# 0 *A.D. is* **A**ctually **B**efore **C**hrist
`https://github.com/0abc/0abc-a23.git`

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

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`https://wildfiregames.com/forum/index.php?/topic/22779-0abc-mod/`

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# Contents

# 1 Introduction

**0abc** 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).

**0abc** 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.

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## 1.1 Instructions

- Use `git clone https://github.com/0abc/0abc-a23.git` to get the repository directly or download it as a zip via `https://github.com/0abc/0abc-a22/archive/master.zip`

- Place it in your `/0ad/mods/` folder:

    GNU/Linux (e.g. Fedora) typically: `~/.local/share/0ad/mods/`

    Macintosh/Apple OS X typically: `~/Library/Application\Support/0ad/mods/`

    Microsoft Windows typically: `~\Documents\My Games\0ad\mods\`

- Launch 0 A.D., click "Settings" and "Mod Selection"

- Select `0abc`, 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

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

## 2.2 Counters

| unit | new penalties | new bonuses | restricted |
|---|---|---|---|
| war dogs | – | – | Ships, Siege, Stru |
| infantry archers | 0.5× vs Elephantry | – | – |
| infantry axe throwers | – | – | – |
| infantry crossbowmen | 0.75× vs Elephantry | – | – |
| infantry longbowmen | 0.5× vs Elephantry | – | – |
| infantry javelinists | – | – | – |
| infantry lead slingers | – | – | – |
| infantry stone slingers | – | – | – |
| infantry axemen | – | – | – |
| infantry hoplites | – | – | – |
| infantry longswordsmen | – | – | – |
| infantry macemen | – | – | – |
| infantry pikemen | – | – | – |
| infantry sabremen | – | – | – |
| infantry spearmen | – | – | – |
| infantry swordsmen | – | – | – |
| camel archers | 0.5× vs Elephantry | – | – |
| camel javelinists | – | – | – |
| camel spearmen | 0.5× vs Elephantry | – | – |
| cavalry archers | 0.5× vs Elephantry | – | – |
| cavalry crossbowmen | 0.75× vs Elephantry | – | – |
| cavalry javelinists | – | – | – |
| cavalry axemen | 0.75× vs Camelry, 0.75× vs Chariotry, 0.5× vs Elephantry | – | – |
| cavalry lancers | 0.75× vs Camelry, 0.75× vs Chariotry, 0.5× vs Elephantry | – | – |
| cavalry macemen | 0.75× vs Camelry, 0.75× vs Chariotry, 0.5× vs Elephantry | – | – |
| cavalry sabremen | 0.75× vs Camelry, 0.75× vs Chariotry, 0.5× vs Elephantry | – | – |
| cavalry spearmen | 0.75× vs Camelry, 0.75× vs Chariotry, 0.5× vs Elephantry | – | – |
| cavalry swordsmen | 0.75× vs Camelry, 0.75× vs Chariotry, 0.5× vs Elephantry | – | – |
| biga archers | 0.5× vs Elephantry | – | Ships, Siege, Stru |
| biga javelinists | – | – | Ships, Siege, Stru |
| quadriga archers | 0.5× vs Elephantry | – | Ships, Siege, Stru |
| war elephants | – | – | – |
| bolt shooter | – | – | – |
| stone thrower | – | 2.0× vs Ships | – |
| battering ram | – | 2.0× vs Defensive | Organic |
| siege tower | – | – | – |

## 2.3 Infantry

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

## 2.4 Camelry

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

## 2.5 Cavalry

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

## 2.6 Chariotry

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

## 2.7 Elephantry

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

## 2.8 Dogs

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

## 2.9 Support

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

## 2.10 Siege weapons

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

## 2.11   Ships

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

# 3 Structures

## 3.1 Civic

| class | building costs (s, f, w, m, s; time) | pop. bonus | loot (s, f, w, m, s; exp) | armour (c, h, p, t) | capture points | garrison capacity | health | territory (root/radius/weight) | vision range |
|---|---|---|---|---|---|---|---|---|---|
| centre, crannog (civil center) | 0, 0, 500, 500, 500; 500<br>(−, 0, 500, 500, 500; 500) | 25<br>(20) | 60, 60, 60, 0, 0; 250<br>(−, 0, 200, 200, 200; 200) | 3, 25, 35, 30<br>(3, 25, 35, −) | 2500<br>(2500) | 25<br>(20) | 3000<br>(3000) | 1/150/10000<br>(1/140/10000) | 100<br>(90) |
| small house | 0, 0, 75, 0, 0; 30<br>(−, 0, 75, 0, 0; 30) | 5<br>(5) | 0, 0, 10, 0, 0; 0<br>(−, 0, 10, 0, 0; 0) | 3, 20, 30, 25<br>(3, 20, 30, −) | 300<br>(300) | 3<br>(3) | 750<br>(800) | 0/10/40000<br>(0/16/65535) | 20<br>(20) |
| big house | 0, 0, 150, 0, 0; 50<br>(−, 0, 150, 0, 0; 50) | 10<br>(10) | 0, 0, 20, 0, 0; 0<br>(−, 0, 20, 0, 0; 0) | 3, 20, 30, 25<br>(3, 20, 30, −) | 300<br>(300) | 6<br>(6) | 1200<br>(1200) | 0/20/40000<br>(0/20/40000) | 20<br>(20) |
| blacksmith | 0, 0, 200, 100, 0; 150<br>(−, 0, 200, 0, 0; 200) | 0<br>(0) | 0, 0, 40, 20, 0; 0<br>(−, 0, 50, 25, 0; 0) | 3, 20, 30, 25<br>(3, 20, 35, −) | 500<br>(500) | 10<br>(1) | 2000<br>(2000) | 0/30/40000<br>(0/38/30000) | 40<br>(32) |
| temple | 0, 0, 100, 0, 300; 200<br>(−, 0, 0, 0, 300; 200) | 0<br>(5) | 40, 0, 20, 0, 60; 0<br>(−, 0, 0, 50, 50; 0) | 3, 20, 30, 25<br>(3, 20, 30, −) | 500<br>(500) | 20<br>(20) | 2000<br>(2000) | 0/40/40000<br>(0/40/30000) | 40<br>(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) |
| 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<br>(−, 1000, 1000, 1000, 1000; 1000) | 0<br>(0) | 400, 200, 200, 200, 200; 0<br>(−, 300, 300, 300, 300; 300) | 3, 15, 25, 20<br>(3, 15, 25, −) | 2000<br>(2000) | 50<br>(30) | 5000<br>(5000) | 1/100/65535<br>(1/100/65535) | 100<br>(72) |

## 3.2 Economic

| class | building costs (s, f, w, m, s; time) | pop. bonus | loot (s, f, w, m, s; exp) | armour (c, h, p, t) | capture points | garrison capacity | health | territory (root/radius/weight) | vision range |
|---|---|---|---|---|---|---|---|---|---|
| field | 0, 0, 100, 0, 0; 60<br>(−, 0, 100, 0, 0; 50) | 0<br>(0) | 0, 0, 20, 0, 0; 0<br>(−, 50, 0, 0, 0; 0) | 5, 15, 40, 25<br>(5, 15, 40, −) | 500<br>(500) | −<br>(−) | 300<br>(250) | −<br>(−) | 0<br>(0) |
| corral | 0, 0, 100, 0, 0; 30<br>(−, 0, 100, 0, 0; 50) | 0<br>(0) | 0, 0, 20, 0, 0; 0<br>(−, 25, 10, 0, 0; 0) | 1, 5, 20, 10<br>(1, 1, 20, −) | 300<br>(500) | (−)<br>(−) | 500<br>(500) | −<br>(0/20/30000) | 30<br>(20) |
| storehouse | 0, 0, 100, 0, 0; 40<br>(−, 0, 100, 0, 0; 40) | 0<br>(0) | 0, 0, 20, 0, 0; 0<br>(−, 0, 10, 0, 0; 0) | 1, 5, 20, 10<br>(1, 5, 20, −) | 300<br>(300) | (−)<br>(−) | 700<br>(800) | −<br>(0/20/30000) | 30<br>(20) |
| farmstead | 0, 0, 100, 0, 0; 50<br>(−, 0, 100, 0, 0; 45) | 0<br>(0) | 0, 0, 20, 0, 0; 0<br>(−, 100, 10, 0, 0; 0) | 1, 5, 20, 10<br>(1, 5, 20, −) | 300<br>(300) | (−)<br>(−) | 900<br>(900) | −<br>(0/20/30000) | 30<br>(20) |
| dock | 0, 0, 200, 0, 0; 150<br>(−, 0, 200, 0, 0; 150) | 0<br>(5) | 0, 0, 40, 0, 0; 0<br>(−, 30, 30, 0, 0; 0) | 3, 20, 35, 10<br>(3, 20, 35, −) | 500<br>(500) | (1)<br>(1) | 1500<br>(2500) | −<br>(−) | 30<br>(40) |
| market | 0, 0, 300, 0, 0; 120<br>(−, 0, 300, 0, 0; 150) | 0<br>(0) | 0, 0, 60, 0, 0; 0<br>(−, 25, 25, 25, 25; 0) | 1, 5, 20, 10<br>(1, 5, 20, −) | 500<br>(500) | (−)<br>(−) | 1500<br>(1500) | −<br>(0/40/30000) | 30<br>(32) |
| rotary mill | 0, 0, 200, 0, 100; 100<br>(−, 0, 200, 0, 100; 100) | 0<br>(2) | 0, 0, 40, 0, 20; 0<br>(−, 50, 25, 0, 15; 0) | 3, 20, 30, 10<br>(3, 20, 30, −) | 500<br>(500) | (−)<br>(−) | 1500<br>(2000) | −<br>(0/32/40000) | 30<br>(40) |

## 3.3 Military

| class | building costs (s, f, w, m, s; time) | pop. bonus | loot (s, f, w, m, s; exp) | armour (c, h, p, t) | capture points | garrison capacity | health | territory (root/radius/weight) | vision 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 (s, f, w, m, s; time) | pop. bonus | loot (s, f, w, m, s; exp) | armour (c, h, p, t) | capture points | garrison capacity | health | territory (root/radius/weight) | vision 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) |