

Oar Rake from 'ahead':
Move the target so that its angle B/C is touching the raker's angle A/B enabling the raker's side B to form a straight line with the target's side C. Once the position is established, the raker's vessel may complete its movement, amending the distance if required (see "Rakers attacking larger galleys").

Oar Rake from 'astern':
Position the attacking vessel so that its angle A/B is touching the target's angle D/C enabling the raker's side B to form a straight line with the target's side C. The raking galley may then complete its movement, amending the distance is required (see "Rakers attacking larger galleys").

Note: both the above cases are simply mechanics to overcome the unyielding nature of the model's bases. In neither instance do they imply any reduction in movement due to turning.

Next, calculate the raking galley's remaining move distance, once vessels are in position:

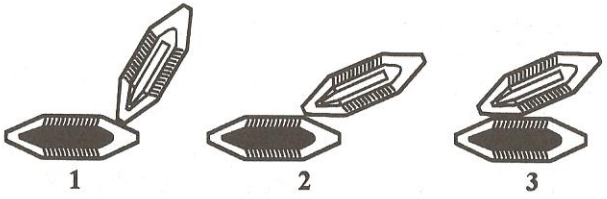
Oar Rake from 'ahead' against a stationary target or one at slow speed = the raker's remaining move without modification.

Oar Rake from 'ahead' against a target at cruise, fast or ram speed = the raker's remaining move distance + 50%.

Oar Rake from 'astern' against a stationary target or one at slow speed = the raker's remaining move without modification.

Oar Rake from 'astern' against a target at cruise, fast or ram speed = the raker's remaining move distance divided by 2.

Rakers attacking larger galleys:
The raking vessel should reduce its remaining move distance by 10mm/category to reflect the more substantial oars used by the larger vessel.



In this example, White has succeeded in stern raking Black.
1 Start of raking manoeuvre;
2 White positioned so that its side B is in line with Black's side C.
3 White completing its movement, having achieved a Full Oar Rake.

Calculating the result of an oar rake:

FULL OAR RAKES

Full oar rakes occur when the raker's base edge A has cleared his opponent's base edge C. The result is as follows:

Ω The raking vessel's speed is temporarily reduced by two bands.

Ω The raked vessel loses 5 classes and is immobilised. It may repair up to three of these classes (Alterations and Repairs). The 'repair' of 1 class does not allow the galley to move under oars; 2 allows slow speed; 3 allows up to cruise speed - which is now the vessel's maximum.

PARTIAL OAR RAKES

The raker's side A has moved along over half of the target's side C but not cleared it. The result is as follows:

Ω The raking vessel's speed is temporarily reduced by one band.

Ω The raked vessel loses 2 classes and is reduced to slow speed. The repair of 1 class allows it to move at cruise speed; 2 allows fast speed - which becomes its maximum.

INCOMPLETE OAR RAKES

Where the raker has insufficient movement to move his side A half way along his opponent's side C:

Ω The raking vessel's speed is not affected.

Ω The raked vessel incurs one loss of class and its speed is reduced by one band.

Raked Vessel's Enforced Manoeuvre

After a rake, the raked vessel - unless it grapples or is grappled or immobilised - must move the minimum distance ahead to allow it to make one point of turn towards its raked side, without touching the raker's base. It cannot alter speed during this Turn.

In certain circumstances, the proximity of the raker - coupled with the raked vessel's speed - may mean that the raked vessel does not have sufficient movement to get clear enough to make the enforced turn. In these circumstances, it must move straight ahead and make the manoeuvre in the next Turn.

Restrictions

- Ω Oar rakes cannot be continued into a subsequent game Turn.
- Ω When it is the raker's part of the next Turn, if the raked vessel has not moved - and it is still in range - he may grapple or move away.
- Ω Oar rakes by vessels under sail are not permissible under these rules. Although in theory it would be possible for a sailing vessel in the right circumstances, to rake a galley, it is precluded within the rules because to rake under sail - unless by a pure 100 to 1 chance - would require a much more sophisticated sail arrangement than that available to the Ancients.
- Ω A raked vessel which has a sail aboard, may, if at the right attitude to the wind, set sail and move without waiting to repair oars.

Oar Replacement or Repair

This is a Medium task under Alterations & Repairs (Pg 52).

Use of a Corvus in Oar Raking Situations

A corvus equipped warship that is being oar raked or about to be oar raked, may attempt to drop its corvus onto the attacking vessel, using Special Ability Throw (Defensive). The successful use of the corvus in these circumstances will depend on the galley's marines scoring an 'Accurate Shooting Test' and will be applied as follows:

Rakers from 'ahead' will be stopped by a corvus with no damage to the corvus equipped warship.

Rakers from 'astern' must achieve a full rake before they can be hit by the corvus.

Use of an Harpago in Oar Raking Situations

Harpagos may be used to disrupt an oar rake using the Special Ability throw (Defensive). Reading off the Shipboard Weapons column, a result of 'Divide by 2' will constitute a 'Miss'.

Note: the harpago may be fired at up to 25mm even with a Special Ability throw and if successful the Galley's remaining weapons may also be fired on contact.

The oar rake successfully disrupted will have a twofold effect:

1) It will reduced the amount of damage caused by the rake: a Full Rake becomes a Partial Rake and a Partial Rake becomes an Incomplete Rake.
2) The rules of Collision will then apply with the contact point being dependent on 1) above. For example, a Partial Rake will mean contact Side C to Side C and the Incomplete Rake will mean contact at Side B to Side B.

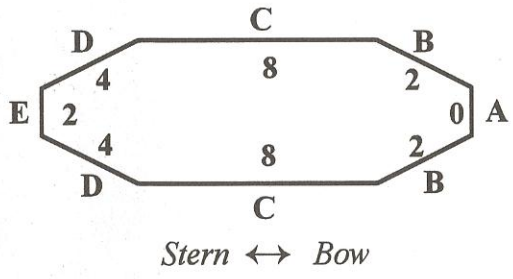
Ramming

- Ω General
  - The Ship Base
  - Ramming Procedure
  - Ramming Attack Angles
- Ω Bow Rams
  - Calculating Bow Ram Damage
- Ω Ram Damage
  - Calculating Damage Result
- Ω Other Ramming Considerations
  - Multiple Rams
  - Galleys under Sail or with Masts Stepped
- Ω Involuntary Movement as a Result of a Ram
- Ω The Corvus in Ramming
- Ω The Harpago in Ramming

RAMMING

General

- Ω A ram results from a ship bringing its ram beak base edge into contact with another vessel's base edge during the course of its movement.
- Ω Ships not equipped with a ram beak can never ram another vessel. Any contact made by such a ship in its movement phase, is a collision.
- Ω When ramming another vessel, a ship would attempt to move at its fastest possible speed in a straight line towards its target, in order to maximise the damage inflicted.
- Ω A ship may accidentally ram (or collide) with another vessel of the same fleet.
- Ω A 'beam' ram or one from 'astern' is unlikely to damage the ramming galley, whereas one from 'ahead' may injure both vessels.



Each edge of the ship base has been allocated a **Ram Value**. This Ram Value forms the basis of any calculation of contact damage.

DIAGRAM SHOWING RAMMING VALUES

THE SHIP BASE

The contact points of ships' bases being critical, the base shown in the diagram has been designed to allow rapid determination of rams and collisions and the speedy resolution of any resultant damage.

Any contact made by a galley with its ram beak (side A), during its movement phase, constitutes a **ram**. Contact with another vessel with any other base edge is considered a **collision**.

> The special exemption to this rule is that when an oar rake has been ordered against a particular vessel: the oar raking vessel's side A may contact the target vessel's side B or D (only) as it gets into position.

Side A of a vessel's base represents the bow area of the vessel. On a galley, it is intended to represent the ram and the area directly behind the ram. Side A is the most strongly built part of a galley.

Side B of a vessel's base represents the forward hull of the vessel. On a galley, this includes the part of a ship between the stem and the leading oar banks and is the second strongest part of the hull. Side B is important as the base edge an opponent must contact to commence an oar rake from 'ahead'.

Side C of a vessel's base represents the sides of the vessel. On a galley, it is the portion of the vessel's side covered by the oar banks and the most vulnerable to ramming.

Side D of a vessel's base represents the rear hull of the vessel. On a galley, it extends from the rear of the oar bank to the steering oars. It is also vulnerable to ramming and is the base edge an opponent must contact to commence an oar rake from 'astern'.

Side E of a vessel's base represents the stern of the vessel. This would be relatively strong by virtue of the construction requirements of Ancient ships.

PROCEDURE:

1. **A player announces as part of his Orders that he intends to ram.**
2. **He determines the angle of attack.**
3. **If applicable, he takes the 'Bow Ram Test'**
4. **He ascertains Ram Damage as follows:**
   a) **identify ramming value of contacted side of target ;**
   b) **calculate 'resultant speed value';**
   c) **add b) to a) and modify the result by the variables listed for both vessels.**
5. **The resultant figure is the amount of ram damage to the target vessel and is expressed as reductions in class.**

Turning before Ramming

Vessels which have been ordered to make a turn (or turns) coupled with a ram, must attempt both.

The execution of the turn(s) takes precedence and could result in the failure of the vessel to make contact with its intended target. This is acceptable, provided that the active player's galley expends the majority of its movement, heading towards the target.

RAMMING ATTACK ANGLES

There are three basic angles of attack.

From 'Ahead': These are rams where one galley's Side A contacts another vessel's Side B or C from ahead of a line at right angles to the target's keel line. These contacts can be very damaging to the target because the closing speeds of the two vessels are added together in the Resultant Speed Value (RSV).

However, the rammer may also experience difficulty and receive damage when extricating his ram (see Alterations and Repairs). Also, the majority of rams from 'ahead' at an enemy galley will be aimed at the target's Side B, causing the rammer the additional potential hazard of a Bow Ram Test (next page).

> *Note 1:* No galley may ram another at Side A - this is to reflect the fact that the ram beak was an extremely small target. The most probable outcome of such an attempted ram would have been for one or other of the galleys to strike his opponent at Side B.
>
> *Note 2:* A galley need not take the Bow Ram Test if the action announced is:
> - a ram from 'ahead' at a merchant vessel, or
> - a ram at Side C of any other galley.

Beam Rams: These are only permitted when the ramming galley contacts directly at right angles to the target's keel line. Beam rams can strike at the target's base, Sides B, C or D. In this calculation, only the ramming galley's speed is considered in the RSV. Ram extrication is easier from a 'beam' ram and in consequence the rammer is less likely to receive damage.

> *Note:* Rams into stationary vessels will be taken as 'beam' rams for calculating damage and ram extrication.

From 'Astern': Here, the galley's Side A contacts another vessel's Side C, D or E from astern of a line at right angles to the target's keel line. In this type of ram, the speed of the target is subtracted from the rammer's speed and the result considered in the RSV. These rams will inevitably be less damaging than with the other two methods of attack, although still considerable if contacting Side C.

Ramming amidships (Side C) from 'astern' was the preferred method of attack in Ancient times as it was considered the best way to cause damage to an opponent with the least risk to oneself. This is reflected in the rules by the fact that ram extrication from 'astern' is the easiest and least likely to cause damage to the rammer.

Note: Although theoretically possible to strike Side B from 'astern' or Side D from 'ahead' because of the shape of the bases, both these instances will be counted as collisions.

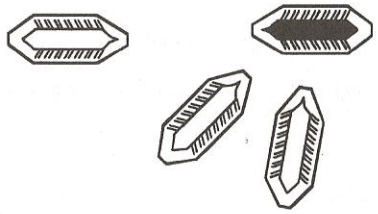
Example of a Ramming Attempt:

Player announces that his 'C' class Hexeres at fast speed under oars, intends to accelerate, turn and ram a Hepteres that is heading towards it.

He then makes the Ability throw for the Hexeres and it's a score of 7, so the vessel fails to accelerate. This failure means that the movement allowance of 105 is insufficient for it to attack the Hepteres' side C.

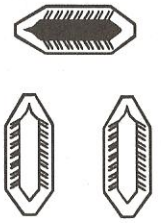
Because ship orders are to turn and ram, the Hexeres must attempt both. The player must turn the galley at least once. He then has a choice of either attacking the target's side B (which will involve the Bow Ram Test) or attempting the target's side C which he knows will fall short, leaving him vulnerable to his opponent's next move.

Examples of RAMMING ANGLES:

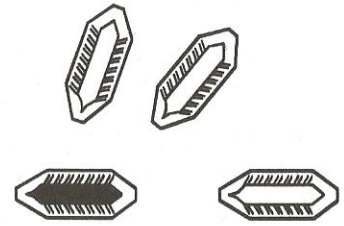


Ramming from 'ahead'. Calculate by adding speeds .

Beam Rams - only permissible from directly 'abeam'. Only use rammer's speed.



Ramming from 'astern'. Deduct one speed from the other.



Bow Rams

A potential bow ram is where one galley attempts a ram from ahead at another vessel's side B. If the outcome is not as intended, then it is possible that the attacking vessel will itself sustain damage.

There are contemporary accounts of galley captains and steersmen losing their nerve and attempting to turn away from a bow ram at the last moment, often with disastrous consequences to their own vessel. This is reflected in the rules by the Bow Ram Test.

The Bow Ram Test is taken immediately a bow ram becomes inevitable and certainly by the time the rammer is within 25mm of its opponent's base.

White Vessel has a Bow Ram Test result of 3-7 *RESULT*

White Vessel has a Bow Ram Test result of 8-12 *RESULT*

White Vessel has a Bow Ram Test result of 13+ *RESULT*

Bow Ram Test

This test is necessary to ascertain whether the rammer's attack is successful against a target area which is relatively small.

Active player throw 3 dice, then modifies the result by the following:

Galley has a reinforced ram bow	+4
Inspired admiral on board	+2
Good admiral on board	+1
Good captain on board	+1
Good crew on board	+1
Each Category that the ramming vessel is higher than its intended target	+1
Each Category that the ramming vessel is lower than its intended target	-1
Target has a reinforced bow	-4

THE RESULTANT FIGURE IS THEN COMPARED TO THE TABLE BELOW:

7 (or less) The steersman misjudges the approach. The ramming vessel sheers off at the last moment - Odd scores to starboard, Even scores to port. The ramming vessel's base edge B contacts its target's base edge A. Its own ram attempt has failed and it has instead been rammed by its intended target. No further movement by either vessel may be made until the ram is resolved during the intended target's next Movement phase.

8-12 The steersman has misjudged the angle of attack. The ramming vessel sheers off at the last moment - Odd scores to starboard, Even scores to port. The ramming vessel's base edge B contacts its target's base edge B. Its own ram attempt has failed and a collision has resulted.

13+ The steersman guides his vessel correctly and the ramming ship rams its target's base edge B as intended - Odd scores to the target's starboard, Even scores to its port side.

RAM DAMAGE

A NUMBER OF FACTORS DECIDE THE DAMAGE INFLICTED BY A RAM:

The 'ramming value' of the ship's base edge contacted is one part of the calculation. Another is the 'resultant speed value' of the vessels involved. The higher the 'resultant speed value' the greater the damage inflicted.

Note: Ramming results are not governed by the Ability Chart, although there is a link with the Ability Score in that:

a) a high Ability score affects movement and so contributes to a successful ram;

b) a high/low Ability score is used in the calculation of Ram Damage, in order to reflect the element of luck.

Resultant Speed Value

The Resultant Speed Value is a combination of the speed (in mm) of the vessel performing a ram or collision and the speed (in mm) of the target vessel at the end of its last movement phase.

- Ω If the final angle of approach of the ramming galley is between directly 'ahead' and directly 'abeam' to the direction of movement of the target vessel, then the speed of the contacted vessel is added to that of the galley initiating the contact.
- Ω If the ram is from directly 'abeam' at right angles to the keel, then only the rammer's speed is calculated.
- Ω If the ram is from any other angle, the speed of the vessel contacted is subtracted from that of the vessel initiating the contact.

The 'resultant speed value' may thus be zero or even negative.

TO CALCULATE 'RESULTANT SPEED VALUE':

1. Determine the ramming angles of the vessels involved.
2. Add or subtract the speeds of the vessels in mm as appropriate.
3. Divide this sum by 100.
4. The outcome should be rounded up or down to the nearest whole number.
5. This final number is the Resultant Speed Value for the vessels involved.

Note 1: If the target ship is stationary, the Resultant Speed Value is just the rammer's speed.

Note 2: Ramming galleys that do not use at least half their full movement distance before contact, should use the speed they maintained in their last Turn, when calcaulating resultant speed value.

Summary

TO CALCULATE THE DAMAGE INFLICTED BY A RAM

1. Take the 'ramming value' of the base edge of the target vessel.
2. Add this to the Resultant Speed Value.
3. Adjust the resulting figure to allow for variables.
4. The final figure is the amount of Ram Damage and is expressed as Reductions in Class.

Next, modify the resulting figure by the following variables:

The Ramming Galley (variable)

More than 1 ship ramming in the Turn (see 'Multiple Rams')	+2
Using a reinforced ram bow	+1
Current Ability score is 14-18	+1
Each Category higher or lower than rammed vessel	+1 or -1
Greater or lesser Structural Integrity if same Category	+1 or -1
Current Ability score is 3-7	-1
Each reduction in Class suffered from firing, this Turn	-1
Each turn the vessel has to make prior to contact*	-1

* *This penalty is included because if the attacking vessel has to make a turn to reach its objective, it affects the momentum at contact.*

However, there is a Special Exemption to this particular rule for Later Aphract Threes and Light Fives as follows:

If they have two of the following: (a) a good captain, or (b) a good crew, or (c) a fast ship, it diminishes their penalty by 1.

If they have all three (a), (b) and (c), then it diminishes their penalty by 2.

The Rammed Vessel (variables):

Reinforced bow struck at side B	-1
Special Ability score is 14-18	-1
Special Ability score is 3-7	+1
Each previous reduction in Class	+1
Vessel is overburdened	+1

The final figure is the amount of Ram Damage and is expressed as a Reduction in Class to the vessel concerned.

Negative Result

This could happen where a damaged small vessel rams a larger vessel. Any negative result causes damage to the ramming galley.

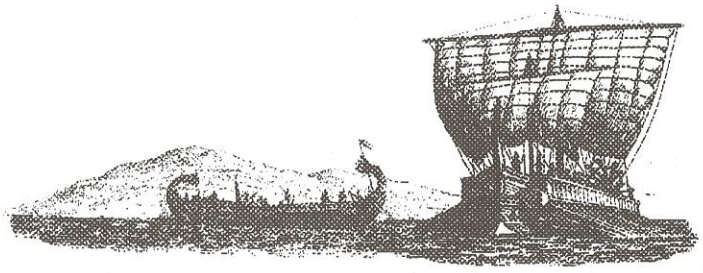
Shattered Vessel

A vessel of E class or below, receiving 10 or more reductions in class in a Turn as a result of a ram, is considered 'shattered' and is removed from the table.

Multiple Rams

When two or more vessels ram the same enemy in the same game Turn, they each gain the 'plus 2' adjustment.

The damage received by the target vessel is calculated separately for each of the ramming vessels.



Ramming Considerations

'Beam' rams and rams from 'astern' only result in damage to the target vessel.

Announced rams from 'ahead' at an opponent's galley, can have one of three results

a) as intended;

b) as a collision between the two galleys;

c) the attacking galley becomes impaled upon the opponent's ram.

Provision for Galleys under sail or with masts stepped:

Galleys may ram or be rammed when under sail or with masts stepped. However, after ramming damage has been apportioned, the player with stepped masts should throw a dice to see if his ship has sustained damage from the impact.

3-6	Reduce Class by 2
7-10	Reduce Class by 1
11-18	No damage

Note: Any reductions in class so caused, will count double in the first two rounds of a boarding melee.

Involuntary Movement as a Result of a Ram:

A ram automatically ends a ship's voluntary movement. However, in certain circumstances where the target vessel is pivoted away from the point of contact, the ramming ship will also be moved - without penalty - so that it maintains the contact.

Ω Any ship suffering a ram at B, C or D must pivot away from the point of the ram and any ship suffering a 'ram from astern' on base edge E must move ahead subject to the following:

For each contact by a vessel which is two or more Categories higher, the victim will pivot two compass points away from the point of contact - if contacted on base edges B, C or D, or move 20mm away from the point of contact if contacted on base edge E.

For each contact by a vessel of equal Category, or one Category higher or lower, the target will pivot one compass point away from the point of contact if contacted on base edges B, C or D or move 10 mm directly away from the point of contact if contacted on base edge E.

A vessel contacted by another which is two or more Categories lower, suffers no pivot or movement as a result of that contact.

Ω If subject to multiple contacts from different directions in the same Turn, calculate the effect from one contact first then that for each additional contact. The player controlling the ramming ships may decide the order in which the effect of each contact is decided.

Ω In the event of a vessel suffering two contacts along the same base edge during the same Turn (usually only possible along base edge C), then only the effect generated by one ship is taken into account (the larger, if one is present, otherwise it's the ramming player's choice).

Ω In all cases of pivots or movement resulting from a contact, the vessel initiating the ram will maintain contact with the base edge of its target where the contact first took place. In the next Turn, the target (rammed) vessel will drift at the appropriate speed (Movement under Sail, pg 63), towing the ramming vessel with her.

If the rammed vessel has received no damage, she may move away at 1 speed band less than her previous speed.

Ω Galleys ramming other vessels amidships from directly 'abeam' will, because of the momentums involved, be considered to have struck 'astern' of midships, so that the target vessel's pivot will be away from the stern.

- Any vessel rammed at base edge D, is assumed to have damaged its steering oar on that side. Until the other ship has extricated its ram or either ship moved away from the collision, the damaged vessel cannot attempt a repair of its steering oar.

  When the damaged vessel is free to move, it may only do so at a maximum of cruise speed and may only make one point of turn towards the damaged side until the repair to the steering oar is effected.

  A vessel damaged on both its side D's, when free to move, will be at Slow and able only to turn 1 point in either direction.

- Unless shattered, the rammed vessel is held until the rammer extricates its ram. In the meantime, the two vessels will drift at the appropriate speed.

- Ramming galleys that shatter another vessel, may complete their movement less 50%. If they contact another vessel within that movement, they can only collide (no firing allowed).

The Corvus in Ramming Situations

A Roman corvus-equipped warship may choose to drop its corvus onto the deck of any ship that it rams or by which it is being rammed (if in reach). To deploy the corvus, the vessels must be in contact as follows:

The vessels must touch at the corvus equipped galley's base side A, B or C - **ahead** of the first file of oarsmen (on the corvus equipped galley).

A corvus is assumed to contact after ramming and so does not affect damage caused by the ram. Its purpose is to give an advantage to boarding.

The Harpago in Ramming Situations

If an harpago equipped vessel is ramming or about to be rammed, the velocity of the closing galley will negate any benefit from the use of the harpago, except that the other vessel will be grappled.

Ramming in strong winds or gales (optional)

Ramming is assumed to take place in a moderate breeze or less and the results are calculated for those conditions.

However, should players wish to ram during strong winds or gales, they may do so, making the following adjustment to the target's damage:

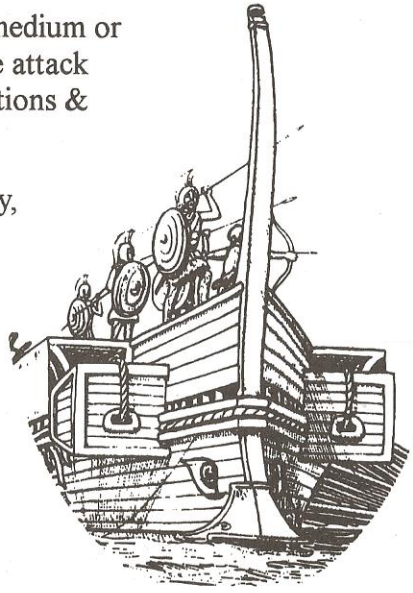
In strong winds - 1 additional Class Reduction;
In gales - 2 additional Class Reductions.

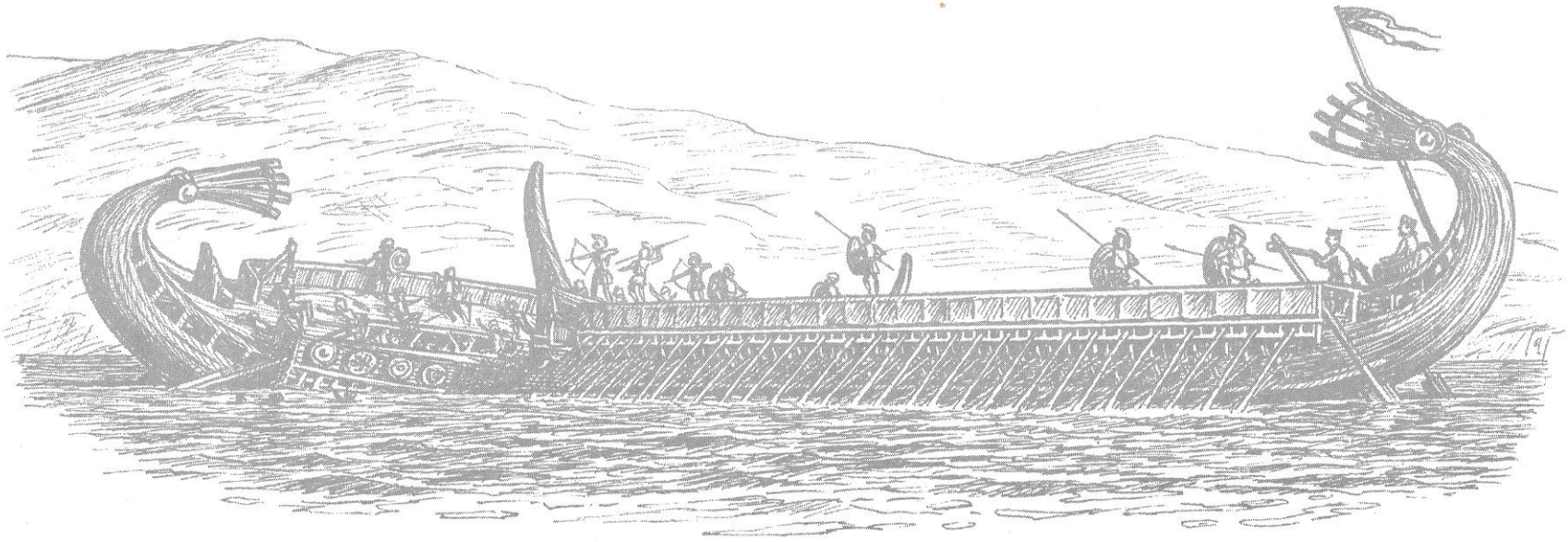
Ram Extrication

Ram extrication is a short, medium or long task - depending on the attack angle of the ram (see Alterations & Repairs for details).

If the target ship is stationary, ram extrication is that of a 'beam' ram (Medium task).

If the target vessel is shattered or if there was no damage, then extrication is automatic and no task is required.





COLLISIONS

- Ω General
- Ω Contacts not deemed to be Collisions
- Ω Calculating Collision Damage
- Ω The Corvus & Harpago in Collisions
- Ω Involuntary Movement as a Result of a Collision
- Ω Separating from a Collision

COLLISIONS

General

Collisions between two vessels often occured in ancient battles. They could be very damaging but unlike rams, were not usually deliberate actions.

In most cases the ram beak would either not be involved or not used with full effect so that generally, the collision would be between two large surfaces.

In these rules, collisions occur when one vessel's base touches another's base.

Contacts which are not deemed to be Collisions~

The following circumstances do not constitute a collision although contact is made.

Between Friendly Vessels

During moderate breeze or less:

a) if one vessel is stationary and the other is at slow speed or drifting;

b) if both vessels are at slow speed or drifting on the same heading.

Between Enemy Vessels

During moderate breeze or less:

a) if the enemy is stationary and the moving vessel is at slow speed;

b) if the enemy was at slow speed or drifting during his previous movement phase and the moving vessel is at slow speed, with both vessels on the same heading.

In both cases, movement will end when the vessels are fully alongside each other.

Procedure for calculating Collision Damage

Players should work through the calculations, Steps 1) to 4) below, to ascertain the amount of Collision Damage.

Then, because of the unpredictable nature of collisions, the damage is apportioned between the vessels involved.

1) **Determine the Ramming Value of the base edge involved for both the vessels concerned.**

2) **Add both vessels' Ramming Values together and divide the result by two.**

3) **Add the 'resultant speed values' of both vessels involved to the outcome of 2) above.**

4) **Adjust the resulting figure to allow for the variables listed below:**

For a collision in a gale	+4
For a collision in a strong wind	+2
For a collision in a moderate breeze	+1
For a collision in a light breeze	0
For a collision in light airs	-1
For a collision in a calm	-2

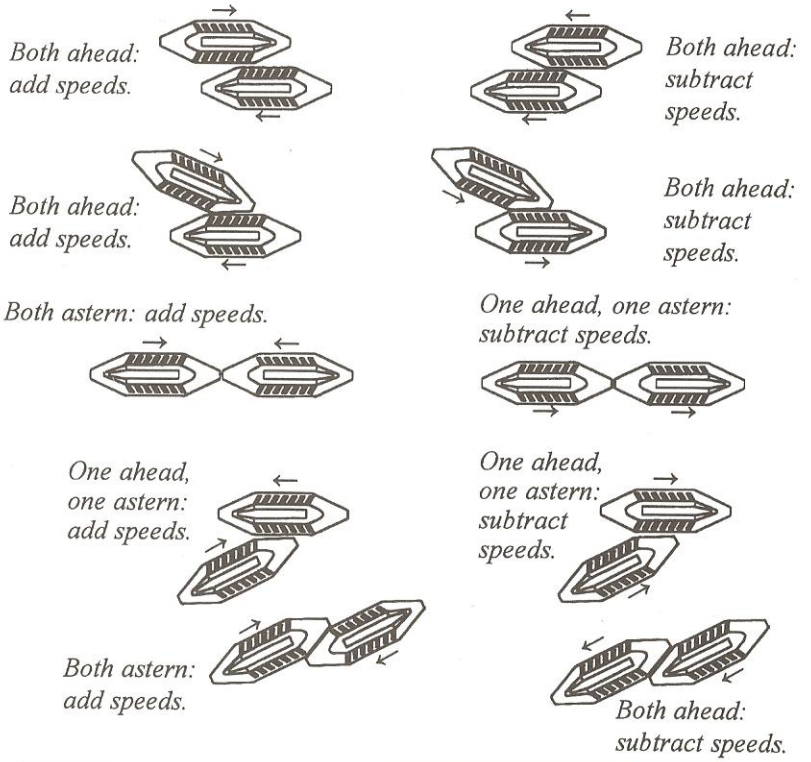
The resultant figure is the amount of Collision Damage and is expressed as Reductions in Class. This should now be apportioned between the vessels concerned, see table on pg 104.

Resultant Speed Value

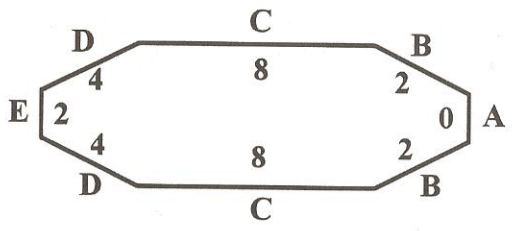
The Resultant Speed Value is a combination of the speed (in mm) of the vessel performing a collision and the speed (in mm) of the other vessel.

- Ω If the other vessel is an opponent's, then its speed during its last movement phase will be used for the calculation.
- Ω If the final angle of approach of the vessel is between directly 'ahead' and directly 'abeam' to the direction of movement of the other vessel, then the speed of the contacted vessel is <u>added</u> to that of the vessel initiating the contact. This is shown on the left of the diagram opposite.
- Ω If the collision is from directly 'abeam' at right angles to the keel, then only the moving vessel's speed is calculated.
- Ω If the collision is from any other angle, the speed of the vessel contacted is <u>subtracted</u> from that of the vessel initiating the contact.

The Resultant Speed Value may thus be zero or even negative.



Ramming Values



To calculate Resultant Speed Value:

1. Determine the direction of contact between the vessels involved.
2. Add or subtract the speeds of the vessels in mm as appropriate.
3. Divide this sum by 100.
4. The outcome should be rounded up or down to the nearest whole number.
5. This final number is the Resultant Speed Value for the vessels involved.

Note: If one vessel is stationary, the RSV is that of the moving vessel alone.

The outcome of collisions was unpredictable and damage could be to either or both vessels. To reflect this, players need to apportion damage. They distribute the calculated total Reductions in Class, as in the table below.

Table for Apportioning Damage to Colliding Vessels

Work down the table, ignoring any items that do no apply. If the calculated total Reductions in Class is more than 8, begin again at the top of the table and repeat until all reductions in class have been apportioned.

(CR=Class Reduction)

CR	*Recipient*
1st	The vessel with the lowest Ability or Special Ability score*.
2nd	The vessel contacted at the highest scoring base side.
3rd	The vessel struck by Side A or B of a galley with reinforced bow.
4th	The vessel that is most overburdened.
5th	The lower category vessel or, if both vessels are the same category, the one with the lower structural integrity.
6th	The vessel with the most previous reductions in class.
7th	The vessel that is a slow ship.
8th	The vessel that has been involved in a previous collision.

Additional Damage

A vessel which has a mast(s) stepped, may incur additional damage. After the distribution of damage as above, the owning player must throw 3 dice and compare the result with the table below.

3-6	Reduce by 2 classes.
7-10	Reduce by 1 class.
11-18	No additional damage.

THE CORVUS & HARPAGO IN COLLISIONS

The Corvus

Where a collision occurs involving a corvus equipped vessel - and the opponent is within the arc of the weapon - the corvus may be deployed. This will have the effect of holding its opponent alongside, facilitating boarding by its marines.

The Harpago

In all cases, the successful use of the harpago creates a collision. For the purpose of calculation of damage, the speed of a vessel hauled in by an harpago, will be considered Slow.

In *Offensive* situations (the harpago is fired in the owning player's part of the Turn): If the player has movement left, this will be halved after the harpago has made contact. The target vessel will be towed along and finish up in contact, its nearest side against the most logical position on the firer's base.

If there is no movement left, the target vessel will automatically be hauled into contact, its nearest side against the firer's side B.

In *Defensive* situations (this is where the non-active player is, under the rules of Shipboard Weapons, entitled to return fire): If he has an harpago on board, he may wish to fire it at 25mm to disrupt the enemy and bring about contact - when he is then entitled to fire his other weapons.

If successful, the target vessel will, if it is moving, terminate its movement phase when it makes base contact.

* The Special Ability Score is allowed the non-active player in defensive situations. It is used to adjudicate the result of return of shipboard weapon firing; and in ramming and collisons, to reflect the element of luck in the outcome of damage from contact.

AFTER A COLLISION

Involuntary Movement as a Result of a Collision:

A collision automatically ends a ship's voluntary movement, even if no damage is sustained. (Where no damage has occurred, any remaining movement is assumed to have been used in evading a damaging collision.)

In certain circumstances where the other vessel is pivoted away from the point of contact, the moving ship will also be moved - without penalty - so that it maintains the contact.

Ω Any ship suffering a collision at B, C or D must pivot away from the point of the contact and any ship suffering a collision from 'astern' on base edge E must move ahead subject to the following:

If vessel 'X' collides with vessel 'Y' which is two or more Categories lower, 'Y' will pivot two compass points away from the point of contact - if contacted on base edges B, C or D, or move 20mm away from the point of contact if contacted on base edge E.

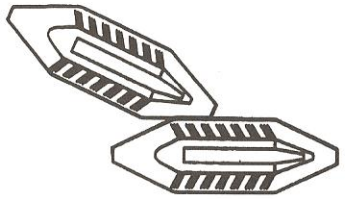
If vessel 'X' and vessel 'Y' are of equal Category, or the difference between them is one Category higher or lower, then 'Y' will pivot one compass point away from the point of contact if contacted on base edges B, C or D or move 10 mm directly away from the point of contact if contacted on base edge E. *See diagrams opposite.*

Ω A vessel contacted by another which is two or more Categories lower, will suffer no pivot or movement as a result of that contact.

/continued overleaf

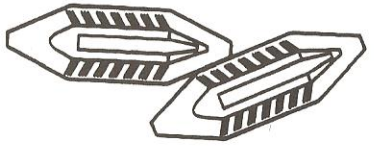
Examples of Involuntary Movement after a Collision, using galleys of the same category:

AT COLLISION



Target on course N.

AFTER COLLISION



Target moved to course NNW

AT COLLISION

AFTER COLLISION

Both 10mm Ahead

Involuntary Movement as a Result of a Collision - continued:

- Ω If subject to multiple contacts from different directions in the same Turn, calculate the effect from one contact first then that for each additional contact. Throw a dice to determine the order in which the effect of each contact is decided, if it is not obvious which struck first.
- Ω In the event of a vessel suffering two contacts along the same base edge during the same Turn (usually only possible along base edge C), then only the effect generated by one ship is taken into account (the larger, if one is present, otherwise dice to determine).
- Ω A vessel colliding with another directly amidships from directly 'abeam' will, because of the momentums involved, be considered to have struck 'astern' of midships, so that the target vessel's pivot will be away from the stern.
- Ω Any vessel contacted at side D in a collision, is assumed to have damaged its steering oar on that side. Until the vessels separate, the damaged vessel cannot attempt a repair of its steering oar. When free to move, it may only do so at a maximum of cruise speed. It may only make one point of turn towards the damaged side, until the steering oar is repaired.

  A vessel damaged on both its side D's, when free to move, will only be able to move at Slow and to turn 1 point in either direction, until repairs are effected.
- Ω In all cases of pivots or movement resulting from a contact, the vessel 'X' initiating the collision will maintain contact with the base edge of the other vessel 'Y' where the contact first took place.

  In the next Turn, 'Y' will drift at the appropriate speed (Movement Under Sail chart), towing 'X'.

Separating from a Collision

- Ω A vessel which has received no damage in the collision, may move away at one speed less than its previous speed.
- Ω If a vessel has sustained damage in the collision, then it must pass a Medium task (Alterations & Repairs) in order to separate from the other vessel. The Ability score must be moderated specifically for this act as follows:

  Minus 1 per reduction in class that the vessel incurred during the collision.
- Ω If successful in the task of separating from a collision, then the player compares his Ability score with the Ability Chart (Acceleration/Deceleration column) to see whether he may move off.

  Depending on his vessel's class, if he passes - he may move off at Slow speed (only). If he fails, then his vessel is moved 10mm away from the other vessel and is subject to the rules for Drifting.
- Ω If the collision has been followed by a boarding action, then the ship attempting to separate will need to further moderate its Ability score by any current Combat Advantage/Disadvantage that it is suffering.

BOARDING

INCL PRIZES

- Ω General
- Ω Restrictions
- Ω Boarding Procedure
- Ω Boarding Melee Test
- Ω Other Boarding Considerations
  Fires and Boarding
  Firing whilst Boarding/Counter-boarding
  Loss of Senior Officer during a Boarding Melee
- Ω To terminate a Boarding Action
  In a Ramming Situation
  In a Collision
- Ω Multiple Boarding Actions
- Ω Boarding Actions involving Small Vessels (OPTIONAL)
- Ω Prizes

BOARDING

BOARDING

General

- Ω Boarding can only take place between vessels that are in contact at the end of the Movement section. This contact may be as a result of a ram or a collision (including harpago induced collisions).
- Ω Boarding may be aided by the use of grapples, corvus or harpago. However there are limitations to the use of the corvus and the harpago in their reach and the fact that they can only be used against one vessel at a time.
- Ω A vessel may only take part in one boarding action at a time - whether it is the initiating boarder, the boarded vessel or a supporting vessel for either side.
- Ω No vessel may initiate a new boarding action until either the current boarding action is resolved or it breaks off from that boarding action and contacts another vessel.
- Ω There is no limit to the number of vessels that may take part in any particular boarding action, provided the rules relating to contact are observed (Rams, Collisions etc).
- Ω Once initiated, a boarding action continues until it is resolved in favour of one player or the other, or one party successfully breaks off the action.
- Ω Warships are not required to prepare boarders and/or counter-boarders; they are considered available at the start of the game. Vessels that do not carry a marine complement offer only token resistance when being boarded and will surrender at the end of the boarding phase of the Turn in which they were boarded.
- Ω *Note*: Boarding is not governed by Ability Chart although a player's Ability Score has a moderating effect (to reflect an element of luck).

Restrictions

- Ω Because the cessation of movement is considered to end the player's part of Turn, a player who rams or collides with an opponent, cannot board in that same Turn. The opponent may take the initiative and try to board in his part of Turn (or try to break free if it is a collision).
- Ω THE VESSEL BEING BOARDED: Counter-boarding is considered automatic. The only other action allowed the boarded opponent during the course of the melee is to try to cut grapples or harpago and break free. He cannot transfer from being the boarded party to being the boarder. However, it could happen as a result of the melee, that the boarder loses - in which case the boarded player will have won the action and be able to place a prize crew aboard his opponent.

THE EFFECT OF MORALE TESTS ON BOARDING

No Morale Tests need to be taken during a boarding action. However, before a boarding action, BOTH players should check if they are required to take a Morale Test, the result of which may affect their ability to continue.

The player boarding:
If he fails the Morale Test, his proficiency in boarding will be affected and this is catered for in the list of modifiers for 'own' vessel.

The boarded player:
Likewise, the result of the Morale Test affects the opponent's ability to withstand boarding. This is reflected in the list of modifiers for 'opponent's vessel'.

Because of the different ways two vessels could come together in collisions or ramming, each boarding would offer different obstacles to the party attempting to board. We have tried to reflect this diversity of contact, as well as the many other variables that might apply, to provide players with a realistic outcome. This has necessitated a number of calculations before arriving at a final score, for each round of boarding.

BOARDING PROCEDURE

① Announce intention to board with Orders at the start of the Turn.

② Take Morale Test if necessary.

③ Calculate side score to determine the ease of boarding - see table opposite.

④ Alter the side score as per list of modifiers for own (boarding) vessel.

⑤ Modify the resultant score by the opponent's (boarded) list of strengths/weaknesses, including his Special Ability Throw (Defensive) result.

⑥ Apply this final moderated figure to the Melee Test which follows.

The Melee Test gives a result for that Turn only.

The result is either final, or, in most cases, expressed as a figure which is a combat advantage/disadvantage to the boarding player(s). This combat advantage/ disadvantage is incorporated in the list of moderators.

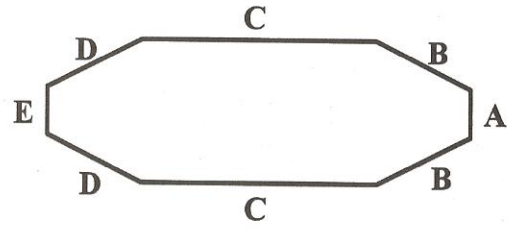
⑦ If the boarding continues, start again at ③, work down to ⑥, using the combat advantage/disadvantage if applicable.

③ Calculating Side Score

The following table gives a score for the different combinations of contact. The letters are the points of contact for the two vessels involved, the first letter always referring to the boarding vessel.

RAMS	
A/C	+1
A/B	0
A/D	0
A/E	-2
C/A	+1
B/A	0
D/A	0
E/A	-2

COLLISIONS	
C/C	+2
B/C, C/B, C/D, D/C	+1
B/B, B/D, D/B, D/D	0
C/E, B/E, D/E, E/C, E/B, E/D	-2



BOARDING

The boarding player must now alter the established side score, firstly by the list of modifiers to his own vessel, then by the list of modifiers to his opponent's vessel. These modifiers cover the attributes, good and bad, of both vessels.

④ OWN VESSEL:

If the Morale Test taken prior to boarding failed, then in the 1st round only, apply the following:

7 or 8	-1
5 or 6	-2
4 or less	Intending Boarder surrenders

Deploying a corvus (1st round only)	+2
Inspired Admiral aboard (1st round only)	+2
Good Marines	+2
Each tower	+2
Good Admiral aboard (1st round only)	+1
Good Captain aboard (1st round only)	+1
More marines *(See Note One)*	Cumulative +1
Larger by two categories *(See Note Two)*	+1
Any functioning light artillery piece aboard	+1
Chemical/Biological weapons supporting boarders	+1
Current Ability score of 14-18	+1
Supported (friendly vessel in contact)	+1
Each combat advantage/disadvantage	+1 or -1
Current Ability score of 3-7	-1
Each reduction in class	-1
Minor fire	-1
Each prize crew not recovered	-1
Poor Admiral aboard (1st round only)	-1
Poor Captain aboard (1st round only)	-1
Incompetent Admiral aboard (1st round only)	-2
Poor marines	-2
Major fire	-2
Sail(s) and Mast(s) aboard	-1

⑤ OPPONENT'S VESSEL

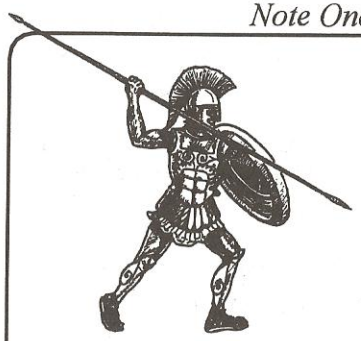
If the Morale Test taken prior to boarding failed, then in the 1st round only, apply the following:

7 or 8	+1
5 or 6	+2
4 or less	Boarded vessel surrenders

Poor marines	+2
Major fire	+2
Incompetent Admiral aboard (1st round only)	+2
Poor Admiral aboard (1st round only)	+1
Poor Captain aboard (1st round only)	+1
Minor fire	+1
Each reduction in class	+1
Each prize crew not recovered	+1
Special Ability score of 3-7	+1
Special Ability score of 14-18	-1
Supported (friendly vessel in contact)	-1
Any light artillery piece carried	-1
More marines *(See Note One)*	Cumulative -1
Chemical/biological weapons used in support	+1
Larger by two categories *(See Note Two)*	-1
Good Admiral aboard (1st round only)	-1
Good Captain aboard (1st round only)	-1
Inspired Admiral aboard (1st round only)	-2
Deploying corvus (1st round only)	-2
Good marines	-2
Sail(s) and mast(s) aboard	+1

Remember, these moderators will affect the outcome for the boarding player only.

Note One: More Marines



The higher a vessel's category, the greater their normal marine complement.

When a player opts for a vessel to carry 'extra' marines, the complement is doubled. However, this does not necessarily mean it will have more than a larger category vessel.

Means of establishing which vessel has MORE marines:
If one galley has 'extra' marines and the other is larger - with only one category difference - then it is assumed they have an equal size complement. e.g. a '3' with 'extra' marines = a '4' with its normal complement of marines.

If one galley has 'extra' marines but the other is larger by more than one category - then despite having 'extra' marines on board, it is still inferior in number. e.g. a '3' with 'extra' marines has LESS marines than a '5' with its normal complement.

Cumulative modifier means the addition/subtraction is increased by one for each round of melee.

Note Two:Larger by two categories (plus or minus 1).

For the purpose of resolving a boarding action, a vessel which is aided by a friendly vessel*, will add the number of categories of that friendly vessel to his category.

Thus, if a Cat 5 is aided by a Cat 3 (total 8) - against a Cat 4 vessel, then the difference in categories gives a +2 or -2 in the modifiers.

In the event of the difference between the accumulated categories and the opposing vessel resulting in an odd number, then ignore the remainder.

* *The friendly vessel must be in contact - with all that implies (see Rams, Collisions etc).*

⑥ BOARDING MELEE RESULT

The player who initiated the boarding action, now ascertains the result. Using the Score established after the application of moderators in procedure ④ and ⑤, the outcome of the current round of boarding is as per the following table.

Melee Result

+8	Boarded vessel surrenders.
+7	7 combat advantages
+6	6 combat advantages
+5	5 combat advantages
+4	4 combat advantages
+3	3 combat advantages
+2	2 combat advantages
+1	1 combat advantage
0	Melee continues with no advantage/disadvantage
-1	1 combat disadvantage
-2	2 combat disadvantages
-3	3 combat disadvantages
-4	4 combat disadvantages
-5	5 combat disadvantages
-6	6 combat disadvantages
-7	7 combat disadvantages
-8	Boarder surrenders.

⑦ Any result other than a surrender, means that the boarding action continues. The boarding player must then go through the procedure from ③ again, next Turn.

OTHER BOARDING CONSIDERATIONS

Fires and Boarding
Fires may not be fought during a melee and so can never be extinguished as long as the melee continues. Players will still need to refer to the Ability Chart in case a low score causes the fire to worsen, ie a minor fire becomes a major one, etc.

Firing whilst Boarding/Counter-boarding
A vessel may fire any or all of its shipboard weapons at any vessel it is intending to ram and board - as it approaches that vessel - provided that the target is not already engaged in a boarding action. Similarly, the vessel being rammed, is allowed defensive fire at the attacking ship at contact.

Once a vessel has initiated a boarding action, no specific weapons fire is allowed by, or at, either vessel until that particular boarding action is resolved or broken off.

The logic behind this is that a boarding action occupies the attention of the whole of a vessel's crew. A vessel engaged in such a melee is deemed to be more concerned with its own immediate situation and will not engage targets that it is not in contact with. Also, there is the difficulty of clearly identifying targets - neither side will shoot into a boarding action for fear of hitting their own men.

Loss of Senior Officer during a Boarding
If a player involved in a boarding, has an Ability score of 3 for a Turn in which there is a boarding melee, then his senior officer will be assumed dead. Conversely, if he has a score of 18, his opponent's vessel will lose its senior officer. The vessel incurring the loss will suffer an additional 4 combat disadvantages on the Boarding Melee Test for one Turn.

At the earliest opportunity after the conclusion of the boarding action, the vessel which lost its senior officer must take a Morale Test (if the vessel has not surrendered).

To terminate a boarding action (other than a surrender):
Of the devices which could hold two vessels together, only the grapple or the harpago could be cut by either party.

In a Ramming situation - Only the rammer may disengage. He must release or cut grapples (if used) and back water to withdraw his ram (Alterations and Repairs) as follows:

i) Releasing grapples is a short task;
ii) Cutting grapples is a medium task.

Only if (i) or (ii) is successful can ram extrication be attempted.

iii} Ram extrication is a short, medium or long task - depending on the angle of impact.

In i) and ii) above, the Ability Score will be moderated by any current combat advantage/disadvantage.

In a Collision - either player, in his part of the Turn, can try to throw a sufficiently high score to break free. If no grappling device were employed, then the throw is for moving away from the combat.

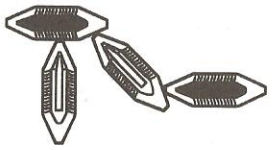
- Ω To release own grapples or harpago is a short task.
- Ω To cut a grapple requires a Medium task.
- Ω To cut an harpago requires a Long task
- Ω In all cases, the vessel must moderate its Ability score by the number of reductions in class it received in the collision and by any current combat advantage/disadvantage

eg The boarded player wishes to cut grapples. He had sustained two reductions in class in the collision and currently, the boarder has 2 combat advantages on the melee test. The boarded player must therefore moderate his Ability score by minus 4 for this task.

With successful disengaging, boarders are assumed to have scrambled back onto their own vessel before the ships break apart.

Provision for Multiple Boarding Actions

A multiple boarding action could occur in the following way:



a) A vessel acting in support of another in a boarding action, may be made the subject of a new boarding action by being contacted by an enemy vessel not engaged in the current melee.

   In this instance, the supporting vessel must withdraw its aid and become the boarded party in the new action.

b) Two vessels may simultaneously ram the same opposing ship, fail to sink it and decide to engage in a boarding action.

c) A player may decide to commit another of his vessels to joining an ongoing boarding action (subject to movement restrictions).

In b) and c) above, the **Boarding Melee Test** will be made using the side scores and attributes of one vessel only (owning player's discretion) - and this may not be changed during the action. The other vessel will count merely as support.

Boarding Actions involving Small Vessels (Optional)

This option is for players fighting actions involving fleets completely composed of ships smaller than a 'three'. They may wish to re-categorise their vessels to better replicate the actual differences in boarding strengths between these smaller ship types.

The special rule follows:

i) Go to 'Setting up a Game'.

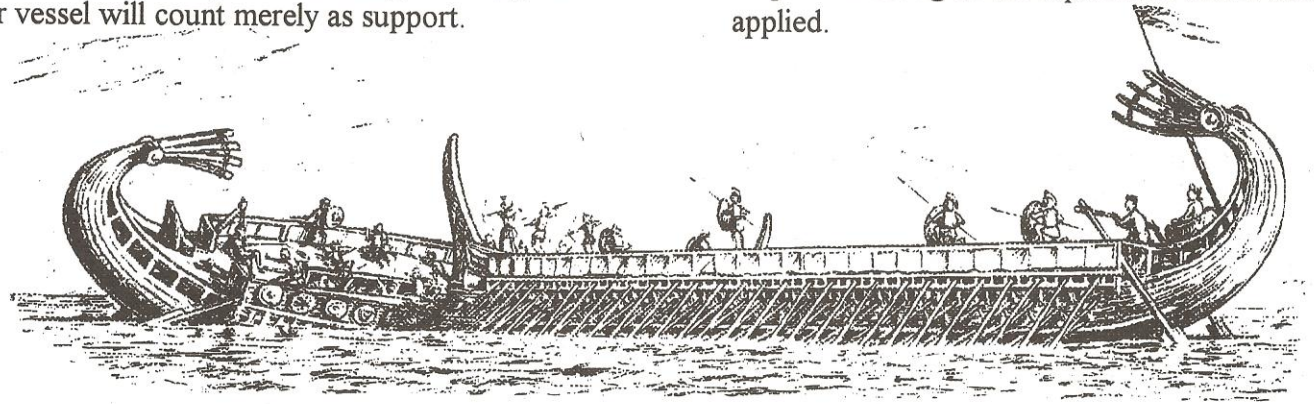
ii) Ignore the normal category of the vessel as given.

iii) Substitute instead, the Structural Integrity (SI) of each ship, divided by 10.

iv) Any fraction should be rounded up or down to nearest whole number.

Thus, a Bronze Age Greek galley would become a Category 2 vessel and an early Pentekonter would become a Category 5.

This special rule only applies to boarding actions. It has no effect on points costing or the capabilities of the vessels to which it is applied.



PRIZES

General

Any vessel which surrenders to an opponent is considered a prize and becomes the responsibility of the capturing player for the duration of the game. Once in possession of a prize, a player has three alternatives (subject to Alterations and Repairs):

a) Taking full control and attempting to move the vessel out of the general engagement to the safety of his own deployment area, thus denying that vessel to the enemy and gaining a potential new vessel for himself.

b) Setting fire to the vessel, thus creating a potential hazard and denying the vessel to the enemy.

c) Sinking the vessel and thus denying it to the enemy.

The choice is up to the capturing player and should be made based upon such considerations as the state of the vessel captured and the general trend of the game as a whole.

Prizes may not be used in combat, as it is considered there will be insufficient marines amongst the prize crew to resist boarders.

A prize may be used as a 'bridge' from which to board another enemy vessel, provided that the prize remains in contact with both vessels.

No torsion powered weapons on a prize may be used to fire at another vessel.

To count as a prize for the purpose of adjudicating winners and losers in the game, a prize has simply to be declared as such by the new controlling player. It must not be in contact with any warship of its former fleet at the end of the game.

A prize should be identified by having a suitable counter or marker placed alongside its base.

Prize Crews

Prize crews are considered to be a nominal complement of marines and sea officers from the capturing vessel, sufficient to return any capture to the safety of the new owner's fleet base - represented for game purposes by that player's deployment area.

They are not allowed to participate in further combat.

They represent a reduction in the fighting capabilities of the vessel from which they originated.

They will continue to carry out their duties even if their parent vessel is sunk or surrenders.

Utilising Captured Prizes (Option)

This option should be agreed between players, before play starts:

A VESSEL WITH EXTRA MARINES ON BOARD: If it captures another vessel of a lower category, it may transfer the extra marines and utilise the captured vessel as one of its own warships. The captain and crew will be Poor. The hull and the marines will retain their original qualities.

Prizes in these circumstances will count 100% of their value, after any deductions, in determining the result of a game.

INTERIM RESULTS

- Ω MORALE TEST
- Ω REDUCTIONS IN CLASS
  - The Effects of Reductions in Class
  - Wreckage
- Ω SENIOR OFFICER ABOARD DEAD
- Ω GROUNDING

END OF PLAY

- Ω Determining the Result of a Game

General

The overall morale of a ship's company is a basic reflection of its willingness to continue to remain in combat.

Except in a melee situation, ships companies will test for morale immediately when:

a) The vessel has a major fire.

b) The senior officer on board is killed.

c) The fleet Admiral's ship surrenders or sinks within 200mm.

d) A friendly vessel surrenders, becomes hulked, or is consumed by fire, within 100mm.

e) On first reducing to 'F' class or below and on any subsequent reduction in Class.

f) The player wishes to test.

Morale Test - Procedure

Throw 3 dice for each ship required to take a Morale Test. Modify the result of that score to reflect variables, then check result table.

Morale Tests and Boarding Melees

No Morale Test needs to be taken during a boarding melee, even if there is a major fire.

However, a Morale Test must be taken prior to boarding, if any of the reasons above apply. The outcome will be reflected in the ensuing melee.

MORALE TEST MODIFIERS

For each enemy vessel in sight - shattered or burnt	+2
If within 150mm of a friendly shore	+2
Inspired Admiral on board	+2
Friends outnumber enemy within 200mm	+2
Having successfully taken a prize	+2
If within 151mm to 300mm of a friendly shore	+1
For each enemy vessel in sight that has become a hulk or surrendered	+1
Inspired admiral in command of fleet	+1
Good Admiral on board	+1
Good Captain on board	+1
Good Crew testing	+1
Successful ram or oar rake achieved during the game	+1
If ram caused 10 points or oar rake is full	+1
Incompetent Admiral in command of fleet	-1
Poor Admiral on board	-1
Poor Captain on board	-1
Poor Crew testing	-1
For each reduction in Class below E	-1
For each previous Morale Test failed	-1
For each friendly vessel seen to become a hulk or captured	-1
Enemy outnumbers friends within 200mm	-1
Minor fire on board	-1
Vessel has a major fire burning	-2
Incompetent Admiral on board	-2
Senior officer aboard dead	-2
If having been subject to a chemical/biological weapon	-2
For each friendly vessel in sight, shattered or burnt	-2

Morale Test Result

The modified score gives the following result:

4 or less
Ship surrenders if in contact with an enemy vessel, otherwise it retires from battle via the nearest table edge. If contacted by an enemy vessel whilst retiring, ship will surrender.

No weapons may be fired.

5 or 6
Ship fails test and will avoid initiating contact with an enemy vessel and must decelerate for the next two Turns.

Any vessel contacted by an enemy has its Boarding effectiveness modified by 2 (already built into the modifiers in that section).

All shipboard weapons fire will be subject to -2 on the Ability score when reading off the Ability Chart.

7 or 8
Ship fails test and will avoid initiating contact with an enemy vessel for the next two Turns and must decelerate for one Turn.

Any vessel contacted by an enemy has its Boarding effectiveness modified by 1 (already built into the modifiers in that section).

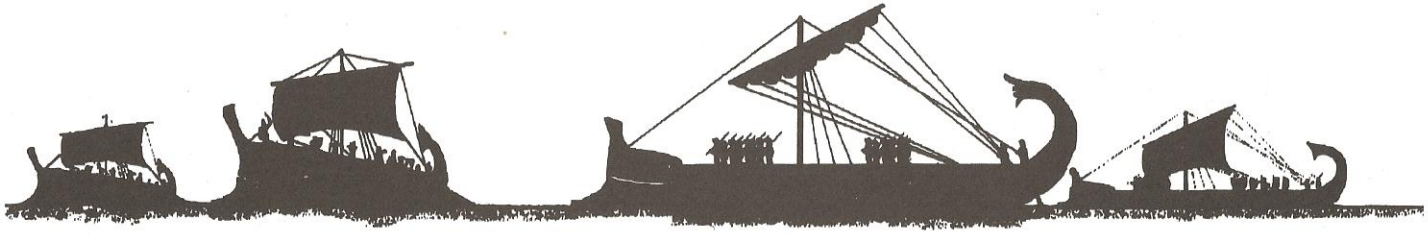
All shipboard weapons fire will be subject to -1 on the Ability score when reading off the Ability Chart.

9 to 16
Ship passes test. Morale holds.

17 or more
Ship passes test and will head directly for the nearest suitable enemy vessel at maximum speed and attempt an engagement.

POOR MORALE SCORE

Throughout the rules, a 'Poor Morale' will be a result of 8 or less.



Reductions in Class

In these rules, a vessel's class is determined by combining the actual quality of its captain and crew, as well as the basic quality of the vessel. It reflects its seaworthiness and ability to move and manoeuvre. The higher the class of a vessel, the better its abilities.

The game has been devised so that any damage to a vessel is shown as an overall drop in its efficiency - which is expressed as a reduction in class.

To amplify this point: a galley which has had its class reduced as a result of a successful oar rake, may be less waterlogged than another which has been rammed. However, both vessels are similarly less able to perform their duties and equally susceptible to sinking in adverse weather conditions.

The Class of a Vessel

At the start of the game, there are only five classes of vessels, namey A to E. Progressive damage is expressed in a further nine classes, namely F-N.

The Effects of Reductions in Class

Any vessel reduced below 'N' Class is considered to be a part submerged hulk. In such a case, the vessel is removed from the table and replaced with a wreckage marker which will drift with the wind for the remainder of the game.

Any vessel in Classes 'E' to 'N' that receives 10 or more reductions in Class as the result of a ram, is considered to have been shattered. The vessel is removed from the table. No wreckage marker is required as not enough of the vessel remains to be a hazard to navigation.

Reductions in Class Table

This is a table for the rapid calculation of a vessel's class:

No of Reductions in Class	*Vessel's Current Class*													
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**
1	B	C	D	E	F	G	H	I	J	K	L	M	N	-
2	C	D	E	F	G	H	I	J	K	L	M	N	-	-
3	D	E	F	G	H	I	J	K	L	M	N	-	-	-
4	E	F	G	H	I	J	K	L	M	N	-	-	-	-
5	F	G	H	I		J	K	L	M	N	-	-	-	-
6	G	H	I	J	K	L	M	N	-	-	-	-	-	-
7	H	I	J	K	L	M	N	-	-	-	-	-	-	-
8	I	J	K	L	M	N	-	-	-	-	-	-	-	-
9	J	K	L	M	N	-	-	-	-	-	-	-	-	-
10	K	L	M	N	-	-	-	-	-	-	-	-	-	-

Wreckage

When a ship becomes a part submerged hulk, it is replaced on the table by a wreckage marker. This represents a waterlogged hull.

Such a marker is a hazard to navigation. Players can use a purpose built 'partially submerged vessel' or substitute an irregular shaped piece of card which must be no longer than 40mm.

All wreckage drifts with the wind in accordance with the Movement under Sail table (Pg 63).

Vessels passing within 10mm of any part of this wreckage marker may suffer penalties as follows:

- Ω 2 reductions in class if moving at ram speed under oars or ram speed under sail.
- Ω 1 reduction in class if moving at fast speed under oars or fast speed under sail.

Sinkings

Vessels that are shattered as a result of a ram are considered to have sunk so completely that no wreckage remains and thus no marker is required.

Regaining Classes

A limited number of classes may be regained, depending on the extent of damage and how it was incurred. *See Alterations and Repairs.*

Senior Officer Aboard Dead

Fleet Admiral

If the Fleet Admiral is killed or captured, the fleet's controlling player can either:

- Ω Transfer command to a vice-admiral (if present) or
- Ω Nominate the captain of the flagship or any other vessel (usually the largest left afloat).

In either case, they retain their quality: the vice-admiral being inspired, good, average or incompetent; the captain being good, average or poor.

Vice Admiral

If a Vice-Admiral is killed or captured, command can be transferred to a nominated captain - who retains his quality.

Captain

If a captain is promoted to admiral, or the captain of a ship is killed by missile fire, his lieutenant is promoted to replace him in command of the vessel. The lieutenant must take a test for his ability as a captain by means of a dice throw as follows:

3-6 ..... Poor
7-14 ..... Average
15-18 ..... Good

Grounding

Vessels cruising areas of shallow water or those going within 10mm of a terrain feature must take a Grounding Test each Turn that they are in the area. The exception is if the terrain feature were a designated beach and their speed is slow.

The test will ascertain if the vessel has grounded. If it has, then the amount of damage is calculated in the table opposite. The vessel's voluntary movement is halted and its speed brought to zero.

Vessels that run aground - and survive - may be refloated subject to Alterations and Repairs.

WITHIN 10MM OF AN OPPONENT'S FRIENDLY SHORE:

Galleys which ground will surrender without firing. The vessel will be excluded from the rest of the game; it cannot be refloated by its captors but will count as a prize.

Galleys which test but do not go aground within 10mm of an opponent's friendly shore, may fire.

Grounding Test

Throw 3 dice, then adjust the score as follows:

Actually touching a terrain feature (unless at a designated beach)	-3
Category 10 or greater	-3
Category 8 or 9	-2
Category 6 or 7	-1
Vessel overburdened	Per Unit -1
Vessel carrying less than its permitted units	+2
Category 3	+1
Category 1 or 2	+2

Result:

3-5	Grounded on rocks. Check for damage.
6-9	Grounded on sand. Check for damage.
10-18	Touched bottom but did not ground.

Calculating Grounding Damage

1. The vessel's speed in mm is divided by 100, rounded up or down as appropriate.
2. The result is adjusted by the variables listed below.

Rocky shore or bottom	+5
Gale	+5
Strong wind	+3
Sandy shore or bottom	+2
Moderate breeze	+1
Poor captain	+1
Poor crew	+1
Slow ship	+1
Each prior class reduction	+1
Each item of overburden	+1
Ability score of 3-7	+1
Ability score of 14-18	-1
Good captain	-1
Good crew	-1
Fast ship	-1
Vessel carrying less than permitted units	-1
Vessel is at anchor or at slow speed	-1
Light airs	-1
Category 4-6	-1
Calm	-2
Category 1-3	-3
Lee shore	-3

Result:

Positive scores give the number of Reductions in Class the vessel will sustain.

Negative scores = no damage.

Note: Beaching differs from Grounding in that it is a deliberate act of putting a vessel onto a designated beach, at Slow Speed. It does not require a grounding test. If at any other speed, whether deliberate or not, it is considered a 'grounding' and must follow the procedure for Grounding.

Determining the Result of a Game

Most games will produce an obvious winner and loser in terms of ships sunk or captured. Friendly games between individuals will usually fall into this category.

Competition games and games which are generally more difficult to adjudicate, require a more formal method of deciding winners and losers. These situations are considered here.

Competition or Close fought Games
To decide the result, each player should:

a) Total up the points value of each of the original ships in his fleet still afloat and under his control at the end of the game, taking into account the following:

i) 5% of the ship's points cost should be deducted for each reduction in Class below that with which a vessel started the game.

ii) Further deductions should be made for any towers or other equipment that may have been ditched overboard during the course of the game, by their respective costs.

iii) Ships that have a major fire still burning, or which are off table, count half their remaining points value after all other deductions have been made. Own hulks count 25% of their points cost after deductions.

b) The overall points cost of the fleet should be reduced for any admiral or vice-admiral lost by his original cost.

c) To the resultant figure after b) above, add points for prizes/ captures as follows:

(i) 50% of the points value of any prizes taken, after first deducting 5% for each reduction in class and the cost of any ditched equipment.

If the prize is off table, or has a major fire burning, it will count as only one quarter of its original value (less ditched equipment etc).

(ii) 50% of original points value of captured Admiral or Vice-admiral.

(iii) 25% of points cost of captured hulks after deductions.

Any vessels drifting or subject to a poor Morale will deduct 20% of the value calculated above.

The total of all these points is added for each player and the final points difference compared as follows:

Difference is less than 10%, ***the game is a draw.***

Difference is greater than 10% but less than 25%, ***the result is a win in favour of the player with the higher percentage.***

Difference is greater than 25%, ***the result is a substantial victory for the player with the higher percentage.***

Note regarding Friendly Shores
A player with a retained a friendly shore will count the full points of the Vice-admiral and troops, less any reductions in class. If the friendly shore had been nullified, then there will be zero points.

Scenarios and Campaigns
Scenarios will not generally include fleets of agreed points totals and therefore no formal comparison of the respective values of each fleet at the end of the game needs to be made. Instead, the scenario's umpire should clearly state the game's victory conditions before play commences. If no umpire is involved, then both players should be in full agreement as to what constitutes their respective victory conditions before game set up.

Campaign games require no specific victory conditions, the result of any engagement bringing a new set of circumstances into the campaign as a whole.

GLOSSARY

This glossary is not intended to be a comprehensive listing of nautical terminology whether Classical or otherwise. Instead it provides a listing of the more common terms occurring in this set of rules or relating to the subject of ancient naval warfare. Ancient Greek and Latin words identified with the respective abbreviations of Gr. or L. to show their origin. Words in italic are defined elsewhere in the glossary.

Actuaria (L.) - General term for a merchant *galley*. Also used specifically for a type of large merchant *galley* with a concave prow and projecting forefoot manned by 30 to 50 oarsmen.

Aphlaston (Gr.) - The fan-like ornamental section of a vessel's poop where the up-curving timbers of the hull terminate.

Aphract (Gr.) - An undecked or open vessel.

Artemon (Gr.) - The boatsail of an ancient *galley*.

Auletes (Gr.) - A member of the deck crew tasked with giving the oar beat to the oarsmen by playing on a pipe. Also known as the trieraules (Gr.).

Auteretes (Gr.) - A fighting man serving as an oarsman in a vessel.

Back water - A reverse rowing stroke to propel a vessel backwards.

Beam - The breadth of a ship.

Bireme - An oared vessel with two *files* of oarsmen ranged for and aft on each side of the vessel. Also known as a dieres (Gr.), biremis (L.) or two.

Brailing rope - Rigging lines used to haul up the bottom of a sail to adjust, shorten or furl it.

Bulwark - A solid protecting screen at each outboard side of the deck.

Cataphract (Gr.) - A fully decked vessel. From the Greek for "covered".

Catch - The instant at which an oarsman starts to pull on his oar.

Corvus (L.)- The hinged boarding bridge fitted to Roman warships during the 3rd. century BC and used in boarding action. The name translates as "raven", a reference to the iron spike which secured it to the deck of an enemy vessel.

Cutwater - The leading part of a vessel's bow.

Diekplous (Gr.) - A Classical battle manoeuvre in which a ship or group of ships breaks through the line abreast formation of an enemy fleet.

Dolphin - A heavy weight or weights suspended from the yardarms of a Merchant Vessel at anchor. It would be dropped on to an enemy passing below, disabling it.

Dromon (Gr.) - The standard warship of the Byzantine navy rowed on two levels.

Eight - An oared warship with eight *files* of oarsmen ranged for and aft on each side of the vessel. Also known as an octeres (Gr.)

Eikosoros (Gr.) - A small 20 oared rounded *galley* used as a transport.

Eleven - An oared warship with eleven *files* of oarsmen ranged for and aft on each side of the vessel.

File, Files - A line or the lines of oarsmen. A bireme had two, a quadrireme four. The number of *files* dictated the type of *galley*, not the number of rowing levels.

Five - An oared warship with five *files* of oarsmen ranged for and aft on each side of the vessel. Also known as a penteres (Gr.) or quinquereme.

Forefoot - The forward projection of a vessel's keel.

Forty - The enormous *galley* built by Ptolemy IV Philopater with forty *files* of oarsmen ranging fore and aft on each side of the vessel. Also known as a tesserakonteres (Gr.)

Four - An oared warship with four *files* of oarsmen ranged for and aft on each side of the vessel. Also known as a tetreres (Gr.) or quadrireme.

Galea (L.) - A light, fast single-banked *galley* used for scouting. See also *keles*.

Galley - An vessel using oars as its primary means of propulsion (Gr. galea).

Gauloi (Gr.) - Phoenician rounded sailing ships.

Harpago (L.) - A large catapult fired grapple secured to a heavy line and used to haul an opponent close enough to board.

Heel - The transverse angle from the upright at which a vessel may float.

Hemiolia (Gr.) - An oared warship with one and a half *files* of oarsmen ranged for and aft on each side of the vessel. Noted for it's speed it was a favourite vessel of pirates.

Hippagogos (Gr.) - A vessel used as a cavalry transport.

Histiokopos (Gr.) - A general term for a merchant *galley*. Literally a ship that uses both sail and oars.

Hog - The bending of a vessel's hull which causes it to arch upwards in the middle and to droop at the ends.

Hoplite - (Gr. hoplites). The standard Greek infantryman of the Classical period used as a marine on Greek warships. Often heavily armoured the hoplite carried a long spear and large round shield, the hoplon, from which he derived his name.

Hyperesia (Gr.) - The deck crew of a trireme tasked with assisting the trierarchos of a fast trireme. This group included 10 hoplites, 4 archers, 6 petty officers and 10 deck hands.

Katastroma (Gr.) - The deck or canopy over the heads of the oarsmen on a *galley*.

Keles (Gr.) A fast, small merchant *galley*, sometimes used in fleets as scouts (see also *galea*). The term means "racehorse".

Kerkouros (Gr.) - An merchant *galley* sometimes used as a supply ship for military fleets.

Kyklos (Gr.) - A Classical battle manoeuvre in which a group of ships forms a defensive circle with their ram beaks pointing outwards.

Lembos (plural lembi) (Gr.) - Generally used as a term for a small oared vessel, specifically applied to ships of this type used in peace and war between the third and first centuries BC. Noted for it's speed. Bireme versions are known to have been used. Known in Latin as a lembus.

Liburnian - (L. liburna). A small warship rowed on two levels extensively used by the Romans. Supposedly invented by the Liburnii, an Illyrian tribe renowned for piracy.

Lusoria (L.) - A small oared vessel used in peace and war.

Mast-step - The substantial timber into which the bottom of a mast is fastened. It's purpose is to spread the weight of the mast through the hull of a vessel.

Navis (L.) - The generic term for a ship.

Navis cubiculata (L.) - A Roman transport with a cabin for passengers.

Navis iudiciaria (L.) - A Roman transport used for ferrying government officials and persons of rank.

Nauarchos Gr. - The Spartan commander of a Peloponnesian fleet.

Nautes (Gr.) - A seaman, in particular an oarsman.

Nine - An oared warship with nine *files* of oarsmen ranged for and aft on each side of the vessel.

Oarbox - The boxed in outrigger protecting rowers in some Hellenistic and Roman vessels.

Oar-loop - The loop of rope or leather holding the oar to the tholepin.

Oarport - The opening in the side of an oared vessel through which an oar is pulled.

Occulus - The stylised eye painted on the bows of ship.

Overburdened - A term used in the rules to denote a vessel is carrying a load in excess of its capacity, causing it to be hampered in movement.

Outrigger - (Gr. parexeiresia). The structure built out from the side of a vessel to improve the efficiency of the oar system. In the trireme it accommodated the tholes of the uppermost *file* of oarsmen.

Pararrumata (Gr.) - Sidescreens.

Pentekonter - A vessel with fifty oars. Also known as a pentekontoros (Gr.).

Periplous (Gr.) - A Classical battle manoeuvre in which a ship or group of ships outflanks the line abreast formation of an enemy fleet.

Permitted units - A term used in the rules, associated with the number of items of eqipment/personnel which a vessel is allowed to carry before becoming *overburdened.*

Pleroma (Gr.) - Oarcrew.

Polyreme - Any oared warship with multiple *files* of oarsmen ranged fore and aft on each side of the vessel. Usually only applied to vessels larger than a trireme.

Proembolis, proembolion (Gr.) - A secondary ram mounted above the waterline on an ancient *galley.*

Room - The space occupied by an oarsman or group of oarsmen. Basically the distance between one thole pin and the next in a fore and aft *file* of oarsmen.

Seven - An oared warship with seven *files* of oarsmen ranged for and aft on each side of the vessel. Also known as a hepteres (Gr.).

Ship-shed - A shed-like structure used in the Classical period for housing a galley when it was not at sea.

Shore - A support for a beached vessel.

Shroud - A heavy rope supporting a mast from behind and transversely.

Six - An oared warship with six *files* of oarsmen ranged for and aft on each side of the vessel. Also known as a hexeres (Gr.).

Sixteen - An oared warship with sixteen *files* of oarsmen ranged for and aft on each side of the vessel.

Strategos (Gr.) - An Athenian official elected to command military or naval forces. A general or admiral.

Stroke - The last man in a *file* of oarsmen ranged for and aft in a vessel.

Stylis (Gr.) - The pole in a vessels stern for the flying of flags and standards.

Taxis (Gr.) - An oarcrew.

Ten - An oared warship with ten *files* of oarsmen ranged for and aft on each side of the vessel. Also known as a dekares (Gr.).

Thalamite - (Gr. thalamios). The lowest *file* of oars on a trireme and the oarsmen who used these oars.

Thalamos or thaleme (Gr.) - The hold of a ship.

Thole or tholepin - the piece of wood acting with the oar-loop as the fulcrum of an oar.

Thirteen - An oared warship with thirteen *files* of oarsmen ranged for and aft on each side of the vessel.

Thirty - An oared warship with thirty *files* of oarsmen ranged for and aft on each side of the vessel.

Thranite - (Gr. thranites). The upper *file* of oars on a trireme and the oarsmen who used these oars.

Three - An oared warship with three *files* of oarsmen ranged for and aft on each side of the vessel. Also known as a trieres (Gr.) or trireme

Thwart - The bench on which a oarsmen sits.

Tremiolia (Gr.) - An oared warship with two and a half *files* of oarsmen ranged for and aft on each side of the vessel. Probably invented in Rhodes as a pirate catcher. Also known as a trihemiolia or trieremiolia.

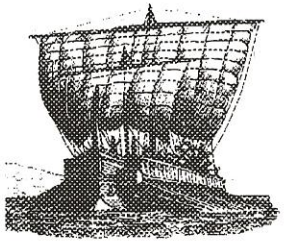
Triaconter - (Gr. triakontoros). A vessel with thirty oars.

Trierarch - (Gr. trierarchos). Originally the commander of a trireme, the term was later applied to any *galley* commander.

Twelve - An oared warship with twelve *files* of oarsmen ranged for and aft on each side of the vessel.

Twenty - An oared warship with twenty *files* of oarsmen ranged for and aft on each side of the vessel.

Zygian - (Gr. zygios). The middle *file* of oars on a trireme and the oarsmen who used these oars.



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