

1st Edition Naval Rules (Enhanced)

Last Updated: 171022

naval@corwyn.net

Contents

Environmental Conditions	2
Visibility	2
Wind	2
Encounters	3
Sighting	3
Range	3
Evasion	4
Ship Movement	4
Ship-to-Ship Combat	5
Armament	5
Hit Determination	5
Damage	5
Scuttling	6
Stopping	6
Contact	6
Ram	6
Colliding	6
Shear	7
Grapple	7
Boarding	7
Critical Hits	7
Fire	8
Repair	8
Appendix A: Ships	9
Appendix B: Random information	Error! Bookmark not defined.
Appendix C: Potential Modifiers	11
Crew Experience	11
Appendix D: Other Siege Attack Values (Against Ships)	11
Bibliography	12

The problem with naval adventures in AD&D is there's so many different variations (see the Appendix). With a naval campaign up and running, I wanted to be sure I had a solid methodology for naval combat. I surveyed many D&D resources, as well as innumerable board games and, finding nothing I wanted, started to build my own system. Then I realized something. Much like BattleSystem, creating a naval combat system is creating a new game. Perhaps a game that includes D&D characters, but still, a separate game. Not AD&D.

Players aren't (typically) skilled in naval combat. For the players to learn the mechanics of naval combat, they had to learning an entirely new game, instead of playing AD&D. Instead, I just needed dice to answer a few simple questions:

- Can the players encounter/escape a naval foe
- What happens when a naval foe is at range
- How long does it take a naval foe to close
- What happens at when two ships close with each other
- What factors might affect those questions (when I wanted to use them)

This is what I ended up with, borrowing from the resources available, trying to use the most true to AD&D rules when possible.

Environmental Conditions

Visibility

On a clear day a 6' tall character can only 3 miles to the horizon line. A character in a 60' crow's nest can see 9 miles. Any obstruction (such as an island) will provide cover which may reduce this distance. Land can be seen at a distance of 24 miles on a clear day. Ships can be identified (type, firepower, low or high in the water) at 300 yards on a clear day (or as little as 40 yards in dense fog).

Maximum Visibility (Crow's Nest)	Miles
Clear	9
Cloudy	3
Gale	2
Hurricane	1
Fog	1 or less

Wind

Wind is normally checked each 24 hours, and (if a change is indicated) changes over d12 hours. Calculating wind direction for each ship can determine random ship position. Wind can be one of eight directions, potentially providing a 0-2 mph modifier to movement:

Wind Direction (d8)			
1	North	5	Northwest
2	South	6	Northeast
3	East	7	Southwest
4	West	8	Southeast

Wind Force (3d6)	Miles per Hour
------------------	----------------

3	Calm	0-1
4-8	Light Breeze	2-7
9-12	Moderate Breeze	8-18
13-15	Strong Breeze	19-31
16	Strong Gale*	32-54
17	Storm *	55-72
18	Hurricane*	73-136

*Any wind of strong gale force or better will have a percentage chance to do damage to the ship. There is also a chance for men to be blown overboard. Checks should be made every 6 hours or until winds subside:

	Strong Gale	Storm	Hurricane
Capsizing	1%	20%	40%
Broken Mast	5%	25%	45%
Broken Beams	10%	35%	50%
Torn Sail/Rigging	20%	45%	65%
Man Overboard	10%	50%	70%

Encounters

Sighting

When two ships enter visual range of one another, each ship makes a d20 roll each turn until it sees the other. Once two ships are within visual range of one another, it is possible for one ship to see the other first and attempt to fade back into the horizon before being seen.

This roll can also be used to indicate sighting land, large sea monsters (at the horizon), or other items of significance. Success is defined by the quality of the crew:

Ship Sighting Table (Crew Quality Roll required on d20)	
Landlubber	20
Green	16
Average	13
Trained	10
Crack	8

Range

A ship will normally be first spotted (depending on visibility) at maximum range.

Distance	Range	Duration	Possible Actions
Distant	> 300 yards (max 9 miles)	d6 hours	Approach/ Escape
Normal	300 - 50 yards:	d6 turns	Approach/Maintain/Withdraw, Spells, ship-to-ship weapons, missile weapons
Short	50 yards - Contact	d6 rounds	Approach/Maintain/Withdraw, Spells, missile weapons, Grapple/Unggrapple, Prepare to Shear/Ram
Boarding	Contact	1 round	Withdraw, Spells, missile weapons, Grapple/Unggrapple, Shear, Ram Board/ (unless Grappled),

Normal range can vary based on visibility. Range changes are possible only every interval defined by Duration. Range increase/decrease will be evenly spread across the Duration.

Evasion

A crew spotting a distant ship can choose to evade:

Base chance of evading pursuit outdoors (d10)	80%
Pursued is faster	+10%
Pursued is slower	-20%
Original Positional Advantage (optional)*	+25% to -25%
Open water	-50%
Marsh	+10%
Light equal to full daylight	-30%
Light equal to twilight	-10%
Light equal to bright moonlight	0%
Light equal to starlight	+20%
Light equal to dark night	+50%
Weather, cloudy day	+10%
Weather, gale	+20%
Weather, storm	+30%
Weather, fog	+50%

*Original positional advantage is determined by where the pursuer is in relation to the wind.

A number generated less than or equal to the adjusted base chance indicates immediate success at eluding the pursuers. Otherwise pursuit continues unless the pursuers are faster and can close within one hour, in which case confrontation will take place. Continuing pursuit requires an Evasion check every hour. Any check of 0% or less indicates imminent confrontation and no further chance of evasion.

Should Evasion fail, ships start 300 yards apart (potentially varying based on visibility) closing at 10 yards/round if pursuer is \leq speed, or at rate of closure. [This should have some variability for slower ships, perhaps $5d4 + 10$ instead of 30 rounds?]

Once the pursuer closes to 300 yards, they have the opportunity to review their target. At that time the pursuer might choose to disengage. This flight is automatically successful if not pursued, otherwise they need to succeed on an Evasion roll in order to return to Distant range (taking 1 turn if the former target turns to pursue) and leading the now pursuer on a merry chase before potentially disappearing from sight in $d6$ hours if successfully evading a second time.

Ship Movement

Accelerate from standing to normal speed	
Oared craft	1 round
Small craft	2 rounds
Barge, Small	2 rounds
Galley, Small	3 rounds
Galley, Large	6 rounds
Merchant ship, Small	5 rounds
Merchant ship, Large/Warship	1 turn
Other actions	
Heave to	2-8 rounds
Get under way	1-6 turns
Raise anchor	3-18 rounds
In irons (see Appendix D)	5-30 rounds

Launch john boat	1 turn
------------------	--------

Exhaustion will occur after a crew has rowed at their normal speed for 8-10 hours, or at maximum speed for 30 minutes.

Ship-to-Ship Combat

Hand-missile weapons (such as bows and crossbows) and ballistae do no effective damage against the ship itself.

Only longships, galleys, and sailed warships can mount catapults; ordinary sailing ships cannot mount a catapult. Armament on galleys ranges from a ram to ballistae; some of the larger ones may even sport a catapult. Typical armament for merchant ships includes at most a ballista.

Armament

	Range (Min/Max)		Damage (S/M, L, Hull)			Rate of Fire	Crew	Arc	Siege Defensive value	AC	Critical Hit
Ballista	1"	32"	2d6	3d6	-	1/2	2	45	2	4	20
Catapult, Light	15"	30"	2d10	3d4	4	1/4	4	30	4	4	20
Catapult, Heavy	18"	36"	2d12	4d4	6	1/4	6	15	6	0	19,20

Rate of Fire can only be achieved with the requisite crew. If less than the requisite crew is available, RoF drops to at best 50% of normal, and for each crew member missing, the weapon takes one additional round to fire.

Incendiary ammo (pitch) reduces range by 1/3, affects a 10'x10' area and causes d6 / turn of hull damage in addition to damage to the crew. Extinguishing the associated fire takes 3/2/1 turns with 5/10/15 crew.

Hit Determination

The level of the weapon crew chief determines base THACO. Default Lvl 4, THACO: 18 (potentially adjusted for crew rating). All catapult targets are considered to be AC0. All ballista targets are considered to be AC10. Adjust the base numbers to hit using the following table, and roll d20:

Target Movement	
Stationary	+3
Movement Rate 3"+	-3
Target Size	
Medium ship	+2
Large Ship	+4
Subsequent shots (if stationary)	+4
Subsequent shots (if moving)	+1
Weather	
Calm	+1
Light to moderate breeze	0
Strong Breeze/Gale	-2
Storm	-4
Direct Fire	+4

Damage

A hole made in the ship has a diameter (in inches) equal to the damage caused by the attack. For example, a strike inflicting 6 points of damage would tear a 6 inch hole. Each 10% of hull damage slows the ship 10%. Any time damage reaches one third to one half of the ship's hull value, repairs can be made at sea. If the damage is more than half, the

ship must be put into port for repairs. When a ship has suffered 75% of its Hull Value in damage, the ship cannot move until makeshift repairs are made (see Repairs).

A ship damaged to 90% or received a "Leaking" Critical Hit will begin to leak. A leaking ship will sink in $2d10 + 10$ minutes unless two crewmen are dedicated to bailing. If this critical is suffered multiple times, each time it occurs the leaks become more severe. As the water flows in faster, five more crewmen must be assigned to keeping the vessel afloat. With enough leaks it will eventually become impossible to keep the ship afloat.

A ship with a 0 Hull Value is sinking and can no longer move or fire weapons. On 4 in 6 the ship weapons are destroyed. While the ship is sinking, large weapons (catapults, ballistae, etc.) are useless. The ship will sink to the waterline in $d10$ rounds, and $d12$ turns later sink beneath the sea. Rowboats will sink in $d10$ rounds

When the ship sinks, every character aboard must make a Saving Throw vs. Death or be sucked down with the ship. For this reason, most characters will try to abandon ship, entering the water first to avoid being sucked into the undertow.

Scuttling

Six man-sized creatures can decrease the hull value of a ship by $d2$ /round (+1 round for each creature less than 6) if appropriately armed and damaging a specific point.

Stopping

Vessels are stopped either by snagging the hull with a large net acting as a sea anchor, or by attaching two sea anchors - one to the rudder (ripping it out) and one to the side of the ship (making the ship turn in circles). The attackers may then attach more sea anchors at their leisure to stop the ship. Both of these methods work 50% of the time.

Contact

Ram

Only oared ships can perform ramming maneuvers as sailing vessels do not possess sufficient maneuverability. A large or small galley may have a ram, a war galley always will. Other ships may not add rams. A ship may only attempt to ram once / turn. Before any battle in which ramming is intended, the mast must be previously unstopped and secured on deck; 10 crew accomplish this task in three turns.

When ramming, use the helmsman's THACO against AC8 to determine if the ramming is successful. The rammed ship suffers from 10% to 60% damage, and there is a 25% chance that it is holed below the waterline and will sink in 3-18 turns unless patched. A vessel rammed in the side loses 20% of its crew (15% must be rowers if the ship is oared). Patching a hole below the waterline requires 5 turns of work by ten men, and there is a 25% chance the job will not hold, requiring another 5 turns to replace.

The ramming ship automatically suffers a Shaken critical hit. If the ramming ship misses its target or reduces the opposing ship to 0 hit points (so that the opposing ship begins to break up), the ramming ship may continue its movement. If the ship hits its target without destroying it or is locked or grappled with the target, its movement stops. Ship crews may grapple in the same round as a ram, if so desired.

Gargantuan creatures take $1d6$ points of damage per 20 cargo tons (or fraction thereof) of the attacking ship (up to a maximum of $6d6$).

Colliding

A ship without a ram may nonetheless collide with an enemy. When two ships collide, the smaller ship is always assumed to be crashing into the larger one. The hull value of the crashing ship are reduced by half of their original value. A ship that is crashed into takes damage equal to the current hull value of the ship that crashed into it. Both ships suffer the critical "Ships Shaken". (Alternate: $5d6$ shared between ships)

Shear

A shearing attack is a close pass against an opposing ship with the intention of snapping oars to slow the ship's speed. Shearing can only be attempted against oared craft. The attacking helmsman's THACO against AC8 is used to determine success. A successful shearing attack will cause a Shearing critical hit (kill 50% of the rowers on that side of the opposing ship, and cause it to be dead in the water for three turns, thereafter moving at one-half speed maximum). If it has its oars sheared again it will remain powerless to move by rowing. Shearing attacks inflict no damage on the target ship's hull, but if a 20 is rolled for the attack, an additional Critical Hit results applies.

Grapple

Grappling may be attempted each round the ships are adjacent. There is a 100% chance of success if both crews desire that outcome, otherwise success is indicated by a 1-2 on a d6, while a 3-6 means the other crew successfully cuts and casts the grappling lines free. Once a ship is grappled, there is a 25% chance of freeing the ship each round (assuming the crew are not otherwise occupied). It requires only one man to grapple or cut a grapple. Three attempts per ship may be made each turn to grapple and a like number of attempts to cut grapples. Grappled ships immediately lose all maneuvering, and have their Movement reduce to 0 in 5 rounds. Once grappled, vessels may be boarded.

In addition to the classic grappling hook, several devices were introduced to assist in boarding. The corvus was a bridge 36' long and 4' wide carried upright in the bow on a swivel mount. The far end had several spikes on the bottom. When an enemy galley was close enough, the lines holding it up were cut, allowing it to fall and spike itself to the enemy galley. The harpax was an iron-bound ballista missile with several lines attached to a winch at one end and a grappling iron at the other. The idea was to grapple and winch in an enemy. Pots of flaming oil were carried at the end of long poles that could be extended from the bow and sides of galleys.

Boarding

Boarding attackers attack and defend at -2 the round they board, but receive a +1 bonus to attack if boarding from a higher ship.

A crew is outnumbered by 3:1 will surrender. A captain can order their continued fighting; his crew will only obey 1 in 6.

Critical Hits

If a ship received a Critical Hit, further damage is indicated:

d20	Result	
1	Roll twice on this table	
2-4	Deck Crew Casualty	One exposed crew member is struck and suffers the same damage as the ship.
5	Interior Crew Casualty	Same as Deck Crew Casualty, but everyone aboard is a potential target, including prisoners and the captain. This reflects not so much the effect of the missile itself, but shattered parts of the ship's interior bouncing around during combat.
6-8	Ship Shaken	All characters not sitting or otherwise firmly tied down must make a Dexterity Check to maintain their balance or fall to the deck, disallowing any attacks or spell use that round. Characters in the rigging could fall.
9-10	Large Weapon Damaged	One large weapon (chosen randomly) is inoperable until repaired. Its crew is unharmed
11-12	Sheared	Ship movement is reduced 50%, and 25% of the rowers are killed.
13	Fire!	See Fire.
14-15	Loss of Movement	The base move of the ship drops by 1".
16	Leaking	The ship begins to leak as the timbers groan. Such a ship will sink in 2d10 + 10 minutes unless two crewmen are dedicated to bailing.
17-20	Hull Holed	The attack punches a hole in the ship where there was none before. A hole made in the ship has a diameter (in inches) equal to the damage caused by the

		attack. For example, a strike inflicting 60 points of damage would tear a five foot (60 inch) hole. The hole is below the waterline, and the ship will sink in d6*10 rounds.
--	--	--

Fire

Whether as a result of a critical hit, flaming pitch, or spells such as Fireball, fires sometimes start on ships. The following will cause a check for fire damage:

Fire Risk:	Hull Damage	Notes
10 flaming arrows	See Hull Burn Table	
Pitch (via catapult)	d6/turn	
5 HD fireball	See Hull Burn Table	< 5 HD will do ½ / HD. 10 HD will check Table twice
8 HD Lightning	See Hull Burn Table	< 8 HD will do ½ / HD and subtract 3 from the HBD roll (below)

Hull Burn Damage from Controlled Fires Table				
3d6	Damage	Hull Damage Equivalent		
3-7	Light (L)	1		Almost no damage. Requires no immediate attention.
8-10	Light Moderate (LM)	2-4	= 3L	Minor damage
11-13	Moderate (M)	3-6	= 2L + 1LM OR 2 LM	Minor repairs needed to get underway
14-15	Moderate Heavy (MH)	4-8	= 2M	Major repairs needed to get underway
16-18	Heavy (H)	5-10	= 2MH	Extensive repairs needed to get underway.

Fire: A fire can be extinguished by two persons on the first round, adding one person for every subsequent round. Fire inflicts one point of hull damage on the first round, doubling on every subsequent round. Fire Burn Damage done to a ship that equals or surpasses the Hull Value is considered a fire no longer under control, and burns the ship uncontrollably to the water line (see Burn Time for individual ships). Any fires magically fed and not countered due to time, lack of men, or capable magic-user have a 75% chance of spreading out of control.

Repair

In most civilized areas, one point of hull damage can be replaced or repaired at a cost of 200 gp in 1d6 days by a crew of ten trained workers in port. Poor (or cheap) characters can repair ships themselves; a crew of five individuals, with the correct materials, can repair five points of hull damage per month. Materials can be acquired by buying them (at an approximate cost of 50 gp of material per point of hull damage) or just landing at a vacant stand of timber and taking what is needed. Such repairs are almost as good as the expensive ones provided that at least one member of the crew has the Shipwright proficiency. A successful proficiency check must be made for each such improvised repair to succeed.

At sea a ship's crew can temporarily repair up to half the damage the ship has received for damage less than half the Hull Value. Five or more crewmen can repair 1 point of hull damage per full turn of work. However, these repairs are makeshift and will fall apart in 6d6 days. Damage greater than half the ship's hull value requires a port for repairs.

Normal maintenance consists of dry docking the ship for one week every six months and an additional two months at the end of every three years. Failure to do so lowers the level of maintenance by one place immediately, and one place further every six months thereafter.

Appendix A: Ships

Ship	Hull	Size	Tonnage	Capacity (RC)	Rowers	Sailors	Marines	Movement (Row/Sail)	Miles/Day (Expert)	Sail in mph (normal/max*)	Oar in mph (Normal/Max**)	Burn Time (Turns)	From standstill (ronds)	Defense Class	Category
Raft	2-4	10'-20'		5,000	-	4/10'	-	3/	12						River
Rowboat	1-4	8'-20'			2	2	-	8/	18	2/3	1 / 2	1	1r	D	River
Canoe	1-2	15'		6,000	2	-	-	5/	18	-			1r		River
Outrigger		30'-80'		6,000 (*20)	-	6 (20)	-	12/1 5	18						Coastal
Ship's lifeboat/ john boat		10'-20'		15,000	2	8	-	3/	18						Coastal
Barge, S	1-6	15'-20'		150,000	-	4	-	5/	30/60	2/3	1 / 1	1-2	2r	C	River
Barge, L	2-8	25'-45'		300,000	-	8	-	5/	30/60	1/2	½ / 1	1-4	5r	C	River
Galley, S	2-12	30'-60'	50	40,000	60	10	20	9/15	18/90	6/9	5 / 8	1-3	3r	B	Coastal
Galley, L	4-16	120'- 160'	65	60,000	180	20	50	9/12	18/72	4/7	4 / 8	1-6	6r	B	Coastal
Galley, War				80,000	300	30	75-150	6/12	12/72						Coastal
Longship, Viking		80'-120'	425	30,000	-	50/40 /16 (75)	Sailors	9/15	18/90						Ocean
Merchant, S (1 mast)	6-36	25'-40'	390	100,000	-	10	-	7/15	90	5/7	½ / 1	2d4	5r	A	Ocean
Merchant, L (3 mast)	12-48	50'-80'	1325	300,000	-	20	-	7/12	72	3/3	¼ / ½	3d4	10r	A	Ocean
Warship	7-42	70'-100'				20	60	6/12	12/72	4/6	½ / 1	3d4	10r		Coastal /Ocean

*Based on wind force of Strong Breeze

** For short periods of 1-2 turns. Exhaustion will occur after the crew has rowed at their normal speed for 8-10 hours or at maximum speed for 30 minutes. This applies only to galleys or any other oared vessel.

Defense Class (Of Ships and Sea):

- A: Sailors exposed 100%, others 25% (0/+7 AC Bonus)

- B: Sailors exposed 75%, others 50% (+2/+4 AC Bonus)
- C: Sailors exposed 50%, others 50% (+4/+4 AC Bonus)
- D: No protection 100%, others 100%

Appendix B: Potential Modifiers

The following modifiers can apply to dice rolls when evaluating ship-to-ship movement and combat:

	-2	-1	0	+1	+2	Special
Crew Quality	Green	Average	Trained	Crack	Old Salts	[Wounded]
Crew Quantity	None	Skeleton/Crowded	Normal	Enhanced	Peak	
Crew Morale	Afraid	Nervous	Normal	Confident	Fervent	
Wind	Calm	Light Breeze	Moderate	Strong	Gale	[Favorable]
Range	Distant	Long	Medium	Short	Contact	
Ship Size	T (< 8')	S (8'-19')	M (20'-59')	L (60'-100')	VL (100'+)	
Ship Status	Crippled	Leaking	Normal	Good	Advanced	[Fire], [Sinking]
Movement	Slow	Slower	Same	Faster	Fast	[Sailed]
Visibility	Foggy	Hurricane	Rain/Storm	Cloudy/Twilight	Clear	[Darkness]
Maneuverability	E	D	C	B	A	[Rowed]

Crew Experience

Training: 6 months landlubber, then 1 year as green/scurvy rats. 50% will then advance to Mates/Average in 6 months.

Trained requires many long voyages at sea, typically on different craft, and experienced in combat. Crack crews are very specialized, for a specific crew, ship, and captain.

Appendix D: Other Siege Attack Values (Against Ships)

<u>Source of Damage</u>	<u>Hull Damage</u>
Bigby's Clenched Fist	1/round
Catapult, Light	4
Catapult, Heavy	6
Disintegrate	2
Fireball & Delayed Blast Fireball	½ per HD (if <5 HD) + F (if >= 5 HD)
Flame Strike	4 + F
Gust of Wind (hostile)	(in irons)*
Horn of Blasting	18
Incendiary Cloud	(F:½ per 6 hp damage done)
Lightning Bolt	½ per HD (if < 8 HD) + F (if >= 8HD)
Meteor Swarm (2' sphere)	3 each
Meteor Swarm (1' sphere)	1½ each
Wall of Fire	2 + F
Wall of Force	As per collision
Sea Monsters	1 hull damage for each 5 hp inflicted unless otherwise indicated

* A vessel in irons (as noted above) is temporarily out of control. How long the vessel stays in irons depends on how quickly the cause is remedied. For the loss of a mast or a poorly executed maneuver, the vessel is in irons for 5-30 rounds. Once in irons, a vessel has no control over its course, cannot fire its artillery engines, and does a fair job of imitating a sitting duck.

Bibliography

- ✓ TSR 2002, Dungeons & Dragons, Vol. 3: The Underworld and Wilderness Adventures, 1974 (pp. 28-34).
 - ✓ TSR 2011, Dungeon Masters Guide, 1979 (pp. 53-54, 58, 69, 108-110).
 - ✓ TSR 1012, Expert Rulebook, 1981 (pp. X63-X64).
 - ✓ TSR 9062, U1: Sinister Secret of Saltmarsh, 1981. [rigging combat]
 - ✘ TSR 9159, M1: Into the Maelstrom, 1985 (Inside cover, p. 4). [Sea Machine]
 - ✓ Dragon Magazine, Issue 107, "For Sail: One new NPC [the Mariner]", March 1986.
 - ✓ Dragon Magazine, Issue 116, "High Seas", December 1986.
 - ✓ TSR 2019 Dungeoneer's Survival Guide, 1986 (pp. 43-48).
 - ✓ TSR 2020, Wilderness Survival Guide, 1986 (pp. 44-46).
 - ✓ TSR 9187, I11: Needle, 1987. [ship stats, weapons, grappling, repair]
 - ✘ TSR 9215, Gaz 4: The Kingdom of Ierendi, 1987 (pp. 29-30, 35-36). [hex-based minis system]
 - ✓ TSR 9236, Gaz 9: The Minrothad Guilds, 1988 (pp. 14-15).
 - ✓ TSR 1049, SpellJammer: Concordance of Arcane Space, 1989 (pp. 55-70). [weapons]
 - ✓ TSR 1071, Rules Cyclopedia, 1991 (p. 70-74, 100, 115).
 - ✓ Dragon Magazine, Issue 165, "Anchors & Arrows", January 1991.
 - ✓ TSR 9346, Pirates of the Fallen Stars, 1992 (pp. 96-110). [Derived from SpellJammer, Crew status]
 - ✓ TSR 2170, Of Ships and the Sea, 1997.
 - ✘ Dungeon Master's Guide [3e], 2000. (p. 150). [ships]
 - ✘ Dungeon Master Guide [2e], 1995. [weather, ships]
 - ✘ Player's Handbook [2e], 1995. [ships]
- <http://blogofholding.com/?p=6415>
- <http://theosrlibrary.blogspot.com/2016/09/osr-pirates-ships-sailing-and-naval.html>