# **Chronology of the Aegean Bronze Age**

Bronze Age	<b>Minoan</b> Crete	Cycladic Aegean Islands	<b>Helladic</b> Greek mainland				
Early	3000-2100	3000-1900	3000-2100				
Middle	I 2100-1900 II 1900-1700 III 1700-1600	1900-1600	2100-1550				



Greece in the Bronze Age. Three distinctive civilizations—Cycladic, Minoan, and Mycenaean—developed around the Aegean Sea in the third and second millennia B.C.E.

### **Early to mid-Early Bronze Age**

3000-2100

History of early Bronze Age Crete is not very clear because subsequent development destroyed much of the archeological record, although a few early Bronze Age settlements have been discovered, such as Vasiliki and the sacred grotto of Eileithyia east of Iraklion.

c. 2400-2200

#### **Early Helladic and Cycladic Civilization**

High cultural development on mainland and Aegean islands Important sites included:

Lerna, Asine, Tiryns in the Argolid Zygouries, Korakou in Corinthia

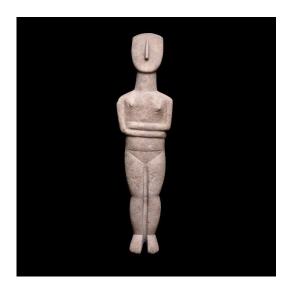
Agios Kosmas in Attica

Eutresis and Orchomenos in Boeotia

Malthi in Messenia Thermi on Lesbos Poliochni on Lemnos Chalandriani on Syros

Phylakopi on Melos

Valuable obsidian from Melos was exported throughout the Mediterranean





## **Late Early Bronze Age**

c. 2200-2000 A number of locations were destroyed, esp. in the Argolid,

Corinthia and the Cyclades.

Possibly due to invasions from Anatolia of speakers of Indo-European (Anatolian) languages ('Luwians in Greece' hypothesis)

c. 2000 Another wave of destruction occurred, perhaps due to beginning

invasions by Indo-European language speakers from the north

('proto-Greeks').

Table of Standardized Cretan Hieroglyphic Signs

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## Middle Bronze Age

2000-1600 **Immigration of Indo-European Greeks** from the north. Decline

of earlier Helladic culture.

Significant cultural interchange and intermarriage: Greek language

and culture strongly influenced by earlier population.

c. 2100-1700 Flowering of early **Minoan Civilization** on Crete.

Construction of the early palaces of Knossos, Phaistos and Mallia.

c. 2000-1800 Development of a hieroglyphic writing system on Crete ('Hiero-

glyphic Cretan').



c. 1800-1700

Replacement of hieroglyphic writing by 'Linear A' writing for the (non-Indo-European) Minoan language.

Despite intensive efforts and many claims, Linear A remains effectively undeciphered.

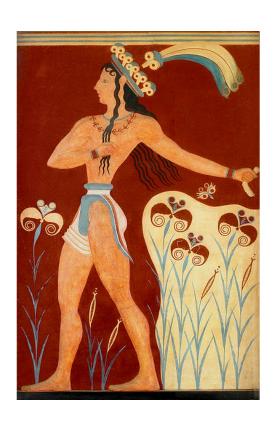
c. 1700-1500

On Crete: later Minoan Civilization: Extensive use of Linear A. Destruction, and subsequent reconstruction, of new palaces at Knossos, Phaistos and Mallia, as well as at Kydonia (Khania) and Kato Zakros.

c. 1600

Mainland Greek culture begins to develop again:

- towns begin to be organized
- rulers amass wealth which allows them to attract artisans from Crete



#### **Late Bronze Age**

c. 1500-1450 Collapse of Minoan civilization.

> A series of catastrophes — severe earthquakes and a volcanic eruption on the nearby island of Thera — leaves most Minoan towns in ruins by 1450.

The Minoan culture continued a bit longer at Knossos and in certain other locations (the harbor town of Amnisos, the city of Gournia, the royal villa at Agia Triada, the noble residences in Tylissos, Vathypetro, the necropolis in Archanes, and several sacred grottos).

c. 1500 Probable introduction of writing on the mainland by Minoans in the employ of Mycenean rulers. Development of 'Linear B' script of Mycenean Greek, used for record-keeping in the 'distributive palace economy'

> Mycenean Civilization: Flowering of culture on the mainland and the Islands.

> > Additional palaces built and numerous towns: Mycenae, Tiryns, Pylos, Athens, Thebes, Orchomenos, Iolkos on mainland, Agia Irini on Chios, among others.

Knossos and other Minoan sites come under the control of new rulers from the mainland, the Greek Achaeans. Use of Linear B on Crete; disappearance of Linear A script.



c. 1550-1200

c. 1400

1400-1200

In Hattusa, Hittite records include the names of what are probably Greek localities:

H.  $Ahhiyaw\bar{a} \rightarrow$  Homeric  $Ak^hai(w)ia$  ' $A\chi\alpha\iota(\digamma)i\alpha$  'Achaea' Mycenean  $Akhaiwi\bar{a}$  (a town in Crete)

H Milawanda, Milawata  $\rightarrow$  Greek Míl(w)atos, Míl $\bar{\epsilon}$ tos Mí $\lambda(\epsilon)$ a $\tau$ os, Mí $\lambda\eta\tau$ os

H  $Tawag(a)lawas \rightarrow Greek *Etewoklewēs > Eteoklēs$  cf. Mycenean Etewokleweios 'belonging to Eteocles' Έτεοκλ $\hat{\eta}$ s

c. 1370

Base of a statue in the temple of Amenophis in Egypt includes Greek place names:

Eg. Amnišá = Greek Amnisós 'A $\mu\nu\iota\sigma$ ós, Myc. Amnisos

Eg.  $Kunuš\acute{a} = Greek Kn\bar{\sigma}ss\acute{o}s Kv\omega\sigma\sigma\acute{o}s$ , Myc.  $Kn\bar{\sigma}ssos$ 

Eg. Mukána = Greek Mukɛ̃nai Μυκῆναι

Eg.  $Dek^w ayis = Greek T^h \bar{\epsilon} bai \Theta \hat{\eta} \beta a \iota$ 

cf. Myc.  $T^h \bar{e} g^w \bar{a}$ -i dat.sg. 'in Thebes'

(Note the characteristic change  $*g^w > b$  in classical Greek)

1350-1200

Mycenean towns control significant trading operations throughout the eastern Mediterrranean, leading to cultural interchange. Linguistic influences on Greek from various sources in the region. c. 1225 Palace at Mycenae destroyed.

1200-1100 Decline of Mycenean civilization. Artistic production ceases to be

innovative. Destruction of palaces. Rulers are overthrown. Precip-

itous loss of literacy in Linear B.

c. 1100-1050 **Bronze Age Collapse**: Beginning of the Greek 'Dark Age'.

until c. 500 Although Greek becomes the dominant language of the Aegean, other languages continue to be spoken in certain pockets.

Eastern Crete (*Eteocretan*: possibly descendant of Minoan)

Lemnos (Lemnian, a language probably related to Etruscan, a non-

Indo-European language of Italy)

Samothrace (a language probably related to the Indo-European

Thracian language)

#### Ruins of Mycenae



# **Objects in Linear B**

- 5904 objects inscribed in Linear B have been discovered as of 2000.
- The vast majority are clay tablets, but clay seals and potsherds have also been found.
- As opposed to Linear A, no Linear B inscriptions have been found on metal objects.
- The archeologist A J Evans first unearthed hundreds of tablets at Knossos in the early 20th century
- Linear B objects have been recovered at:

5 locations on Crete, principally:

Knossos: 4153 objects from c. 1400-1275

5 locations in the Peloponnese (southern Greece), principally:

Pylos: about 1088 objects from c. 1200

Mycenae: about 85 objects from c. 1250-1225

Tiryns: about 68 objects from c. 1200

6 locations in central Greece, principally:

Thebes: about 400 objects from c. 1300-1260





## **Linear B Script**

- Like Linear A, Linear B consists of both syllabic signs and ideograms
- There are at least 87 syllabic signs and about 150 ideograms
- The direction of writing is normally left-to-right
- The tablets mostly contain business records, which were recorded on a yearly basis on clay which was not fired, but simply left to dry.
- At the end of the year the tablets were moistened and mashed together to make new tablets for use the next year.
- The tablets we possess are generally only of the year the palace in question was destroyed. Material written on papyrus or palm leaf, if any, were burned and did not survive.
- Some writing has been discovered on fragments of pottery, but it usually consists of just a few letters
- Linear B was deciphered in 1952 by the English architect Michael Ventris, with the assistance of the philologist J Chadwick. Their publication of their results in 1953 created a worldwide sensation.
- The Linear B language, usually known as Mycenean Greek, turned out to be an archaic form of Greek containing forms which were not preserved even in Homer, previously the oldest known Greek texts.
- Linguistically the pre-Homeric period of Greek is divided into three phases:

c. 2000-1400 Pre-Mycenean Greek

1400-1200 Mycenean Greek

1200-700 Post-Mycenean Greek

after 700 Homeric and early classical Greek



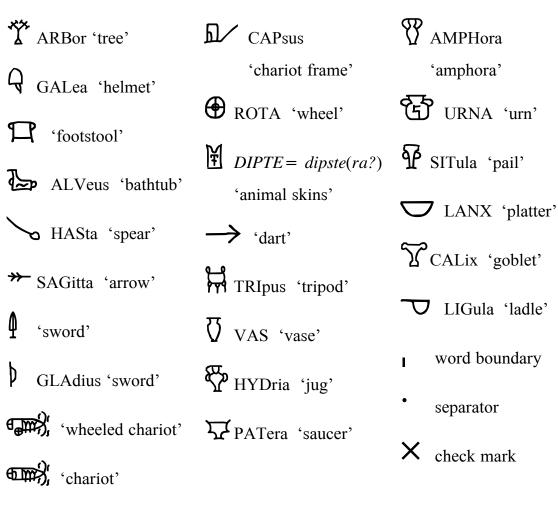
# **Linear B Syllabograms**

## Linear B ideograms

- VIR 'man'
- MULier 'woman'
- CERVus 'deer'
- EQUus 'horse'
- EQUf 'mare'
- EQU<sup>m</sup> 'stallion'
- ¶ qi OVIS 'sheep'
- OVISf 'ewe'
- F OVIS<sup>m</sup> 'ram'
- CAPer 'goat'
- CAPf 'she-goat'
- \* CAP<sup>m</sup> 'he-goat'
- au SUS 'pig'
- SUSf 'sow'
- SUS<sup>m</sup> 'boar'

- ¶ mu BOS 'bovine'
- H BOSf 'cow'
- H BOS<sup>m</sup> 'bull'
- GRAnum 'wheat'
- HORDeum 'barley'
- OLIVa 'olive'
- AROMa 'spice'
- CYPrus 'cyprus'
- $\oint KAPO = karpoi$ 'fruits'
- KANAKO = knako 'safflower'
- OLEum 'oil'
- M VINUM 'wine'
- $^{*}$   $AREPA = aleip^h ar$  'perfumed oil'

- MERI = meli 'honey'
- AES 'bronze'
- AURum 'gold'
- ¥ ra₃ CROCus 'saffron'
- LANA 'wool'
- x sa LINUM 'flax'
- Transport CORNu 'horn'
- PELlis 'hide'
- TELA 'cloth'
- TUNica 'garment'
- armor'
- LUNA 'month'
- ni FICus 'fig tree'



## Meaning uncertain:



### **Spelling Rules: Vowels**

**1.** Short and long vowels are not distinguished: long vowels are spelled with short vowel syllabograms

```
po-me poimēn 'herdsman' nom.sg.

po-me-no poimenos 'herdsman' gen.sg.
```

- 2. Between *i* or *u* and a following vowel, a j or w, respectively, is normally written i-ja-te *iātēr* 'healer' a-re-ku-tu-ru-wo *alektruōn* (name) ko-no-si-jo *knōssioi* 'of Knossos'
- **3a.** The *i* part of the diphthongs *ai*, *ei*, *oi*, *ui* is normally omitted before a consonant e-ra-wo elaiwon 'olive tree' e-ke  $ek^hei$  'has' re-ko-me-no  $leik^womenoi$  'leaving' nom.pl. pres. mid. pple.
- **3b.** The *u* part of the diphthongs *au*, *eu*, *ou* is normally written with the u sign.

  ze-u-ke-si *dzeugessi* 'yokes' dat.pl.

  i-je-re-u *iereus* 'priest'

  a-ro-u-ra *arourans* 'fields' acc.pl.
- **3c.** Before vowels the second part of a diphthong is written as j or w i-je-re-ja iereia 'priestess'
- **3d**. *ais* before a consonant is written a-i

  pa-i-to p<sup>h</sup>aistos 'Phaistos' (place name)
- **3e.** At the beginning of a word *ai* is written with the special a<sub>3</sub> syllabogram, and *rai/lai* are often written with the special ra<sub>3</sub> syllabogram:

```
a<sub>3</sub>-ka-sa-ma aiksmans 'spears' acc.pl.
e-ra<sub>3</sub>-wo ~ e-ra-wo elaiwon 'olive tree'
```

**3f.** At the beginning of a word *au* is normally written with the special au syllabogram:

```
au-to-jo autoio 'self' gen.sg.
```

**4.** The monosyllabic word  $g^w \bar{o} n(s)$  'cows' acc. pl. is written qo-o with an extra o sign

#### **Spelling Rules: Consonants**

#### A. Single Consonants

**1.** Voiced, voiceless and aspirated consonants are not distinguished, with the exception of d = d vs. t = t or  $t^h$ ). Thus:

```
p, b, p^h \rightarrow p-series
t, t^h \rightarrow
                t-series
d \rightarrow
                d-series
k, g, k^h \rightarrow
                k-series
k^w, g^w, k^{wh} \rightarrow
                q-series
ts, dz \rightarrow
                z-series
                             pa-ka-na phasgana 'swords' nom.pl
pa-te patēr 'father'
tu-ka-te t^hugat\bar{e}r 'daughter' do-so-si d\bar{o}sonsi 'they will give'
ka-ko k^halkos 'bronze'
                                     ka-ra-we graiwes, grāwes 'old women'
a-pi-qo-ro amphikwoloi 'servants' qo-u-ko-ro gwoukoloi 'cowherds'
me-zo medzos 'greater'
                                      ka-zo-e katsohes 'worse' nom.pl.
```

**2.** l and r are not distinguished: both are written with the **r**-series

```
e-re-u-te-ro eleutheros 'free'
```

**3.** Myc. h < \*s at the beginning of a word or between vowels

In Pylos, ha is very often written with the special syllabogram  $a_2$ , but in Knossos it is mostly written just as a

```
a_2-te-ro hateron < *sm-terom 'other' neut. acc. sg.

pa-we-a_2 ~ pa-we-a p^harweha < *-es-a 'large pieces of cloth' neut. nom.pl.
```

**4.** In general, word-final consonants are not written:

```
ka-ke-u khalkeus 'metal-worker'
pa-te patēr 'father'
po-me poimēn 'herder'
```

#### **B.** Consonant Clusters

- **1.** Geminates (i.e. doubled consonants) are always written single.
  - $e-\underline{r}a-pe-me-na$   $errap^hmen\bar{a}$  '(things) sewn together' fem. nom.sg. pf. pass. pple.
- 2. Certain consonant clusters have special syllabograms: dwe, dwo, twe, two, nwa, pte, rja/lja, rjo/ljo, which are often used: pte-re-wa ~ pe-te-re-wa ptelewās 'elm tree' gen.sg.
- 3.  $ti-ra_2$  probably spells trja as distinct from ti-ri-ja = tria
- **4a.** Consonant clusters are normally written by using a 'prop' vowel, which was usually the same as the next vowel in the word:

```
a<sub>3</sub>-k<u>a</u>-sa-ma aiksmans 'spears' acc.pl. k<u>o</u>-no-so knōssos 'Knossos' t<u>i</u>-ri-po-de tripode 'tripods' nom. dual q<u>i</u>-ri-ja-to k "riato' 'she bought' k<u>a</u>-ra-te-ra krātēra 'mixing bowls' acc.sg. te-tu-ko-wo-a tetuk "woha 'having built' neut. nom. pl. pf. act. pple. o-da-ke-we-ta odakwenta 'dental' neut. nom. pl.
```

- **4b.** But if the second consonant is w, the prop vowel is sometimes u:

  a-ra-ru-wo-a arărwoha 'having joined together' neut. nom. pl. pf. act. pple.
- **4c.** The cluster wj can be written either wi-jV or u-jV me-wi-jo me-u-jo me $wj\tilde{o}s$  'greater, more'
- **5a.** BUT, the sonorant and fricative consonants  $m \ n \ l \ r \ s$  are not normally written when in the syllable coda:

```
pa-we-a<sub>2</sub> ~ pa-we-a p^ha\underline{r}weha 'large pieces of cloth' neut. nom.pl. ka-ke-u k^ha\underline{l}keus 'metal-worker' e-ko-si ek^ho\underline{n}si 'they have' a-pi-me-de a\underline{m}p^him\bar{e}d\bar{e}s (personal name)
```

**5b.** EXCEPT in *nw*, *sw*, *sm*, *mn*, which are often written with a prop vowel:

```
wi-so-wo wiswos 'equal' do-so-mo dosmos 'giving back, return' ke-se-nu-wi-ja ~ ke-se-ni-wi-ja ksenwia 'foreign' neut. nom. pl.
```

**6.** Word-final consonant clusters are typically not written, BUT a stop consonant t, k,  $k^w$  followed by word-final s is sometimes written with a prop vowel:

```
wa-na-<u>ka</u> wana\underline{ks} 'lord' o-nu ~ o-nu-<u>ka</u> onu\underline{ks} 'nail' to-ra ~ to-ra-<u>ka</u> t^h \check{o} r\bar{a}\underline{ks} 'breastplate' a<sub>2</sub>-ti-jo-qo ait^h iok^w s or ait^h iok^w os 'Ethiopian' nom.sg. or gen.sg.
```

## **Spelling Rules: Abbreviations**

• In addition to syllabograms and ideograms, the Linear B scribes also made use of a large number of abbreviations

```
'young' m. f. nt.
           new-os, -\bar{a}, -on
ne
                                            'old' m/nt. f.
           palai-os, -ā
pa
                                            'one-year old'
           wetalos
we
                                            'from the previous year'
           perusinwos
pe
           tsāwetes < *kjā-wetes
                                            'from this year'
za
           monwos
                                            'single'
mo
                                            'a pair'
           dzeugos
ze
           op^h \breve{e}l(l)on \text{ or } op^h elos
                                            'owing' or 'debt'
O
```

· Other words were occasionally abbreviated

```
koriha(n)dna
                                                     'coriander'
ko ~ ko-ri-a2-da-na
                               korwos/korwā
ko ~ ko-wo/ko-wa
                                                     'boy/girl'
                               korut<sup>h</sup>os
                                                     'helmet'
ko ~ ko-ru-to
                                                     'caraway'
ku \sim ku-mi-no
                               kumīnon
                               marat<sup>h</sup>won
ma ~ ma-ra-tu-wo
                                                     'fennel'
                                                     'sesame (seeds)'
                               sāsama (pl.)
sa ~ sa-sa-ma
                               mint^h\bar{a}
                                                     'mint'
mi ~ mi-ta
```