# 0 A.D. is Actually Before Christ https://github.com/Oabc/Oabc-a23.git

A modification of 0 A.D. Empires Ascendant version 0.0.23 Alpha XXIII: Ken Wood

 $0 a b c @mail.com \\ {\tt https://wildfiregames.com/forum/index.php?/topic/22779-0 abc-mod/} \\ September~4,~2018$ 



# Contents

1	Intr	oduction	•
	1.1	Instructions	
<b>2</b>	Uni	ts	4
	2.1	Population costs	4
	2.2	Counters	4
	2.3	Infantry	1
	2.4	Camelry	6
	2.5	Cavalry	6
	2.6	Chariotry	6
	2.7	Elephantry	7
	2.8	Dogs	7
	2.9	Support	7
	2.10	Siege weapons	
		Ships	
3	Stru	actures	Ę
	3.1	Civic	Ć
	3.2	Economic	Ć
	3.3	Military	
	3.4	Defensive	(

#### 1 Introduction

**Oabc** is an acronym for "0 A.D. is Actually Before Christ". This mod tweaks, rebalances, and improves upon what already exists in the game. Amongst other things, it contains a moderate bonus attack counter and penalty system, more experience promotion ranks (0–12), and a new resource (silver).

**Oabc** serves as a showcase for what 0 A.D. easily could be at the moment, as a playground for me experimenting with modifying the game to get used to the code structure, and as a platform for including my own opinions and views to have the game the way I like it. Being a test mod of an alpha-stage game, it is inherently imperfect, unfinished, and restricted by my limited programming skills and the files available in 0 A.D.'s latest stable release.

All the content is completely open for any use: feel free to download, change, redistribute, or (re)use anything in any way you like; no asking for permission or granting credits is required for incorporating parts or all of it in your own mods (or main distribution). Have fun with it!

#### 1.1 Instructions

- Use git clone https://github.com/Oabc/Oabc-a23.git to get the repository directly or download it as a zip via https://github.com/Oabc-a22/archive/master.zip
- Place it in your /Oad/mods/ folder:

GNU/Linux (e.g. Fedora) typically: ~/.local/share/Oad/mods/ Macintosh/Apple OS X typically: ~/Library/Application\Support/Oad/mods/ Microsoft Windows typically: ~\Documents\My Games\Oad\mods\

- Launch 0 A.D., click "Settings" and "Mod Selection"
- Select Oabc, click "Enable" and "Save Configuration"
- Add, remove, or move up or down any other mods, click "Save Configuration" and "Start Mods"
- Click "Learn To Play" and "Structure Tree" to see the mod(s) implemented.

### 2 Units

#### 2.1 Population costs

- ullet 0: fauna, catafalques, ships
- 1: infantry, women, healers, traders
- 2: camelry, cavalry
- $\bullet$  3: worker elephants
- $\bullet$  4: bigae, battering rams, bolt shooters, stone throwers
- 5: -
- $\bullet\,$ 6: quadrigae, war elephants, siege towers

#### 2.2 Counters

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	iips, Siege, Stru
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	
cavalry lancers $0.75 \times$ vs Camelry, $0.75 \times$ vs Chariotry, $0.5 \times$ vs Elephantry – cavalry macemen $0.75 \times$ vs Camelry, $0.75 \times$ vs Chariotry, $0.5 \times$ vs Elephantry – cavalry sabremen $0.75 \times$ vs Camelry, $0.75 \times$ vs Chariotry, $0.5 \times$ vs Elephantry –	
cavalry macemen $0.75 \times$ vs Camelry, $0.75 \times$ vs Chariotry, $0.5 \times$ vs Elephantry – cavalry sabremen $0.75 \times$ vs Camelry, $0.75 \times$ vs Chariotry, $0.5 \times$ vs Elephantry – –	
cavalry sabremen $0.75 \times$ vs Camelry, $0.75 \times$ vs Chariotry, $0.5 \times$ vs Elephantry $-$	
cavalry sabremen $0.75 \times$ vs Camelry, $0.75 \times$ vs Chariotry, $0.5 \times$ vs Elephantry $-$	
cavalry swordsmen $0.75 \times$ vs Camelry, $0.75 \times$ vs Chariotry, $0.5 \times$ vs Elephantry $-$	
	nips, Siege, Stru
	nips, Siege, Stru
	nips, Siege, Stru
war elephants – – –	1,
bolt shooter – – –	
stone thrower $ 2.0 \times$ vs Ships $-$	i i
siege tower – – –	rganic

## 2.3 Infantry

class	pop.	training costs	exp.	vision	walk	health	armour	damage	rate	range	other
	size	(s, f, w, m, s; time)	loot/up	range	$\mathbf{speed}$		(c, h, p, t)	(c, h, p, t)	(ms)	(m)	stats
infantry	1	0, 25, 35, 15, 0; 20	60/100	75	11.0	60	2, 2, 2, 2	0, 0, 5, 0	1000	60	
archer	(1)	(-, 50, 50, 0, 0; 10)	(100/100)	(80)	(9.9)	(50)	(10, 1, 1, -)	(0, 0, 6, -)	(1000)	(72)	
infantry	1	0, 25, 30, 20, 0; 20	60/100	75	11.0	60	2, 2, 2, 2	2, 6, 0, 0	1000	15	
axe thrower	(1)	(-, 50, 50, 0, 0; 10)	(100/100)	(80)	(12.6)	(50)	(10, 1, 1, -)	(0, 0, 16, -)	(1250)	(24)	
infantry	1	0, 25, 25, 25, 0; 20	60/100	75	11.0	60	2, 2, 2, 2	0, 0, 5, 0	1000	60	
crossbowman	(1)	(-, 50, 50, 0, 0; 10)	(100/100)	(80)	(9.9)	(50)	(10, 1, 1, -)	(0, 0, 6, -)	(1000)	(72)	
infantry	1	0, 25, 45, 5, 0; 20	60/100	75	11.0	60	2, 2, 2, 2	0, 0, 12, 0	1000	30	
javelinist	(1)	(-, 50, 50, 0, 0; 10)	(100/100)	(80)	(12.6)	(50)	(10, 1, 1, -)	(0, 0, 16, -)	(1250)	(24)	
infantry	1	0, 25, 20, 30, 0; 20	60/100	75	11.0	60	2, 2, 2, 2	0, 0, 4, 0	1000	75	
lead slinger	(1)	(-, 50, 20, 0, 30; 10)	(100/100)	(80)	(10.8)	(50)	(10, 1, 1, -)	(1, 0, 9.5, -)	(1250)	(48)	
infantry	1	0, 25, 40, 10, 0; 20	60/100	75	11.0	60	2, 2, 2, 2	0, 0, 5, 0	1000	60	
longbowman	(1)	(-, 50, 50, 0, 0; 10)	(100/100)	(80)	(9.9)	(50)	(10, 1, 1, -)	(0, 0, 6, -)	(1000)	(72)	
infantry	1	0, 25, 40, 0, 10; 20	60/100	75	11.0	60	2, 2, 2, 2	6, 0, 0, 0	1000	45	
stone slinger	(1)	(-, 50, 20, 0, 30; 10)	(100/100)	(80)	(10.8)	(50)	(10, 1, 1, -)	(1, 0, 9.5, -)	(1250)	(48)	
infantry	1	0, 25, 35, 15, 0; 20	60/100	75	10.0	90	4, 4, 4, 4	2, 4, 0, 0	1000	3	
axeman	(1)	(-, 50, 40, 10, 0; 10)	(100/100)	(80)	(9.45)	(100)	(15, 5, 5, -)	(0, 5.5, 0, -)	(750)	(3.5)	
infantry	1	0, 25, 10, 40, 0; 20	60/100	75	10.0	90	4, 4, 4, 4	0, 1, 0, 5	1000	3	
hoplite	(1)	(-, 50, 50, 0, 0; 10)	(100/100)	(80)	(8.55)	(100)	(15, 5, 5, -)	(0, 3.0, 2.5, -)	(1000)	(4.5)	
infantry	1	0, 25, 20, 30, 0; 20	60/100	75	10.0	90	4, 4, 4, 4	0, 4, 0, 2	1000	3	
longswordsman	(1)	(-, 50, 40, 10, 0; 10)	(100/100)	(80)	(9.45)	(100)	(15, 5, 5, -)	(0, 5.5, 0, -)	(750)	(3.5)	
infantry	1	0, 25, 15, 35, 0; 20	60/100	75	10.0	90	4, 4, 4, 4	6, 0, 0, 0	1000	3	
maceman	(1)	(-, 50, 40, 10, 0; 10)	(100/100)	(80)	(9.45)	(100)	(15, 5, 5, -)	(0, 5.5, 0, -)	(750)	(3.5)	
infantry	1	0, 25, 45, 5, 0; 20	60/100	75	10.0	90	4, 4, 4, 4	0, 0, 3, 3	1000	6	
pikeman	(1)	(-, 50, 50, 0, 0; 10)	(100/100)	(80)	(7.2)	(100)	(15, 10, 10, -)	(0, 1.0, 3.0, -)	(2000)	(7.0)	
infantry	1	0, 25, 30, 20, 0; 20	60/100	75	10.0	90	4, 4, 4, 4	0, 6, 0, 0	1000	3	
sabreman	(1)	(-, 50, 40, 10, 0; 10)	(100/100)	(80)	(9.45)	(100)	(15, 5, 5, -)	(0, 5.5, 0, -)	(750)	(3.5)	
infantry	1	0, 25, 40, 10, 0; 20	60/100	75	10.0	90	4, 4, 4, 4	0, 0, 0, 6	1000	3	
spearman	(1)	(-, 50, 50, 0, 0; 10)	(100/100)	(80)	(8.55)	(100)	(15, 5, 5, -)	(0, 3.0, 2.5, -)	(1000)	(4.5)	
infantry	1	0, 25, 25, 25, 0; 20	60/100	75	10.0	90	4, 4, 4, 4	0, 3, 0, 3	1000	3	
swordsman	(1)	(-, 50, 40, 10, 0; 10)	(100/100)	(80)	(9.45)	(100)	(15,5,5,-)	(0, 5.5, 0, -)	(750)	(3.5)	

## 2.4 Camelry

${f class}$	pop.	training costs	$\exp$ .	vision	walk	$\mathbf{health}$	armour	damage	$\mathbf{rate}$	range	other
	size	(s, f, w, m, s; time)	loot/up	range	$\mathbf{speed}$		(c, h, p, t)	(c, h, p, t)	(ms)	(m)	stats
camel	2	0, 60, 30, 10, 0; 25	90/125	85	18.0	110	1, 1, 1, 1	0, 0, 6, 0	1000	68	
archer	(1)	(-, 100, 50, 0, 0; 15)	(130/150)	(92)	(17.55)	(100)	(15,3,1,-)	(0, 0, 7, -)	(1000)	(72)	
camel	2	0, 60, 35, 5, 0; 25	90/125	85	18.0	110	1, 1, 1, 1	0, 0, 15, 0	1000	34	
javelinist	(1)	(-, 100, 50, 0, 0; 15)	(130/150)	(92)	(17.55)	(100)	(15, 3, 1, -)	(0, 0, 18, -)	(1250)	(28)	
camel	2	0, 60, 25, 15, 0; 25	90/125	85	18.0	135	2, 2, 2, 2	0, 0, 0, 8	1000	3	
spearman	(1)	(-, 100, 50, 0, 0; 15)	(130/150)	(92)	(19.305)	(160)	(15,4,3,-)	(0,6,5,-)	(2000)	(4.5)	

# 2.5 Cavalry

class	pop.	training costs	exp.	vision	walk	$\mathbf{health}$	armour	damage	$\mathbf{rate}$	range	other
	size	(s, f, w, m, s; time)	loot/up	range	$\mathbf{speed}$		(c, h, p, t)	(c, h, p, t)	(ms)	(m)	stats
cavalry	2	0, 75, 35, 15, 0; 30	120/150	80	15.0	120	1, 1, 1, 1	0, 0, 6, 0	1000	64	
archer	(1)	(-, 100, 50, 0, 0; 15)	(130/150)	(92)	(17.55)	(100)	(15, 3, 1, -)	(0, 0, 7, -)	(1000)	(72)	
cavalry	2	0, 75, 25, 25, 0; 30	120/150	80	15.0	120	1, 1, 1, 1	0, 0, 9, 0	1000	48	
crossbowman	(1)	(-, 100, 50, 0, 0; 15)	(130/150)	(92)	(17.55)	(100)	(15, 3, 1, -)	(0, 0, 7, -)	(1000)	(72)	
cavalry	2	0, 75, 45, 5, 0; 30	120/150	80	15.0	120	1, 1, 1, 1	0, 0, 15, 0	1000	32	
javelinist	(1)	(-, 100, 50, 0, 0; 15)	(130/150)	(92)	(17.55)	(100)	(15, 3, 1, -)	(0, 0, 18, -)	(1250)	(28)	
cavalry	2	0, 75, 40, 10, 0; 30	120/150	80	15.0	150	3, 3, 3, 3	2, 6, 0, 0	1000	3	
axeman	(1)	(-, 100, 30, 20, 0; 15)	(130/150)	(92)	(21.06)	(160)	(15, 4, 2, -)	(0,6.5,0,-)	(750)	(3.5)	
cavalry	2	0, 75, 10, 40, 0; 30	120/150	80	15.0	150	3, 3, 3, 3	1, 0, 0, 8	1000	3	
lancer	(1)	(-, 100, 50, 0, 0; 15)	(130/150)	(92)	(19.305)	(160)	(15, 4, 3, -)	(0,6,5,-)	(2000)	(4.5)	
cavalry	2	0, 75, 5, 45, 0; 30	120/150	80	15.0	150	3, 3, 3, 3	7, 0, 0, 0	1000	3	
maceman	(1)	(-, 100, 30, 20, 0; 15)	(130/150)	(92)	(21.06)	(160)	(15, 4, 2, -)	(0,6.5,0,-)	(750)	(3.5)	
cavalry	2	0, 75, 20, 30, 0; 30	120/150	80	15.0	150	3, 3, 3, 3	0, 8, 0, 0	1000	3	
sabreman	(1)	(-, 100, 30, 20, 0; 15)	(130/150)	(92)	(21.06)	(160)	(15, 4, 2, -)	(0,6.5,0,-)	(750)	(3.5)	
cavalry	2	0, 75, 30, 20, 0; 30	120/150	80	15.0	150	3, 3, 3, 3	0, 0, 0, 9	1000	3	
spearman	(1)	(-, 100, 50, 0, 0; 15)	(130/150)	(92)	(19.305)	(160)	(15, 4, 3, -)	(0,6,5,-)	(2000)	(4.5)	
cavalry	2	0, 75, 15, 35, 0; 30	120/150	80	15.0	150	3, 3, 3, 3	0, 6, 0, 2	1000	3	
swordsman	(1)	(-, 100, 30, 20, 0; 15)	(130/150)	(92)	(21.06)	(160)	(15,4,2,-)	(0,6.5,0,-)	(750)	(3.5)	

### 2.6 Chariotry

class	pop.	training costs	exp.	vision	walk	health	armour	damage	$\mathbf{rate}$	range	other
	size	(s, f, w, m, s; time)	loot/up	range	$\mathbf{speed}$		(c, h, p, t)	(c, h, p, t)	(ms)	(m)	stats
biga	4	0, 150, 90, 60, 0; 40	180/210	85	16.0	240	5, 5, 5, 5	0, 0, 7, 0	1000	72	arrow count: 1–2 (–)
archer	(1)	(-, 250, 100, 100, 0; 30)	(150/-)	(96)	(20.25)	(240)	(20, 7, 5, -)	(0, 0, 14, -)	(1000)	(76)	
biga	4	0, 150, 100, 50, 0; 40	180/210	85	16.0	240	5, 5, 5, 5	0, 0, 21, 0	1000	36	arrow count: 1–2 (–)
javelinist	(1)	(-, 250, 100, 100, 0; 30)	(150/-)	(96)	(20.25)	(240)	(20, 7, 5, -)	(0, 0, 36, -)	(1250)	(32)	
quadriga	6	0, 250, 120, 80, 0; 50	240/240	85	17.0	360	6, 6, 6, 6	0, 0, 8, 0	1000	72	arrow count: 1–2 (–)
archer	(1)	(-, 250, 100, 100, 0; 30)	(150/-)	(96)	(20.25)	(240)	(20, 7, 5, -)	(0, 0, 14, -)	(1000)	(76)	

### 2.7 Elephantry

${f class}$	pop.	training costs	$\exp$ .	vision	walk	$\mathbf{health}$	armour	$_{ m damage}$	$\mathbf{rate}$	range	other
	size	(s, f, w, m, s; time)	loot/up	range	$\mathbf{speed}$		(c, h, p, t)	(c, h, p, t)	(ms)	(m)	stats
war	6	0, 300, 150, 150, 0; 60	360/300	90	12.0	600	20, 5, 15, 10	60, 0, 0, 0	1000	6	
elephant	(3)	(-, 250, 0, 250, 0; 30)	(150/-)	(100)	(8.45)	(750)	(25, 10, 10, -)	(150, 20, 0, -)	(1500)	(8)	

### 2.8 Dogs

${f class}$	pop.	training costs	$\exp$ .	vision	$\mathbf{walk}$	$\mathbf{health}$	armour	damage	$\mathbf{rate}$	range	other
	size	(s, f, w, m, s; time)	loot/up	range	$\mathbf{speed}$		(c, h, p, t)	(c, h, p, t)	(ms)	(m)	stats
war	0	0, 30, 0, 0, 0; 10	15/30	30	14.0	30	1, 1, 2, 1	0, 0, 6, 0	1000	2	
dog	(0)	(-, 100, 0, 0, 0; 15)	(100/100)	(30)	(14.40)	(90)	(1,1,2,-)	(0, 7, 2, -)	(1000)	(3)	

### 2.9 Support

class	pop.	training costs	exp.	vision	walk	$\mathbf{health}$	armour	damage	$\mathbf{rate}$	range	other
	size	(s, f, w, m, s; time)	loot/up	range	$\mathbf{speed}$		(c, h, p, t)	(c, h, p, t)	(ms)	(m)	stats
woman	1	0, 25, 0, 0, 0; 25	-/-	60	9.0	45	1, 1, 1, 1	1, 1, 1, 1	1000	2	build rate: $-(1.0)$
(female citizen)	(1)	(-, 50, 0, 0, 0; 8)	(10/-)	(32)	(9.0)	(25)	$(1,\ 1,\ 1,\ -)$	(0, 2, 0, -)	(1000)	(3)	
slave	1	50, 0, 0, 0, 0; 25	-/-	60	9.0	45	1, 1, 1, 1	_	_	_	build rate: 0.5 (0.5)
	(0)	(-, 0, 0, 50, 0; 20)	(10/-)	(12)	(9.0)	(100)	$(1,\ 1,\ 1,\ -)$	(-)	(-)	(-)	
healer	1	50, 25, 0, 0, 0; 25	25/200	60	9.0	75	1, 1, 1, 1	heal 1 HP	500	12	
	(1)	(-, 250, 0, 0, 0; 8)	(10/150)	(30)	(9.0)	(85)	$(1,\ 1,\ 1,\ -)$	(heal 5 HP)	(2000)	(12)	
trader	1	0, 50, 50, 50, 0; 25	-/-	60	9.0	100	1, 1, 1, 1	_	_	_	trade gain: 0.75 (0.75)
	(1)	(-, 100, 0, 80, 0; 15)	(10/-)	(60)	(9.0)	(100)	$(1,\ 1,\ 1,\ -)$	(-)	(-)	(-)	
worker	3	0, 150, 0, 0, 0; 25	-/-	60	5.4	450	9, 3, 7, 5	_	_	_	build rate: 2.0 (2.0)
elephant	(1)	(-, 150, 0, 0, 0; 20)	(50/-)	(50)	(5.4)	(300)	(10, 5, 8, -)	(-)	(-)	(-)	

### 2.10 Siege weapons

class	pop.	construction costs	exp.	vision range	walk	$\mathbf{health}$	armour	damage	$\mathbf{rate}$	range	other
	size	(s, f, w, m, s; time)	loot/up	packed/unpacked	$\mathbf{speed}$		(c, h, p, t)	(c, h, p, t)	(ms)	(m)	stats
bolt shooter	4	0, 100, 150, 150, 0; 30	0/-	50/100	8.0	200	5, 1, 50, 2	0, 0, 100, 50	5000	15-90	un/pack (ms): 9000 (10000)
	(2)	(-, 0, 250, 250, 0; 20)	(200/-)	(120)	(8.1)	(200)	(5, 1, 50, -)	(25, 0, 150, -)	(4000)	(26-80)	l. splash: $-(5c+0h+75p)$
stone thrower	4	0, 100, 200, 100, 0; 40	0/-	50/100	7.0	250	5, 1, 50, 2	100, 0, 0, 0	5000	30-90	un/pack (ms): 12000 (10000)
	(2)	(-, 0, 400, 0, 250; 25)	(300/-)	(120)	(7.2)	(250)	(5, 1, 50, -)	(100, 0, 10, -)	(5000)	(26-80)	c. splash: $-(35c+0h+15p)$
battering ram	4	0, 100, 300, 100, 0; 20	0/-	40	6.0	400	5, 1, 50, 2	40, 0, 0, 0	1000	6.5	garrison capacity: 8 (10)
	(3)	(-, 0, 350, 200, 0; 30)	(60/-)	(80)	(8.1)	(400)	(5, 1, 50, -)	(150, 0, 0, -)	(1500)	(6.5)	
siege tower	6	0, 200, 500, 300, 0; 60	0/-	100	4.0	750	5, 1, 50, 2	2, 0, 6, 0	1000	10-60+10	garrison capacity: 20 (20)
	(3)	(-, 0, 500, 300, 0; 60)	(60/-)	(80)	(6.3)	(500)	(5, 1, 50, -)	(2.5, 0, 12, -)	(2000)	(10-55+10)	arrow count: 2–12 (0–10)

~

### 2.11 Ships

class	pop.	construction costs	exp.	vision	walk	health	armour	damage	$\mathbf{rate}$	range	other
	size	(s, f, w, m, s; time)	loot/up	range	$\mathbf{speed}$		(c, h, p, t)	(c, h, p, t)	(ms)	(m)	stats
fishing	0	0, 15, 60, 0, 0; 15	-/-	75	12.0	150	2, 2, 4, 2	0, 0, 0, 10	1000	5	garrison capacity: 1 (1)
boat	(1)	(-, 0, 50, 0, 0; 20)	(1/-)	(30)	(9.9)	(200)	(2,2,5,-)	(0, 10, 0, -)	(1000)	(5)	food capacity: 60 (40)
merchant	0	0, 30, 120, 60, 0; 25	-/-	90	11.0	600	3, 3, 6, 3	_	_	_	garrison capacity: 15 (15)
$_{ m ship}$	(1)	(-, 0, 0, 100, 0; 20)	(25/-)	(50)	(12.15)	(400)	(2,2,5,-)	(-)	(-)	(-)	trade gain: $0.75 (0.75)$
fireship	0	0, 0, 150, 0, 0; 15	-/-	60	13.0	450	4, 4, 8, 4	5, 5, 5, 5	100	10	regeneration: $-5(-6)$ ;
	(1)	$(-,\ 0,\ 50,\ 0,\ 0;\ 30)$	(-/-)	(60)	(14.4)	(500)	(5, 5, 10, -)	(10, 10, 10, -)	(100)	(8)	death damage
barge	0	0, 50, 250, 100, 0; 45	-/-	120	10.0	1800	5, 5, 10, 5	0, 0, 5, 0	1000	60	garrison capacity: 45 (40)
	(3)	(-, 0, 150, 150, 0; 40)	(100/-)	(90)	(14.58)	(1600)	(5, 5, 10, -)	(0, 0, 35, -)	(2000)	(55)	arrow count: 3–24 (3–13)
triaconter	0	0, 60, 60, 30, 0; 20	-/-	105	10.0	300	5, 5, 10, 5	0, 0, 6, 0	1000	60	garrison capacity: 5 (20)
(light warship)	(2)	(-,0,125,50,0;20)	(75/-)	(90)	(13.95)	(800)	(5, 5, 10, -)	(0, 0, 35, -)	(2000)	(45)	arrow count: 1–3 (2–10)
penteconter	0	0, 100, 100, 50, 0; 30	-/-	105	9.5	500	5, 5, 10, 5	0, 0, 6, 0	1000	60	garrison capacity: 10 (20)
(light warship)	(2)	(-,0,125,50,0;20)	(75/-)	(90)	(13.95)	(800)	(5, 5, 10, -)	(0, 0, 35, -)	(2000)	(45)	arrow count: 1–5 (2–10)
bireme	0	0, 200, 200, 100, 0; 40	-/-	105	9.0	1000	6, 6, 12, 6	0, 0, 6, 0	1000	60	garrison capacity: 20 (30)
(medium warship)	(3)	(-,0,150,150,0;25)	(100/-)	(90)	(16.2)	(1400)	(5, 5, 10, -)	(0, 0, 35, -)	(2000)	(55)	arrow count: 2–10 (3–13)
trireme	0	0, 300, 300, 150, 0; 50	-/-	105	8.5	1500	6, 6, 12, 6	0, 0, 6, 0	1000	60	garrison capacity: 30 (30)
(medium warship)	(3)	(-, 0, 150, 150, 0; 25)	(100/-)	(90)	(16.2)	(1400)	(5, 5, 10, -)	(0, 0, 35, -)	(2000)	(55)	arrow count: 3–15 (3–13)
quadrireme	0	0, 400, 400, 200, 0; 60	-/-	105	8.0	2000	6, 6, 12, 6	0, 0, 6, 0	1000	60	garrison capacity: 40 (30)
(medium warship)	(3)	(-, 0, 150, 150, 0; 25)	(100/-)	(90)	(16.2)	(1400)	(5, 5, 10, -)	(0, 0, 35, -)	(2000)	(55)	arrow count: 4–20 (3–13)
quinquereme	0	0, 500, 500, 250, 0; 70	-/-	105	7.5	2500	7, 7, 14, 7	0, 0, 6, 0	1000	60	garrison capacity: 50 (50)
(heavy warship)	(3)	(-, 0, 350, 200, 350; 30)	(150/-)	(110)	(16.2)	(2000)	(5, 5, 10, -)	(100, 0, 10, -)	(5000)	(10-72)	arrow count: 5–25 (1–10)
sexireme	0	0, 600, 600, 300, 0; 80	-/-	105	7.0	3000	7, 7, 14, 7	0, 0, 6, 0	1000	60	garrison capacity: 60 (50)
(heavy warship)	(3)	(-, 0, 350, 200, 350; 30)	(150/-)	(110)	(16.2)	(2000)	(5, 5, 10, -)	(100, 0, 10, -)	(5000)	(10-72)	arrow count: 6–30 (1–10)
septireme	0	0, 700, 700, 350, 0; 90	-/-	105	6.5	3500	7, 7, 14, 7	0, 0, 6, 0	1000	60	garrison capacity: 70 (50)
(heavy warship)	(3)	(-, 0, 350, 200, 350; 30)	(150/-)	(110)	(16.2)	(2000)	(5, 5, 10, -)	(100, 0, 10, -)	(5000)	(10-72)	arrow count: 7–35 (1–10)
octoreme	0	0, 800, 800, 400, 0; 100	-/-	105	6.0	4000	8, 8, 16, 8	0, 0, 6, 0	1000	60	garrison capacity: 80 (100)
(juggernaut)	(5)	(-, 0, 400, 300, 350; 60)	(200/-)	(110)	(16.2)	(4000)	(5, 5, 10, -)	(100, 0, 10, -)	(5000)	(10-72)	arrow count: 8–40 (1–10)
novireme	0	0, 900, 900, 450, 0; 110	-/-	105	5.5	4500	8, 8, 16, 8	0, 0, 6, 0	1000	60	garrison capacity: 90 (100)
(juggernaut)	(5)	(-, 0, 400, 300, 350; 60)	(200/-)	(110)	(16.2)	(4000)	(5,5,10,-)	(100, 0, 10, -)	(5000)	(10-72)	arrow count: 9–45 (1–10)
decereme	0	0, 1000, 1000, 500, 0; 120	-/-	105	5.0	5000	8, 8, 16, 8	0, 0, 6, 0	1000	60	garrison capacity: 100 (100)
(juggernaut)	(5)	(-, 0, 400, 300, 350; 60)	(200/-)	(110)	(16.2)	(4000)	(5, 5, 10, -)	(100, 0, 10, -)	(5000)	(10-72)	arrow count: 10–50 (1–10)

# 3 Structures

### 3.1 Civic

class	building costs	pop.	$\mathbf{loot}$	armour	capture	garrison	health	territory	vision
	(s, f, w, m, s; time)	bonus	(s, f, w, m, s; exp)	(c, h, p, t)	$\mathbf{points}$	capacity		(root/radius/weight)	range
centre, crannog	0, 0, 500, 500, 500; 500	25	60, 60, 60, 0, 0; 250	3, 25, 35, 30	2500	25	3000	1/150/10000	100
(civil center)	(-, 0, 500, 500, 500; 500)	(20)	(-,0,200,200,200;200)	(3, 25, 35, -)	(2500)	(20)	(3000)	(1/140/10000)	(90)
small house	0, 0, 75, 0, 0; 30	5	0, 0, 10, 0, 0; 0	3, 20, 30, 25	300	3	750	0/10/40000	20
	(-, 0, 75, 0, 0; 30)	(5)	(-, 0, 10, 0, 0; 0)	(3, 20, 30, -)	(300)	(3)	(800)	(0/16/65535)	(20)
big house	0, 0, 150, 0, 0; 50	10	0, 0, 20, 0, 0; 0	3, 20, 30, 25	300	6	1200	0/20/40000	20
	(-, 0, 150, 0, 0; 50)	(10)	(-, 0, 20, 0, 0; 0)	(3, 20, 30, -)	(300)	(6)	(1200)	(0/20/40000)	(20)
blacksmith	0, 0, 200, 100, 0; 150	0	0, 0, 40, 20, 0; 0	3, 20, 30, 25	500	10	2000	0/30/40000	40
	(-, 0, 200, 0, 0; 200)	(0)	(-, 0, 50, 25, 0; 0)	(3, 20, 35, -)	(500)	(1)	(2000)	(0/38/30000)	(32)
temple	0, 0, 100, 0, 300; 200	0	40, 0, 20, 0, 60; 0	3, 20, 30, 25	500	20	2000	0/40/40000	40
	(-, 0, 0, 0, 300; 200)	(5)	(-,0,0,50,50;0)	(3, 20, 30, -)	(500)	(20)	(2000)	(0/40/30000)	(40)
library	(-, 0, 0, 200, 200; 200)	(0)	(-, 0, 0, 50, 50; 0)	(3, 20, 30, -)	(500)	(5)	(2000)	(0/50/40000)	(40)
lighthouse	(-, 0, 0, 200, 200; 200)	(0)	(-, 0, 0, 50, 50; 0)	(3, 20, 30, -)	(500)	(5)	(2000)	(0/0/40000)	(180)
monument	(-, 0, 0, 100, 100; 120)	(0)	(-, 0, 0, 25, 25; 0)	(3, 20, 30, -)	(-)	(-)	(1200)	(1/38/40000)	(60)
palace (apadana)	(-, 0, 0, 200, 300; 300)	(10)	(-, 0, 0, 50, 75; 0)	(3, 20, 30, -)	(500)	(10)	(3000)	(1/48/40000)	(40)
pillar	(-, 0, 0, 100, 100; 80)	(0)	(-, 0, 0, 25, 25; 0)	(3, 20, 30, -)	(-)	(-)	(1000)	(1/38/40000)	(40)
rotary mill	(-, 0, 200, 0, 100; 100)	(2)	(-, 50, 25, 0, 15; 0)	(3, 20, 30, -)	(500)	(-)	(2000)	(0/32/40000)	(40)
theatre	(-, 0, 0, 500, 500; 500)	(0)	(-, 0, 0, 125, 125; 0)	(3, 20, 30, -)	(500)	(5)	(2000)	(0/100/40000)	(40)
wonder	0, 1000, 1000, 1000, 1000; 1200	0	400, 200, 200, 200, 200; 0	3, 15, 25, 20	2000	50	5000	1/100/65535	100
	(-, 1000, 1000, 1000, 1000; 1000)	(0)	(-, 300, 300, 300, 300; 300)	(3, 15, 25, -)	(2000)	(30)	(5000)	(1/100/65535)	(72)

#### 3.2 Economic

class	building costs	pop.	loot	armour	capture	garrison	health	territory	vision
	(s, f, w, m, s; time)	bonus	(s, f, w, m, s; exp)	(c, h, p, t)	points	capacity		(root/radius/weight)	range
corral	(-, 0, 100, 0, 0; 50)	(0)	(-, 25, 10, 0, 0; 0)	(1, 20, 1, -)	(500)	(-)	(500)	(0/20/30000)	(20)
field	(-, 0, 100, 0, 0; 50)	(0)	(-, 50, 0, 0, 0; 0)	(5, 15, 40, -)	(500)	(-)	(250)	(-)	(0)
farmstead	(-, 0, 100, 0, 0; 45)	(0)	(-, 100, 10, 0, 0; 0)	(1, 5, 20, -)	(300)	(-)	(900)	(0/20/30000)	(20)
storehouse	(-, 0, 100, 0, 0; 40)	(0)	(-, 0, 10, 0, 0; 0)	(1, 5, 20, -)	(300)	(-)	(800)	(0/20/30000)	(20)
dock	(-, 0, 200, 0, 0; 150)	(5)	(-, 30, 30, 0, 0; 0)	(3, 20, 35, -)	(500)	(1)	(2500)	(-)	(40)
(market)	(-, 0, 300, 0, 0; 150)	(0)	(-, 25, 25, 25, 25; 0)	(1, 5, 20, -)	(500)	(-)	(1500)	(0/40/30000)	(32)

### 3.3 Military

class	building costs	pop.	$\mathbf{loot}$	armour	capture	garrison	$\mathbf{health}$	territory	vision
	(s, f, w, m, s; time)	bonus	(s, f, w, m, s; exp)	(c, h, p, t)	${f points}$	capacity		(root/radius/weight)	range
army camp	(-, 0, 500, 0, 0; 250)	(5)	(-, 0, 100, 0, 0; 100)	(2, 15, 25, -)	(1500)	(40)	(2500)	(-)	(60)
barracks	(-, 0, 300, 0, 0; 150)	(0)	(-, 0, 30, 0, 10; 0)	(3, 20, 35, -)	(500)	(10)	(2000)	(0/50/40000)	(32)
cavalry stables	(-, 0, 0, 0, 200; 150)	(0)	(-, 0, 30, 0, 10; 0)	(3, 20, 35, -)	(500)	(10)	(2000)	(0/50/40000)	(32)
elephant stables	(-, 0, 0, 200, 200; 300)	(0)	(-, 0, 0, 50, 50; 0)	(3, 20, 35, -)	(500)	(5)	(3000)	(0/38/40000)	(40)
kennel	(-, 0, 50, 200, 50; 50)	(0)	(-, 0, 10, 10, 0; 0)	(5, 10, 40, -)	(500)	(5)	(500)	(0/20/30000)	(40)
workshop	(-, 0, 300, 0, 0; 200)	(0)	(-, 0, 75, 0, 0; 0)	(3, 20, 35, -)	(500)	(2)	(2000)	(0/38/40000)	(40)
shipyard (dock)	(-, 0, 200, 0, 0; 150)	(5)	(-, 30, 30, 0, 0; 0)	(3, 20, 35, -)	(500)	(1)	(2500)	(-)	(40)
harbour (cothon)	(-, 0, 300, 0, 200; 500)	(10)	(-, 0, 75, 50, 50; 0)	(3, 20, 35, -)	(2000)	(5)	(5000)	(1/200/25000)	(100)

#### 3.4 Defensive

class	building costs	pop.	loot	armour	capture	garrison	health	territory	vision
	(s, f, w, m, s; time)	bonus	(s, f, w, m, s; exp)	(c, h, p, t)	${f points}$	capacity		(root/radius/weight)	range
outpost	(-, 0, 80, 0, 0; 40)	(0)	(-, 0, 8, 0, 0; 100)	(1, 5, 20, -)	(500)	(1)	(800)	(-)	(80)
sentry tower	(-, 0, 100, 0, 0; 40)	(0)	(-, 0, 20, 0, 0; 100)	(1, 20, 25, -)	(500)	(3)	(500)	(0/16/30000)	(80)
stone tower	(-, 0, 100, 0, 100; 150)	(0)	(-, 0, 0, 0, 20; 100)	(3, 25, 30, -)	(500)	(5)	(1000)	(0/32/40000)	(80)
fortress	(-, 0, 0, 0, 1000; 500)	(10)	(-, 0, 0, 0, 65; 100)	(6, 25, 40, -)	(4000)	(20)	(4200)	(0/100/40000)	(80)
palisade short	(-, 0, 4, 0, 0; 5)	(0)	(-, 0, 10, 0, 0; 100)	(2, 4, 25, -)	(1200)	(-)	(250)	(0/20/65535)	(20)
palisade medium	(-, 0, 7, 0, 0; 8)	(0)	(-, 0, 10, 0, 0; 100)	(2, 4, 25, -)	(1200)	(3)	(500)	(0/20/65535)	(20)
palisade long	(-, 0, 13, 0, 0; 11)	(0)	(-, 0, 10, 0, 0; 100)	(2, 4, 25, -)	(1200)	(5)	(750)	(0/20/65535)	(20)
palisade gate	(-, 0, +20, 0, 0; +5)	(0)	(-, 0, 10, 0, 0; 100)	(2, 4, 25, -)	(1200)	(-)	(637)	(0/20/65535)	(20)
palisade turret	(-, 0, 5, 0, 0; 7)	(0)	(-, 0, 10, 0, 0; 100)	(2, 4, 25, -)	(1200)	(-)	(750)	(0/20/65535)	(20)
siege wall short	(-, 0, 20, 0, 0; 15)	(0)	(-, 0, 15, 0, 0; 100)	(5, 15, 35, -)	(1200)	(-)	(750)	(0/20/65535)	(20)
siege wall medium	(-, 0, 40, 0, 0; 30)	(0)	(-, 0, 15, 0, 0; 100)	(5, 15, 35, -)	(1200)	(3)	(1500)	(0/20/65535)	(20)
siege wall long	(-, 0, 60, 0, 0; 45)	(0)	(-, 0, 15, 0, 0; 100)	(5, 15, 35, -)	(1200)	(5)	(2250)	(0/20/65535)	(20)
siege wall gate	(-, 0, +80, 0, 0; +10)	(0)	(-, 0, 15, 0, 0; 100)	(5, 15, 35, -)	(1200)	(-)	(2550)	(0/20/65535)	(20)
siege wall turret	(-, 0, 100, 0, 0; 80)	(0)	(-, 0, 15, 0, 0; 100)	(5, 15, 35, -)	(1200)	(2)	(3000)	(0/20/65535)	(60)
stone wall short	(-, 0, 0, 0, 15; 15)	(0)	(-, 0, 0, 0, 15; 100)	(3, 25, 30, -)	(1200)	(-)	(1000)	(0/20/65535)	(20)
stone wall medium	(-, 0, 0, 0, 22; 30)	(0)	(-, 0, 0, 0, 15; 100)	(3, 25, 30, -)	(1200)	(3)	(2000)	(0/20/65535)	(20)
stone wall long	(-, 0, 0, 0, 28; 45)	(0)	(-, 0, 0, 0, 15; 100)	(3, 25, 30, -)	(1200)	(5)	(3000)	(0/20/65535)	(20)
stone wall gate	(-, 0, 0, 0, +60; +10)	(0)	(-, 0, 0, 0, 15; 100)	(3, 25, 30, -)	(1200)	(-)	(1912)	(0/20/65535)	(20)
stone wall turret	(-, 0, 0, 0, 90; 80)	(0)	(-, 0, 0, 0, 15; 100)	(3, 25, 30, -)	(1200)	(2)	(4000)	(0/20/65535)	(60)