

THE ORIGIN OF THE GREEK
TORTOISE-SHELL LYRE

by

David E. Creese

Submitted in partial fulfillment of the requirements
for the degree of Master of Arts

at

Dalhousie University
Halifax, Nova Scotia
August, 1997

© Copyright by David E. Creese, 1997



National Library
of Canada

Bibliothèque nationale
du Canada

Acquisitions and
Bibliographic Services

Acquisitions et
services bibliographiques

395 Wellington Street
Ottawa ON K1A 0N4
Canada

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence

Our file Notre référence

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-24822-4

Canada

"'Take my lyre,' he said, 'which to those who can deftly use it will discourse all sweet things; but to those who touch it, not knowing how to draw forth its speech, it will babble strange nonsense and rave with uncertain meanings.'"

-- Charles Kingsley,
paraphrasing ll. 482-490 of
the *Homeric Hymn to Hermes*,
in The Heroes, ed. E. M.
Wilmot (London: Buxton,
1920) p. 213.

TABLE OF CONTENTS

List of Illustrations.....	vi
Abstract.....	vii
Acknowledgements.....	viii
PREFACE.....	1
CHAPTER 1: The Origins and pre-Hellenic Development of the Lyre.....	10
INTRODUCTION.....	11
<i>Two theories on the origin of Aegean lyres:</i>	
(a) The Evolution of Cycladic Harp into Minoan Lyre..	14
(b) The Mesopotamian Origin of Aegean Lyres.....	27
Conclusions.....	39
CHAPTER 2: The Myceneans and the Appearance of the Tortoise-Shell Lyre.....	46
<i>Evidence for the appearance of the lyra:</i>	
(a) Archaeological Evidence.....	49
(b) Graphic Evidence.....	55
(c) Textual and Linguistic Evidence.....	57
African Bowl-Lyres and the Southward Migration of the Greek Lyra.....	70
The Improbability of a European Origin for the Lyra...	78
CONCLUSION.....	83
APPENDIX: The Construction of the Lyra.....	85
(a) Soundbox.....	86
(b) Arms.....	91
(c) Crossbar.....	94
(d) Tuning Bulges.....	96
(e) Strings.....	99
(f) Bridge.....	100
(g) Tailpiece.....	101
BIBLIOGRAPHY.....	104

LIST OF ILLUSTRATIONS

<u>Figure</u>	<u>Page</u>
1. Toronto 908.46.3 B: concert kithara.....	5
2. Toronto 919.5.24: lyra.....	6
3. Chapel Hill 62.14.2: lyra.....	7
4. London GR 1816.6-10.501: the Elgin lyre.....	8
5. Toronto 919.5.21: barbitos.....	9
6. Athens 3908: Cycladic marble harper.....	12
7. Heraklion: Hagia Triada fresco: Minoan box-lyre.....	15
8. Middle Minoan seal-carvings and graffiti.....	17
9. Baghdad: Sumerian box-lyre.....	29
10. Beni-Hasan: Syrian musician with lyre.....	34
11. Khania XM 2308: Minoan box-lyre.....	42
12. Pylos: Mycenaean box-lyre.....	48
13. Phylakopi SF 814: drilled tortoise-shell fragments....	51
14. Dorsal face of tortoise carapace, scutes labelled.....	53
15. Athens 313: Archaic Greek lyra.....	56
16. Votive figure in lead: lyra.....	58
17. Tübingen 2657: phorminx.....	59
18. Hungary: Hallstatt lyre.....	79
19. Hungary: Hallstatt lyre.....	79
20. Hungary: Hallstatt lyre.....	80
21. Diagram of Greek lyra and its parts.....	87
22. Calabria: Locri Epizephyrii carapace.....	89
23. Reconstruction of arm/crossbar attachment.....	95
24. Tuning bulge of Sudanese <i>kissar</i>	98
25. Tailpiece from the Arta lyre.....	102

All drawings and photographs by the author.

ABSTRACT

The history of stringed instruments in the Aegean begins with the third-millennium Cycladic civilization, which possessed a form of triangular harp. In the second millennium, box-lyres appeared for the first time in the Aegean, among the Minoans, and the harp appears to have vanished. The change from harp to lyre as the exclusive stringed instrument of the region has been explained in two ways: one theory claims that the Cycladic harp evolved into the Minoan lyre; another claims that the lyre was introduced into the Aegean from the East, where its origins can be traced to fourth-millennium Sumer. The second appears to be the more well-founded of the two theories, although the possible influence of Cycladic instruments on the shape of the Minoan lyre cannot be discounted.

The Myceneans inherited the Minoan box-lyre, but before the collapse of their civilization a new variant on it had been developed. This was the tortoise-shell lyre, a lighter, more simply built instrument whose shape essentially follows that of the box-lyre. It made its first appearance in the Bronze Age, is found in Greek art early in the Archaic Period, and appears in literature about a century later, by which time it had become a common instrument in the Greek world. A look at the very similar bowl-lyres of modern Africa helps to establish a southward direction for the instrument's migration, and a Hellenistic date for the lyra's arrival in Egypt denies the possibility of an African genesis for the instrument. Neither can claims of its European origin be substantiated. The lyra appears to have been a Bronze-Age Aegean invention whose form was inspired by the originally Mesopotamian box-lyre.

ACKNOWLEDGEMENTS

The preparation of this thesis was greatly assisted by many individuals who generously shared with me their time and expertise. Professor Walter Kemp first offered bibliographical suggestions, and his interest and encouragement have been an ongoing support. Professor J. P. Atherton has given me much valuable instruction through our readings of Greek musical texts.

I am indebted to Mrs. Anna R. Creese and Mrs. Janet Ross for their help with German books and articles; to Mrs. Blanche Machaalani for her help with Arabic words; and to Professor P. J. Calkin for her assistance with Hebrew. I am grateful to Mr. Charles Creese for his help with modern acoustic theory.

Mr. Philip Neuman kindly sent me detailed information about his own reconstruction of a Roman lyra, and Professor John Younger of Duke University responded faithfully to my queries about Aegean Bronze-Age music and the Phylakopi excavation, in which he participated. Professor Dennis Farrell offered helpful suggestions and discussion during the preparatory stages of the thesis. I am grateful as well to Professor Jane Snyder of Ohio State University, and to Professor Andrew Barker of the University of Birmingham, for their encouragement.

Mr. J. Lesley Fitton and Dr. Judith Swaddling of the British Museum assisted me both by providing information from the Museum's artifact records and by informing me of several useful articles. Alison Easson and the staff of the Royal Ontario Museum's Greek and Roman Department made it possible for me to examine closely and photograph several vases in their collection; Barbara Matilsky and the staff of the Ackland Art Museum in Chapel Hill, North Carolina, provided me with similar assistance.

I owe a special debt of gratitude to my parents for their constant interest and support: to my mother, for inspiring my love of language and music; and to my father, whose fascination with the origins of things I have come to share.

PREFACE

The aim of this thesis is to investigate the origin of the lyra, one member of the family of Greek stringed instruments classified generally as lyres. It may be helpful at the outset to say something about the nomenclature of the lyre-type instruments, all of which had been given clearly distinguished names by the fourth century B.C. Distinctions made here are based primarily on structural differences, rather than on differences of origin.

There are three main ways in which a group of strings can be made to sound a series of pitches, and these constitute the generally accepted categories for grouping plucked stringed instruments. The fundamental pitch produced by a string depends on three basic factors: the string's thickness, tension and vibrating, or "speaking", length. With a plucked instrument it is most advantageous for ease of playing to allow only a minimal difference in tension between one string and the next, so the major divisions of stringed instruments hinge on the alteration of the other two factors.

The first group is characterized by strings of unequal length: these are the harps. Harps were known in

Ancient Mesopotamia and Egypt, and their presence among the Cycladic people of the third millennium will be discussed in Chapter 1. Harps tended to take three main forms: the bow-harp (common in Egypt), the frame of which was essentially bow-shaped; the angle-harp (most prominent in Mesopotamia but known also in Egypt), whose frame enclosed two sides of the instrument; and the triangle-harp (called τρίγωνον by Plato¹), which was enclosed on all sides. The Cycladic harps discussed in the first chapter are a variety of the latter; the Late Classical and Early Hellenistic arched harps depicted on red-figured vases appear to be a variant of the angle-harp form. Harps, though known in the Aegean before and after the second millennium, and during the second millennium elsewhere, were not found in any form in the Minoan and Mycenaean cultures of the second-millennium Aegean.

The second group is made up of instruments of equal string length, the effective speaking length of which can be artificially altered to produce more than one pitch from each string: these are the necked instruments. The earliest of these was the lute, which had appeared in Mesopotamia and Egypt by the early second millennium, but did not arrive in Greece until the fourth century B.C., where it was called πανδούρα, πανδουρίς, πάνδουρος or τρίχορδον (a name which reveals its usual number of strings). Long-necked varieties of this instrument spread to Persia and India, and westward again into Europe during the Middle Ages. Modern examples of instruments belonging to this family are the guitar in the

¹ Republic 399d.

West, and the sitar in the East.

The third group is defined by strings of approximately equal length (whose speaking length is fixed, as is the case with harps), difference of pitch being rendered largely by differing string thicknesses: these are the lyres. Lyres were known (as will be discussed in Chapter 1) in Mesopotamia from very early times, and subsequently in Egypt and the Aegean. Among the various instruments of this type, this grouping can be further subdivided by construction into those instruments with a squarish or rounded wooden soundbox and arms (usually parallel or slightly outward-angled) which essentially form an extension of the soundbox; and a second group of instruments whose soundbox is entirely round (i.e., bowl-shaped, either of carved wood or of the hollowed shell of a tortoise), covered with the stretched hide of a sheep or ox, with straight or slightly curved arms of either wood or animal horn. The former group, which M. L. West designates as the "box-lyres",² includes the Sumerian, Babylonian, Hittite, Syrian, Egyptian and Minoan lyres mentioned in Chapter 1, along with the Mycenaean lyre, the Homeric $\phi\acute{o}\rho\mu\upsilon\gamma\acute{\epsilon}$, the so-called "cradle-kithara",³ and the later

² M. L. West, Ancient Greek Music (Oxford: Oxford University Press, 1992) p. 51.

³ The term *Wiegenkithara* was first coined by Max Wegner in 1949 (Das Musikleben der Griechen (Berlin: Walter de Gruyter) p. 31; cited by Warren Anderson in Music and Musicians in Ancient Greece (Ithaca: Cornell University Press, 1994) p. 177), on account of the instrument's shape. The term was later taken up by French musicologists (as *cithare en berceau* or *cithare-berceau*) and has since become the most common term for the instrument: its ancient name remains unknown. Bo Lawergren has proposed a new term, "cylinder kithara", for the same instrument, on structural grounds ("The Cylinder Kithara in Etruria, Greece, and Anatolia", Imago Musicae 1(1984):147-174, p. 156).

concert kithara (see fig. 1). The latter group, West's "bowl-lyres",⁴ include the Greek λύρα (see figs. 2-4), which was also found among the Etruscans, and βάρβιτος (or βάρβιτον), a longer-stringed, deeper-voiced variant of the λύρα (see fig. 5). Modern varieties of the bowl-lyre are still in use throughout northeastern Africa. This second group, the bowl-lyres, will be the focus of Chapter 2.

Throughout this thesis the term "lyre" will be used in a general sense to indicate any instrument of the third of the above groupings. "Lyra" (as simply a transliteration of the equivalent Greek term λύρα) and "bowl-lyre" will be used synonymously to designate lyres of the second subgroup, and "tortoise-shell lyre" will be used to refer specifically to the variety of bowl-lyre whose soundbox is made from the carapace of a tortoise.

The object of this investigation is to clarify the origins of the Greek lyra. In order to properly examine its appearance in the Greek world, and to adequately assess the question of its genesis, the broader history of Aegean chordophones must be considered, beginning with those of the region's earliest civilizations. Accordingly, Chapter 1 will focus on establishing the origin of the family of Aegean lyre-type instruments generally, and Chapter 2 will deal with the origin of the lyra specifically. Details of the lyra's construction which could not be dealt with in the course of the argument are discussed in the Appendix.

⁴ West 1992, p. 56.

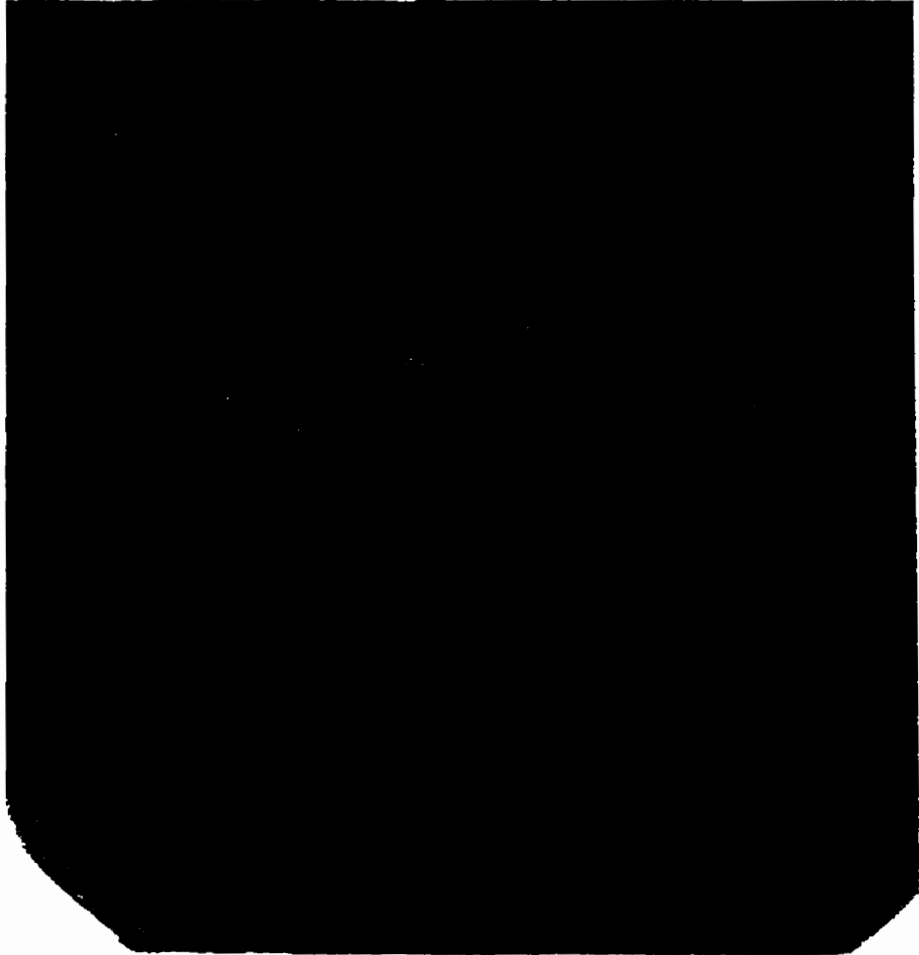


Fig. 1. Toronto 908.46.3, side B:
Attic black-figured neck-amphora,
late 6th century B.C. Musician
(possibly Apollo) with concert
kithara.

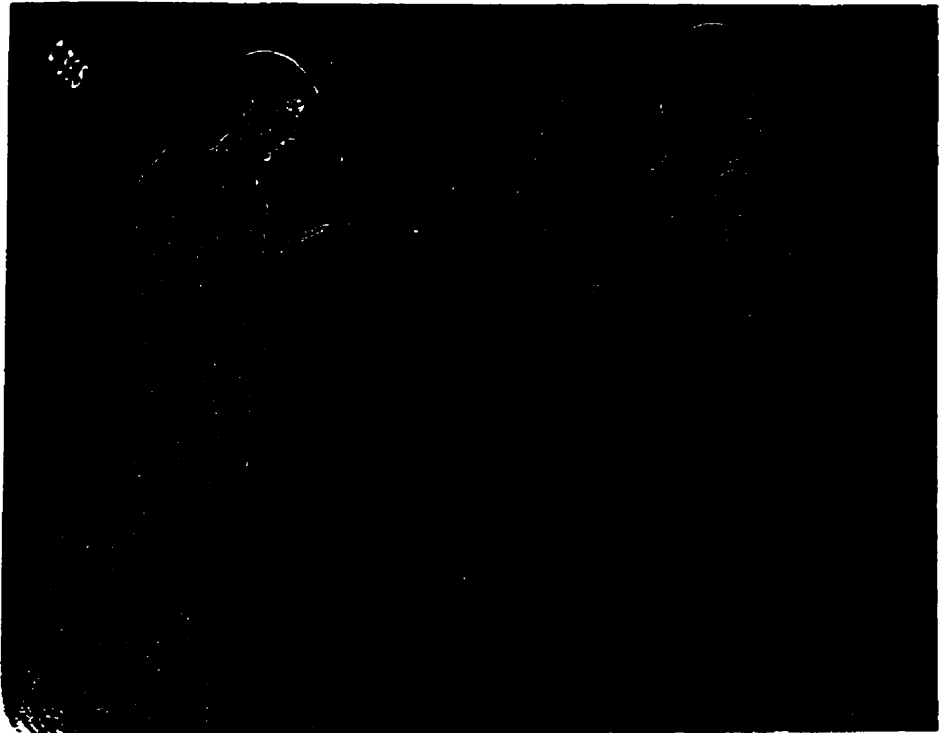


Fig. 2. Toronto 919.5.24: Attic red-figured pelike, Capua, ca. 460 B.C., by the Pig Painter. Youth with lyra.



Fig. 3. Chapel Hill 62.14.2:
Attic red-figured kylix, ca. 500-475
B.C., by Makron. Lyra.



Fig. 4. London GR 1816.6-10.501:
the Elgin lyre, Athens, 5th or 4th
century B.C.; only the arms and
crossbar are original.



Fig. 5. Toronto 919.5.21: Attic red-figured kylix, ca. 480 B.C. Bearded reveller playing barbitos.

CHAPTER 1:

The Origins and Pre-Hellenic Development of the Lyre

INTRODUCTION

The presence of stringed instruments in the Aegean predates the arrival of the first Greek-speaking peoples by over half a millennium. The earliest instruments for which there is archaeological evidence were harps, the form of which is represented by a half-dozen Cycladic marble figurines dating from the early third millennium (see fig.6).¹ If the Cycladic culture, which flourished for about five hundred years in the mid-third millennium, possessed any other type of stringed instrument, there is no evidence of it among the extant archaeological finds. The Cycladic harp, if the figurines are to be trusted, was triangular in shape and enclosed on all three sides; an ornament in the shape of a bird's head, facing outward, away from the performer, appears to have been standard. This element, and the fact that the figurines were recovered from burial sites, suggest that

¹ e.g. Athens 3908; cf. Martha Maas and Jane M. Snyder, Stringed Instruments of Ancient Greece (New Haven: Yale University Press, 1989) p. 15 fig. 1; Friedrich Behn, Musikleben im Altertum und Frühen Mittelalter (Stuttgart: Hiersemann, 1954) pl. 53 fig. 122.



Fig. 6. Athens 3908: Cycladic marble figurine, third millennium B.C. Harpist. [Maas/Snyder 1989, p. 15 fig. 1.]

harps had some religious association in Cycladic culture.²

With the rise of the Minoan civilization early in the second millennium, a new kind of stringed instrument made its appearance. The harp, apparently, was unknown to the Minoans,³ and only one main type of stringed instrument can be attested for their culture: a type of round-based, apparently wooden, normally seven-stringed lyre.

Since there is very little archaeological material to illuminate any relations between the more ancient Cycladic civilization and its newer neighbour civilization on Crete over the first centuries of the second millennium,⁴ many conjectures have been made about the disappearance of the Cycladic harp. It appears to have vanished with the decline of Cycladic civilization after about 2200 B.C., and to have been replaced by the Minoan lyre by the sixteenth century B.C., nearly seven hundred years later, as the only Aegean stringed instrument. The gap between the harp of the Cycladic marble figurine from Keros (fig. 6)⁵ and the fully

² The religious symbolism of birds -- especially swans -- incorporated as ornaments on stringed instruments was prevalent not only in Cycladic culture but was shared by the Minoans, Myceneans and later Greeks. Even in Classical times a strong mythic affinity was held between stringed instruments, birds, and the dead: Plato, at *Republic* 620a6, describes two mythological musician-figures, Thamyris and Orpheus, both of whom were said to have played the lyre; Thamyris is shown choosing the form of a nightingale after his death, Orpheus that of a swan. On swan-ornamentation in Minoan and Mycenaean lyres, see Leopold Vorreiter, "The Swan-Neck Lyres of Minoan-Mycenaean Culture", *Galpin Society Journal* 28(1975):93-97. A later echo of the association between swans, music and death in Western culture can be seen in the music of the Renaissance; an example is the madrigal "The Silver Swan" by Orlando Gibbons (1583-1625), *The Oxford Book of English Madrigals*, ed. Philip Ledger (Oxford: Oxford University Press, 1978) pp. 310-312.

³ Maas/Snyder 1989, p. 2.

⁴ Maas/Snyder 1989, p. 1.

⁵ Maas/Snyder 1989, p. 15 fig. 1.

developed lyre of the late Minoan frescoes found at Hagia Triada (see fig. 7)⁶ cannot be confidently filled in. Scholars have, however, advanced two main and opposed theories on the question, and these will now be considered in turn.

THE EVOLUTION OF CYCLADIC HARP INTO MINOAN LYRE

The first theory, put forward initially by Bernhard Aign in his 1963 PhD. dissertation,⁷ and more recently supported by Warren Anderson,⁸ is that the triangular harp of Cycladic culture was gradually transformed into the lyre of Minoan culture. This would account for the apparently exclusive presence of each in its own time, and also for the characteristically round base which distinguishes the western lyres (until the appearance of the Greek concert kithara) from the flat-based lyres of the eastern Mediterranean and Mesopotamia.⁹ The argument is that the triangular shape of the Cycladic harp became gradually "rounded out", still with the prominent soundbox at the bottom, still with the bird's-head ornament. Over time, the trend leaned toward a set of

⁶ Maas/Snyder 1989, p. 16 fig. 2a; Warren D. Anderson, Music and Musicians in Ancient Greece (Ithaca: Cornell University Press, 1994) p. 8 fig. 5, p. 9 fig. 6.

⁷ Bernhard Paul Aign, Die Geschichte der Musikinstrumente der ägäischen Raumes bis um 700 vor Christus: Ein Beitrag zur Vor- und Frühgeschichte der griechischen Musik, PhD. diss., Johann Wolfgang Goethe-Universität, Frankfurt am Main, 1963.

⁸ Anderson 1994, p. 172 fig. 19 (reprinted from Aign), and supporting discussion, pp. 4-6.

⁹ Bo Lawergren, "Lyres in the West (Italy, Greece) and East (Egypt, the Near East), ca. 2000 to 400 B.C.", Opuscula Romana 19(1993):55-76, especially 71-72.



Fig. 7. Heraklion: fresco from Hagia Triada, Crete. Late Minoan, ca. 1400 B.C. [Maas/Snyder 1989, p. 16 fig. 2a; Anderson 1994, p. 9 fig. 6.]

parallel or minimally radial strings of more or less equal length, one end of which was still affixed to the soundbox, the other, by the Late Minoan Period, to a yoke or crossbar supported by two roughly parallel arms, ornamented in a curled fashion to resemble the necks and heads of birds.

The main support for this reconstruction is a group of Cretan seal-carvings and graffiti, all dating from the Middle Minoan Period (ca. 1850-1700 B.C.).¹⁰ Their dates fall conveniently into the mystery period between the decline of Cycladic civilization and the affluence of the Late Minoan Period. The first example is an early seal impression from the Candia district, showing a vaguely heart-shaped instrument with a rectangular soundbox at its base (see fig. 8a). Each half of the instrument's heart shape encloses a space in which four parallel strings are clearly visible. On top of one of the halves, there is a protrusion from the instrument's frame which crudely suggests the bird's head ornament familiar from the Cycladic harp statuettes. The two sets of four strings emerge from the soundbox at somewhat less than right angles; since there is no representation of the performer with the instrument, little can be deduced about how it was held, or about the performer's hand positions, and a valuable parallel between this instrument

¹⁰ Six figures are reprinted from Aign by Anderson (1994, p. 6 fig. 3), but Maas and Snyder note that due to a publication error in the first volume of Arthur Evans' book, The Palace of Minos at Knossos (Aign's source), an illustration of the earliest of these seal-stones was printed twice, with different captions. This error led Aign (and Anderson) to believe that there were two seal-carvings depicting the same instrument, when in reality there was only one. Therefore the two images of Anderson's fig. 3a represent the same seal-stone, which has been reproduced here as fig. 8a. The present location of this seal is unknown (Maas/Snyder 1989, p. 219 n. 3).



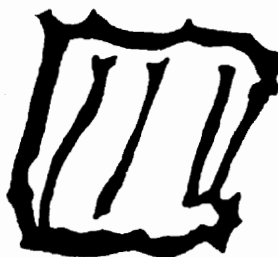
a



b



c



d

Fig. 8. Middle Minoan carvings,
Crete, ca. 1850-1700 B.C.

a. Seal-stone from Candia;

b. Seal-stone from Knossos;

c-d. Graffiti from Knossos.

[Anderson 1994, p. 6 fig. 3.]

and the Cycladic harp is therefore not possible.¹¹

The second example is a pair of seal-stone carvings, this time from Knossos (see fig. 8b). They, like the first, show eight strings quite clearly, only now we find them grouped not separately, by fours, but together. They emerge radially from what appears to be a smaller, rectangular soundbox and are made fast to the upper part of the instrument's frame. The frame itself is now no longer heart-shaped but rather egg-shaped, curving elliptically around as though constructed of one piece of wood. There is no yoke or crossbar; the strings appear to be made fast directly to the frame itself at the point where it curves around parallel to the soundbox and roughly perpendicular to the strings. Small lumps protrude from the upper frame where the strings are attached: these may be intended to represent the leather collars around which the strings were wrapped on later lyres (called κόλλοπες or κόλλαβοι by the Greeks), by which the string could be turned on the crossbar for tuning purposes. If, however, a different method of string attachment was used for the harps, these vaguely carved shapes may represent some other structure (such as pegs) by which strings were fastened and tuned.

The last group of carvings are the graffiti, also

¹¹ Lawergren (1993, p. 75) calls the instrument of this Minoan seal "enigmatic, since [it is] never shown being played", and shows reservation at Aign's use of it to link Minoan lyres with Cycladic harps (n. 164), and also at Boardman's use of it to suggest a link between Minoan lyres and a group of "perplexing" examples of lyres from the northern Adriatic and Italian regions. He also notes (n. 166) that the instruments on these Minoan seal carvings bear a resemblance to a "Cretan hieroglyphic sign" which was in use "during the first half of the second millennium". Obviously, then, the instruments, whatever they were, had a familiar shape for the Minoans, and were easily stylized.

found at Knossos, by Arthur Evans (see fig. 8c-d). If they represent the third stage in a roughly 150-year evolution of chordophone form within the Middle Minoan Period, they also yield the least amount of valuable information because their accuracy of representation is naturally so dubious. They may not actually depict instruments at all. If they do, however, certain things can be cautiously ascertained. Firstly, that the shape of the instrument in question may have become taller and less oblong toward the end of the Middle Minoan Period; and secondly, that the general shape of the instrument may have begun to take on the more characteristically U-shaped, flat-topped appearance which is such a distinguishing feature of the Late Minoan, Mycenaean and early Greek lyres. Whether the vaguely flat top on both graffito-instruments represents a shift from harp-type construction, where the strings are made fast at their upper end to a piece which is still essentially a part of the instrument's frame, to lyre-type construction, where the frame has been divided and the upper ends of the strings are attached to a crossbar which yokes together the now divided frame, is a question the lack of clarity of the graffito carvings makes it impossible to answer with any confidence. Anderson lacks any degree of caution on this point. "Beyond question," he writes, "it is a transitional sequence, ending with something very like a lyre."¹²

There is certainly evidence that would support this theory, but its value is questionable. The strongest

¹² Anderson 1994, p. 5.

argument, perhaps, is in the presence of the ornament on the first example. The bird's head, as seen on the Cycladic harp, continues as an ornament on Aegean chordophones until the end of the Bronze Age. The shape which projects from the frame of the first instrument (fig. 8a) does suggest a bird's head, especially in light of the continuity of this tradition. This argues for some sort of link, then, between the Cycladic harp and this Minoan instrument. The instrument also appears to be basically harp-like in its construction: there are only two major structural components, the soundbox and the frame. These factors alone, however, are not conclusive. The Minoans may well have borrowed or inherited the harp from the Cycladic culture and adapted it to suit their music, thus changing its shape in ways reflected by these two seal impressions; they may also have brought their own harp-like instrument with them, simply borrowing the bird's head ornament from their Cycladic neighbours as an attractive addition to a distinctly Minoan harp. Excepting, then, the ornament as an element which may have been added later, the instrument depicted on this seal-stone is more different from the Cycladic harp than the latter is from the angle-harps of the Babylonians, for example.¹³ One small seal-carving from the Middle Minoan Period does not constitute enough evidence to argue for the continuity of the whole instrument from the Cycladic to the Minoan

¹³ A good example is the frieze of a Babylonian vertical angular harp at the Louvre, dated to 1800 B.C., which makes it roughly contemporary with this early Minoan seal-stone; see M. Duchesne-Guillemin, "Music in Ancient Mesopotamia and Egypt", World Archaeology 12(1981):287-297, especially pl. 51.

civilization.

The instruments on the pair of seal-carvings from Knossos (fig. 8b) have lost the ornament altogether, and rounded out their shape into something that resembles a harp as little as it does a lyre. Yet structurally it still appears to be constituted of soundbox plus continuous frame, and so after some fashion it can still be considered a type of angleless harp. There is nothing to suggest that these instruments are not the descendants, or perhaps some variant contemporaries, of the first example.

The graffito-instruments (fig. 8c-d), however, are so sketchy in shape that it is not clear what can or cannot be safely inferred about their development from the previous examples. It should be noted as cautionary evidence that while the artisans of the three seal-carvings were able to clearly represent eight strings in each case, here there are only three strings shown in each graffito, and there is no compelling reason to suspect that the instrument being portrayed really possessed only three strings.¹⁴ If, then, three scratches must suffice to represent eight strings, one must be cautious in the inferences one draws from the rest of the carving.

Anderson admits that they are "rough impressions, hardly more than outlines";¹⁵ however, he goes on to assert that the instruments "do not look at all like harps. They

¹⁴ The eight strings of the earlier examples appears to be a standard, if approximate, complement for most Aegean Bronze-Age chordophones; seven or eight strings are usually shown on Minoan lyres. See Anderson 1994, p. 8 fig. 5, p. 9 fig. 6; Maas/Snyder 1989, p. 16 fig. 2b.

¹⁵ Anderson 1994, p. 5.

appear to be lyres, and they have no more than three strings. Something remarkable is happening, or appears to be happening: within a century and a half, one basic type of instrument apparently becomes another."¹⁶ Although he does not lay out specifically what it is that makes them "appear" to be lyres and not harps, the fundamental change in structure -- which is merely a suggestion in the graffiti -- is from the undivided frame of the harp to the U-shape of the lyre, the gap in which is bridged by a crossbar, which would make the top of the instrument look flat for the first time. But if these "rough impressions, hardly more than outlines" are the only extant evidence for a "missing link" between harps and lyres in the Aegean, then the theory is on shaky ground indeed. Bo Lawergren, in his 1993 article on lyres in the Mediterranean and Near East, expresses distrust at Helen Roberts' reconstruction of a concert kithara based on coins of the Classical Period, on the grounds that a representation on an object as small as a coin or a gem "can easily be unreliable" on points of detail.¹⁷ There is a great deal more accuracy of detail on most fifth- and fourth-century Greek coins than is shown on any of the three seal-stones, let alone the two graffiti. This is enough to allow us to regard

¹⁶ Anderson 1994, p. 6.

¹⁷ Lawergren 1993, p. 57 n. 11.

the evidence of all five carvings as inconclusive at best.¹⁸

A further consideration, which seems to have fallen unnoticed by Anderson, is the difference in the position of harps and lyres in the hands of their players. The Cycladic marble statuettes portray a seated male performer holding the harp with its base resting either on his right thigh, or to the right of his right thigh. The inside arm of the harp rises from the base, passing between his right arm and his chest, and curves forward at the top, joining the third side in the familiar bird's-head ornament. The player appears to hold the outer side of the instrument's frame with his right hand in one example,¹⁹ with his left in another;²⁰ in a further example, unfortunately, the player's hands are missing and it is impossible to tell what their position was (fig. 6).²¹ At any rate, the harp's position on the performer's right thigh suggests that the player's left arm was the more mobile one when it came to sounding the strings. A right-hand-side playing position appears to have been common among Mesopotamian harpers as well.²²

¹⁸ Maas and Snyder dismiss even the earliest of these seal-stones: because the instrument depicted "cannot be securely identified as either a harp or a lyre (instruments that almost certainly developed independently), or even as a musical instrument, it cannot be accepted as evidence" (1989, p. 219 n. 3). Paul Courbin ("Les lyres d'Argos", Bulletin de correspondance hellénique Suppl. 6(1980):93-114) also expresses distrust with regard to Aign's theory: "La filiation proposée par B. Aign...paraît sujette à caution" (p. 96 n. 11).

¹⁹ Anderson 1994, p. 4 fig. 2.

²⁰ Behn 1954, pl. 53 fig. 122.

²¹ Maas/Snyder 1989, p. 15 fig. 1.

²² e.g. Duchesne-Guillemain 1981, pl. 51. Harpers in Classical Athens appear to have sat with the lyre on either their left or right side, if the vase-paintings are to be trusted; see Maas/Snyder 1989, p. 163 figs. 14 and 15.

On the other hand, almost every graphic example of performers on lyres of all types, from the Mesopotamian lyres of the fourth millennium²³ to those of Hellenistic and Roman times²⁴ shows the instrument held on the performer's left side if standing (these tend to be the box-lyres), or resting on his or her left thigh if seated (generally the bowl-lyres).²⁵ The very fact that all Cycladic harpers are portrayed in a sitting position and all Minoan and Mycenaean lyre-players are shown standing (perhaps walking?) counts as an important difference. That the two instruments were held on opposite sides of the body further reinforces the difference between them.

Another difference is that from the earliest sixteenth- and fifteenth-century illustrations of Minoan instruments, lyres are shown to be supported by the standing musician's left arm with the aid of a wrist-sling made fast

²³ Marcelle Guillemin and Jacques Duchesne, "Sur l'origine asiatique de la cithare grecque", *L'Antiquité classique* 4(1935):117-124, especially pl. II fig. 5.

²⁴ e.g. the lyre being played by one of the figures in the wall painting of a Dionysiac mystery cult at the Villa of the Mysteries in Pompeii, ca. 50 B.C.

²⁵ One notable exception to this trend is a 14th-century B.C. Egyptian fresco of a woman playing a 15-stringed lyre which she holds on her right side; see Guillemin/Duchesne 1935, pl. VI fig. 21.

to the outer arm of the lyre;²⁶ the later Greek lyra was also often equipped with this feature, sometimes even when the musician was seated while playing.²⁷ This piece of equipment was evidently not required in playing the harp, but was apparently necessitated by the customary standing playing position for the Minoan concert lyre, and in this way became a more or less standard feature of the instruments of the lyre family in the Aegean.

Still further, all of the earliest representations

²⁶ Anderson 1994, p. 8 fig. 5, p. 9 fig. 6. This wrist-sling was later given the generic term *τελαμών* (strap, band) and was probably of leather or linen cloth; see Jacques Chailley, *La musique grecque antique* (Paris: Société d'édition «Les belles lettres», 1979) p. 68. Solon Michaelides (*The Music of Ancient Greece: An Encyclopaedia* (London: Faber & Faber, 1978) p. 324) calls it a "leather band or strap by which the lyra or the kithara was hung from the performer's breast; by holding the instrument the telamon could help the player to use both hands freely." All the graphic evidence contradicts Michaelides' assertion (for which he gives no reference): it is quite clear that from the time of the Minoan frescoes (e.g., fig. 7) to the Hellenistic period the *τελαμών* was attached to the outer arm of the instrument and to the player's left wrist, and that this did indeed restrict the movement of his left hand while playing. The Greek shield-strap, also called *τελαμών*, was worn over the head and shoulder, so that the shield was suspended around the soldier's neck and could be worn either to protect his front or back. This may account for the confusion in Michaelides' account.

²⁷ Maas/Snyder 1989, p. 111 figs. 26, 28.

of Minoan lyre-players clearly show a plectrum²⁸ in the performer's right hand, whereas harps of all types, including those in Egypt and Mesopotamia, appear to have been plucked with the fingers.²⁹ The issue of the origin of the plectrum, which does little to support Aign and Anderson, will be discussed in the following section.

Thus if the theory of Aign and Anderson is correct, and the Minoan lyre is indeed a transformed descendant of the Cycladic harp, it would have had not only to change its shape drastically and fundamentally within, as Anderson says, a century and a half, but the customs surrounding its usage would also have had to change just as significantly and quickly. Performers would have had to begin to hold it with their right arm instead of their left, to stand instead of sit while playing it, supporting it with a sling around their left wrist, and sound its strings with a plectrum held in the right hand instead of plucking them with the bare fingers.

It is a pity no artifact has come to light which might provide some information about how the instruments on

²⁸ κλήκτρον, from the verb κλήτω (to strike), also had the meaning "spear-point", as an object used for striking. It is unlikely that the first plectra were adapted from spear-points, since their first appearance predates the arrival of lyres in the Aegean (this will be discussed in the following section). The verb κλήτω was used in a musical context with the meaning "to play the lyre [or related instrument] with the plectrum", or literally "to strike [the strings]" as opposed to ψάλλω, "to pluck [the strings] with the fingers". Chailley describes the appearance of the plectrum in a combination of modern technological metaphors: "C'était une sorte de grosse poignée renflée aux deux bouts et accrochée à l'instrument par un cordon; probablement en bois dur, il ressemblait quelque peu à un combiné de téléphone, et se terminait par une sorte de cuillère à bec pointu" (1979, p. 68). The four illustrations in Maas/Snyder 1989 (p. 48 fig. 13d) are, perhaps, somewhat more helpful.

²⁹ Anderson 1994, p. 7 fig. 4, p. 9 fig. 6.

the Middle Minoan seal-stones, and their graffiti counterparts, were held and played. This would go a long way to help assess the quality of this scant and fragmentary evidence for the evolution of harps into lyres in the Aegean. Without the support of any such archaeological find, however, the theory remains scarcely tenable.

THE MESOPOTAMIAN ORIGIN OF AEGEAN LYRES

The second theory put forward to explain the appearance of the lyre in the Aegean, of which Anderson seems to be unaware,³⁰ was advanced first in a paper by Jacques Duchesne and Marcelle Guillemin in 1932.³¹ This paper was followed in 1935 by an article bringing further support to their thesis.³² They proposed that lyres entered the Aegean from the East in the mid-second millennium; one group came to Cyprus from Syria, another to Crete from Egypt. Egyptian lyres were borrowed from Syria, from where they can be traced

³⁰ Unless his dismissive comment about "commonplaces about the importance of [foreign] influence" on musical instruments in second-millennium Crete (1994, p. 6) is a reference to Guillemin and Duchesne; references to their work do not appear either in his notes or his bibliography. Marcelle Duchesne-Guillemin herself, in a more recent article ("L'Animal sur la cithare: Nouvelle lumière sur l'origine sumérienne de la cithare grecque", *Acta Iranica* 9(1984):129-141), has remarked on the general lack of response among scholars of Greek music to the proposal she and her husband advanced in their 1935 article: "Notre article, considéré comme important par les éminents musicologues que furent Curt Sachs, O. Gombosi et R. Wagner, ne semble pas avoir impressionné les spécialistes de la culture musicale grecque, s'il ne leur a échappé. Ni Max Wegner...ni Fr. Behn...ne mentionnent ma théorie, ne fût-ce que pour la discuter" (p. 130).

³¹ *Fédération archéol. et histor. de Belgique. Congrès de Liège, 1932. Publications préalables, fasc. II, p. 117.*

³² vide supra, n. 23.

back via Babylon and Mitanni to Sumer.

The earliest pieces of evidence which they present are two fourth-millennium cylinder seals from Fara (Shuruppak) in Mesopotamia depicting a simple, rectangular and unornamented stringed instrument. Bridge, crossbar, almost-parallel arms and strings (four on one,³³ and seven on the other³⁴) can be clearly distinguished, though the images are both small and crudely rendered.³⁵ The same basic shape can be seen in two larger representations from Ur, dated to ca. 3000 B.C.,³⁶ and is further clarified by three lyres of the same date, still quite intact, all of them found in excavations of Ur (see fig. 9).³⁷ From these early examples, much can be said with certainty about the lyres of Mesopotamia in the fourth millennium -- more, in fact, than is known about the Cycladic harp in the third. The six marble statuettes of Cycladic harpers, some of them quite fragmentary, tell less about the instruments they represent than do these three surviving Sumerian lyres about the stringed instruments of early Mesopotamia.

What appears as a simple rectangular frame on the

³³ Berlin, V.A. 8629; Guillemin/Duchesne 1935, pl. II fig. 2.

³⁴ Berlin, V.A. 8655; Guillemin/Duchesne 1935, pl. II fig. 1.

³⁵ Two further examples are less clear but undoubtedly represent stringed instruments of lyre type: (a) Berlin, V.A. 6598, a cylinder-seal from Fara (Shuruppak), fourth millennium, Guillemin/Duchesne 1935, pl. II fig. 3; (b) Baghdad (no ref. no.), a cylinder seal from Ur, ca. 3000 B.C., Guillemin/Duchesne 1935, pl. II fig. 4.

³⁶ Museum of the University of Pennsylvania (no ref. no.), Guillemin/Duchesne 1935, pl. II fig. 5; British Museum (no ref. no.), Guillemin/Duchesne 1935, pl. II fig. 6.

³⁷ British Museum and Baghdad (no ref. nos.), Guillemin/Duchesne 1935, pl. III figs. 7-9.

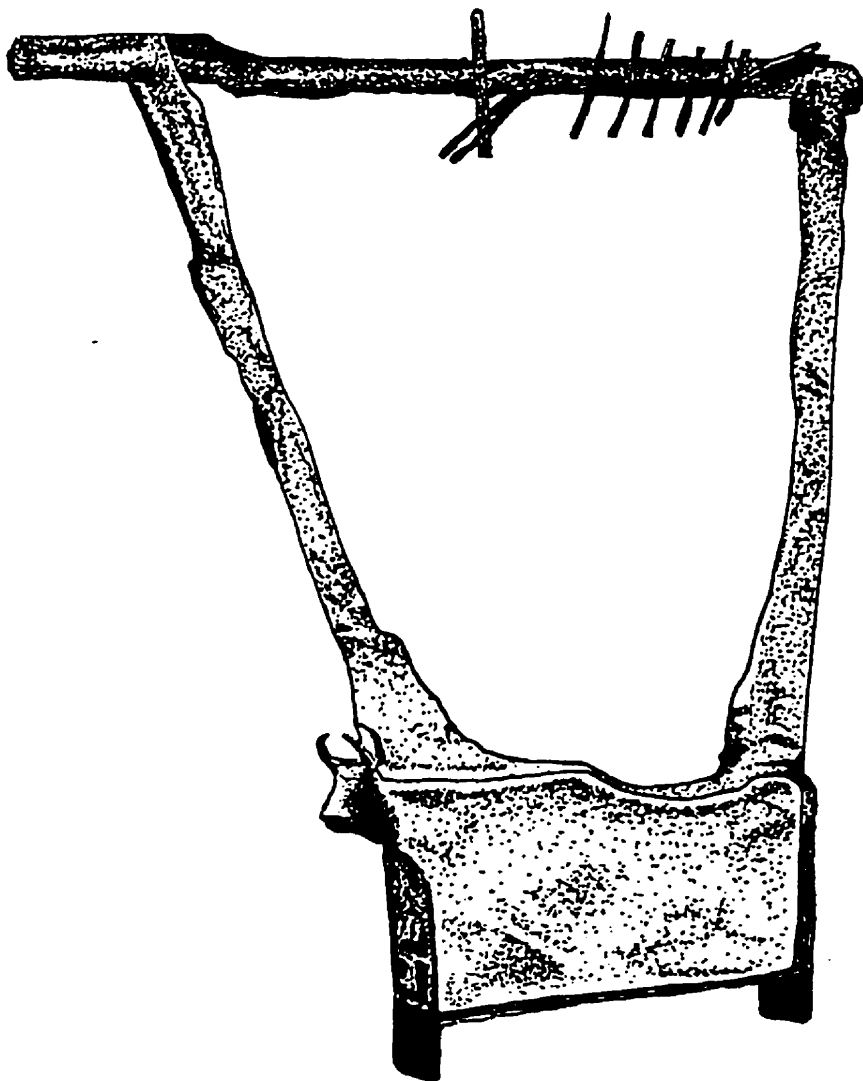


Fig. 9. Baghdad: Sumerian lyre,
ca. 3000 B.C. [Guillemin/Duchesne
1935, pl. III fig. 8.]

cylinder seals appears on two of the instruments³⁸ (likely as a later evolution but possibly as simply the true form of what could not be clearly carved in such a limited space) as a rectangle with one end curved inward at the bottom, so as to create a boat-shaped soundbox; on the third lyre the soundbox is almost perfectly rectangular.³⁹ All three have an animal's-head ornament projecting from the front of the instrument's soundbox: this tends to be a horned bull, and the artistic representations suggest that this was the commonest ornament on Mesopotamian lyres. Sometimes the whole soundbox is shaped so as to look like the body of a bull, either standing (fig. 9)⁴⁰ or lying down.⁴¹ This helps to explain the curious dip in the top of the soundbox near the end opposite the animal's head: if this feature did not have a practical function, it may have been simply decorative, representing the dip in a bull's back between the shoulder and the rump. But since this dip falls just where the strings would have crossed the top of the soundbox on two of the lyres,⁴² perhaps it was a functional feature. On the

³⁸ Guillemin/Duchesne 1935, pl. III figs. 7, 9.

³⁹ Guillemin/Duchesne 1935, pl. III fig. 8.

⁴⁰ Guillemin/Duchesne 1935, pl. III fig. 8.

⁴¹ Guillemin/Duchesne 1935, pl. II fig. 5. It is to this animal motif that Marcelle Duchesne-Guillemin has returned in subsequent publications as one of the stronger arguments in favour of her theory of the migration of lyres westward from Sumer. It has been discussed most recently in her 1984 article "L'Animal sur la cithare" (vide supra, n. 30), where she traces the Sumerian bull-ornament to the stag- and ibex-motif identifiable on kitharas depicted on, she claims, at least 170 extant black- and red-figured Greek vases dating from the sixth to the fourth centuries B.C. Some of the later examples of what Duchesne-Guillemin holds to be a continuation of the ibex-motif are so highly stylized as to be scarcely recognizable; Lawergren (1993, p. 58 n. 13) expresses reservations at her conclusion.

⁴² Guillemin/Duchesne 1935, pl. III figs. 7, 8.

engraved plaque, however, the dip is shown farther forward, and the strings cross the top of the soundbox just behind it; this may have been an error on the artist's part, especially since it is contradicted by the two instruments which have the feature. Besides this, the forward placement of the dip makes for a very poorly proportioned bull.

An argument for the functional character of this dip is supported by a Babylonian relief showing a musician playing a lyre which seems to combine the curving boat-like and rectangular box-like features of the three surviving instruments.⁴³ The bull-ornament is present, but instead of being incorporated into the shape of the soundbox, it has become a miniature bull which stands on the front of the soundbox, the forward arm of the lyre emerging from its shoulder. Thus with the bull-ornament as a distinct element, not in any way connected structurally with the shape of the soundbox, there is no reason to expect to see the dip in the top of the soundbox, and yet it is there. Furthermore, it is shown toward the back of the soundbox, nearest the arm closest the performer's body, and the strings cross it. This is more evidence to suggest artist error as the cause for the forward placement of the dip in the engraved plaque.⁴⁴ The feature may then have originally been a functional one, for which the genius of Sumerian instrument-makers found an artistic adaptation in the context of the bull-ornament.

Whatever the initial reason for this feature, it is

⁴³ Louvre (no ref. no.), a relief from Tello; Guillemin/Duchesne 1935, pl. III fig. 10.

⁴⁴ Museum of the University of Pennsylvania (no ref. no.), Guillemin/Duchesne 1935, pl. II fig. 5.

one which, because it is visible in different forms on the lyres of the Syrians, Egyptians, Minoans, Myceneans and later Greeks, lends support to the migration-theory of Guillemin and Duchesne.

Artifacts indicating the form of lyres in the third millennium are much scarcer than those of the preceding era, and are generally less helpful in establishing details of construction.⁴⁵ The location of these finds, however, indicates the beginnings of cross-cultural migration: lyres can be seen on the Babylonian relief discussed above (ca. 2900 B.C.), a Babylonian cylinder seal (third millennium), a Mitannian stone carving (third millennium), and a badly damaged Babylonian terra-cotta (ca. 2000 B.C.).⁴⁶ These examples suggest a simplification of structure, a sharp decrease in ornamentation, a decrease in overall size (and thus an increase in portability), and specifically a decrease in width, and a change in the angle at which the instrument was played, from the vertical position of the first example to the roughly 45° outward angle of the last. These changes appear to be proportional to the time elapsed from 3000 B.C. at Ur: the earliest example most closely resembles the Sumerian lyres, and the latest example shows the widest divergence from it.

The second millennium yields a good number of lyre representations, which suggest further migration and change of form. The examples brought forward by Guillemin and Duchesne are a Syrian musician and his lyre in an Egyptian

⁴⁵ Guillemin/Duchesne 1935, pp. 119-120.

⁴⁶ Guillemin/Duchesne 1935, pl. III fig. 10, pl. IV figs. 11-13.

wall-painting in a tomb at Beni-Hasan (ca. 1900 B.C.), a Syro-Hittite cylinder seal (fifteenth century B.C.), a cylinder seal from Susa showing a lyre player and a lutenist playing their instruments together (ca. 1350 B.C.), two Egyptian lyres, in a condition allowing a reliable restoration (fifteenth century B.C.), and an Egyptian wall-painting depicting a female performer playing a lyre nearly identical to these instruments (fourteenth century B.C.).⁴⁷

Perhaps the most remarkable of the above examples is the first: the Egyptian wall-painting of a Syrian musician with his instrument found in a tomb at Beni-Hasan (see fig. 10).⁴⁸ It is nearly contemporary with the Babylonian terra-cotta figure of ca. 2000 B.C., and shows immediately that the trend toward a horizontal playing position was continuing as the instrument spread westward. This, as can be seen by many other examples, was a fluctuating trend; Greek lyres of the Classical Period were held at different angles according to their type: wooden instruments of the kithara type were generally held nearly vertically, whereas the lyra and barbitos were held at a more oblique angle.

More surprising than the angle, however, is the instrument's shape. It is the first artistic representation in a thousand years which is large enough to contain a satisfactory amount of detail. What we see is a lyre that has the rectangular soundbox, and the dip in its upper side,

⁴⁷ Guillemin/Duchesne 1935, pl. IV figs. 14-16, pl. V figs. 17-18, pl. VI fig. 21.

⁴⁸ M. L. West (Ancient Greek Music (Oxford: Oxford University Press, 1992) p. 56 n. 32) calls this performer an "Asiatic Bedouin".

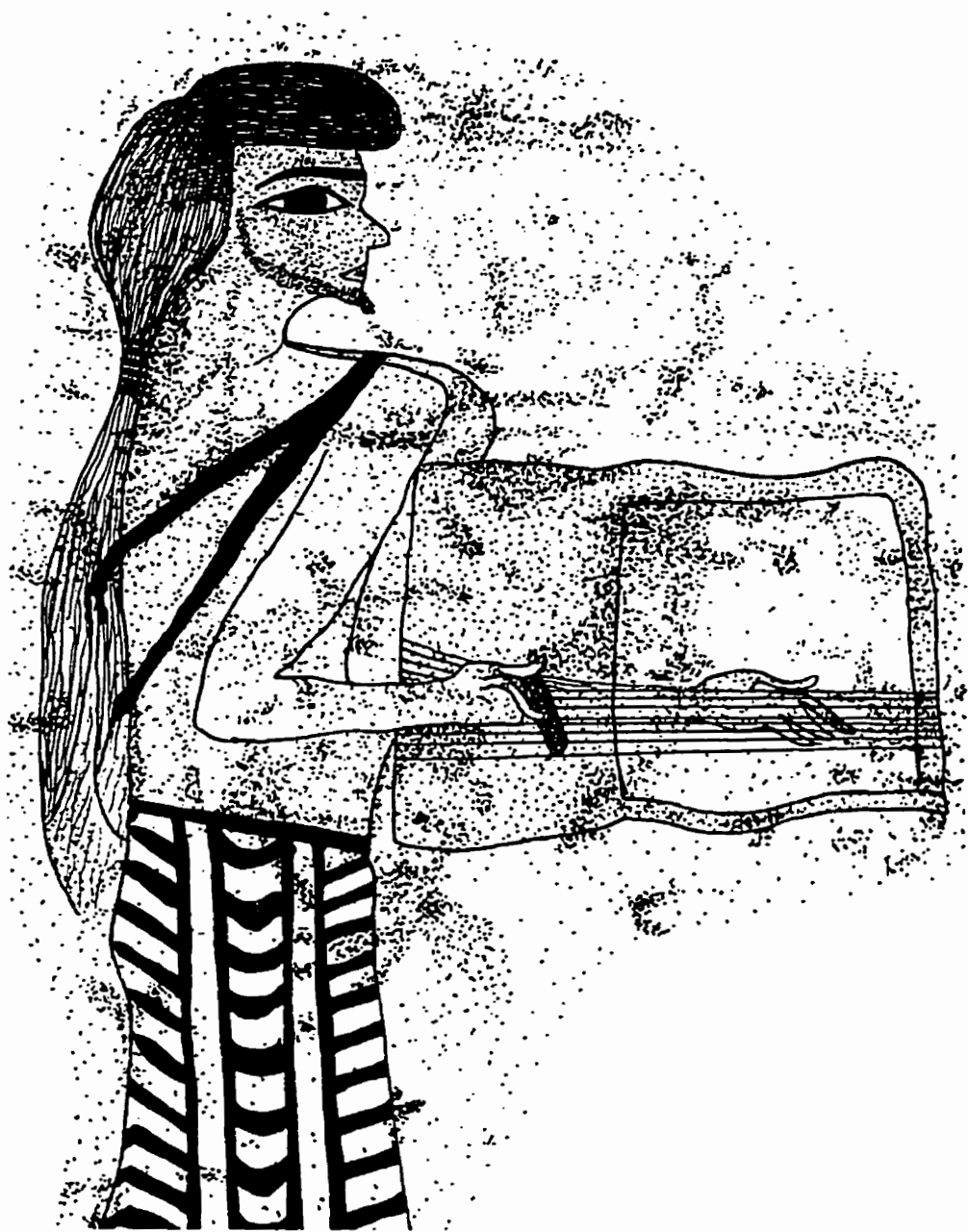


Fig. 10. Beni-Hasan: wall-painting, ca. 1900 B.C. Syrian with lyre. [Behn 1954, pl. 37 fig. 85; Guillemin/Duchesne 1935, pl. IV fig. 14; Sachs 1940, pl. VI fig. B.]

of the Sumerian instrument, but which possesses a startling affinity to both the Egyptian lyre in its also rectangular, dipped soundbox, and to the Minoan lyre in its curved arms.⁴⁹ Though it does not appear to possess any ornamental feature, both the Egyptian and Minoan lyres have animals' heads on the upper portion of each arm, which suggests that ornamented versions of this instrument may have been known in Syria. It is for these reasons that Duchesne and Guillemin hold the Beni-Hasan lyre as the central pillar of their evidence: it would seem to be the ancestor of both the Egyptian and the Minoan lyres, and the descendant of the Sumerian lyre, on account of its "position remarquable,...à mi-chemin entre Sumer et la Grèce comme entre le quatrième millénaire et le premier".⁵⁰

Their argument rests on the strength of a claim to the Sumerian ancestry of the Beni-Hasan lyre, and equally on the evidence for its spread into the musical culture of the Hittites, Phoenicians, Egyptians, and finally Greeks. The second point can be satisfactorily demonstrated by the extant archaeological finds, they claim;⁵¹ it is the first which must

⁴⁹ It also appears to anticipate the overall squarish shape of the classical Greek concert kithara more than any of its counterparts in the second millennium.

⁵⁰ Guillemin/Duchesne 1935, p. 118.

⁵¹ The associations between Egypt and the East were quite strong in the mid-second millennium. Babylonian influence was strong, and tablets from excavations at Tel-el-Amarna in Egypt show that the Babylonian language was used in official correspondence between the Egyptian Pharaoh and his Babylonian subjects; see Rosalind Thomas (ed.), The Histories of Herodotus, trans. George Rawlinson (1858; New York: Alfred A. Knopf, 1997) p. 221 n. 2. Marcelle Duchesne-Guillemin (1981, p. 287) also comments that Ancient Egypt "was very much influenced, from the New Kingdom onward, by the Babylonian and Hittite off-shoots of the Sumerian culture".

be proven. The archaeological evidence, which has not yet yielded an example of a Syrian lyre from that country's own soil,⁵² consists of an early Egyptian depiction of a Syrian lyre as an obviously foreign instrument (fig. 10), and a clear painting of a later Egyptian lyre, with two surviving instruments to authenticate this representation. One problem is certainly that the chief piece of evidence in Guillemin and Duchesne's argument is, though clearly portrayed, the only known image of a Syrian lyre, painted outside Syria by a non-Syrian artist at a time when the instrument was not well known in that country. More than one musicologist has remarked at the curious and perhaps inaccurate placement of the strings in the painting.⁵³ It is hard to assess what other details may have been incorrectly represented by the artist due to his probable unfamiliarity with his subject matter, but for the moment it remains the only example from which scholars can work.

These difficulties notwithstanding, Guillemin and Duchesne have confidently placed the Beni-Hasan lyre as the keystone of their argument. The difficulty of proving its Sumerian ancestry is dismissed in a single sentence:

Cette filiation [entre la cithare syrienne et la cithare sumérienne] se laisse pourtant démontrer, d'une manière indirecte, par la raisonnement suivant: l'Égypte a emprunté la cithare à la Syrie; la cithare égyptienne ressemble à celle de Sumer; donc, ses modèles syriens devaient eux-mêmes ressembler aux instruments

⁵² Guillemin/Duchesne 1935, p. 121.

⁵³ Guillemin/Duchesne 1935, p. 120 n. 1.

sumériens.⁵⁴

Their conclusion, then, is that two varieties of lyre, one ornamented, the other plain, originated in Sumer, and that both had migrated as far as Syria by the end of the third millennium.⁵⁵ From there, an ornamented type came to Egypt and then to Crete, where Minoan lyres bear witness to their Egyptian ancestry by the curvature of their arms and by the presence of animal's-head ornaments. The other (unornamented) type of Syrian lyre passed first to Cyprus and then to mainland Greece, where it first appears in Geometric art.⁵⁶

One small clue, apparently overlooked by Guillemin and Duchesne, which may lend considerable weight to their argument, is found in the right hand of the Beni-Hasan lyre player. Here, for the first time, we see a performer using a plectrum. The Egyptian artist would have been quick to notice this novelty; Egyptian harpers plucked the strings of their instruments with their fingers. The painting shows the plectrum gripped almost awkwardly at an odd angle between the

⁵⁴ Guillemin/Duchesne 1935, pp. 120-121.

⁵⁵ The idea of a culture having two separate types of lyre, one variety being ornamented and perhaps larger than the other, plain variety, recurs in analyses of Mycenaean instruments; cf. Helen H. Roberts, Ancient Greek Stringed Instruments 700-200 B.C. (University of Reading: PhD. diss., 1974) p. 9.

⁵⁶ This conclusion is drawn together on p. 121 of their article. Roberts, who credits the theory of an eastern origin for the lyres with some validity, dismisses Guillemin and Duchesne's conclusion of a migration route to Crete via Egypt on temporal grounds (1974, p. 3). Since the lyre did not find a regular place in Egyptian musical life until the 16th century B.C. or thereabouts, the earlier (19th- and 18th-century) evidence from Crete contradicts Guillemin and Duchesne's proposed migration route.

performer's thumb and forefinger: this was likely not the angle at which it would really have been held, if Minoan and Mycenaean examples are any indication. Its inaccurate portrayal by the Egyptian artist emphasizes its presence and gives the impression that that the plectrum was at that time seen in Egypt as a curiosity, an odd and notable feature of the Syrian lyre.

It is, however, perhaps the unique contribution of the Syrians to the practice of an instrument which passed through their lands without leaving a trace there. There is no hint of the use of plectra in any older representations of eastern lyres; the engraved plaque from Ur⁵⁷ makes it clear, on the contrary, that Sumerian lyres were played with the fingers alone.⁵⁸ Yet it is clear from the earliest portrayal of the Minoan lyre⁵⁹ that the plectrum had reached Crete by the fifteenth century at the latest. The best early depiction of a Minoan concert lyre, that found in the fresco on the Hagia Triada sarcophagus,⁶⁰ clearly shows a plectrum in the performer's right hand, leaving little doubt that it was an essential feature of lyre equipment by that time. Since

⁵⁷ Museum of the University of Pennsylvania (no ref. no.), Guillemin/Duchesne 1935, pl. II fig. 5.

⁵⁸ There was, however, one type of Mesopotamian harp that was played with the plectrum; see West 1992, p. 74 n. 114. This is the exception rather than the rule: the majority of near-eastern harps (and all early Mesopotamian lyres) appear to have been plucked with the fingers.

⁵⁹ On a Cretan seal-stone found at Knossos; Anderson 1994, p. 7 fig. 4. Evans' ambiguous Knossos seal-stone may, if it represents a lyre, be older yet (vide infra, n. 71); it also appears to show a plectrum, attached by a cord to the very bottom of the instrument's soundbox.

⁶⁰ Anderson 1994, p. 9 fig. 6; Maas/Snyder 1989, p. 16 fig. 2a.

there is nothing to suggest that the plectrum was known in the Aegean before the appearance of the lyre,⁶¹ it may well have been a Syrian invention. At any rate, its first appearance in the Beni-Hasan lyre painting, and its subsequent appearance on Crete, contemporaneous with that of the lyre, helps to strengthen Guillemin and Duchesne's claim for the Sumerian origin of Aegean lyres.

CONCLUSIONS

Each theory, in dealing with the complex issue of the rather sudden appearance of a fully developed instrument in a part of the world where it had been previously unknown, and the disappearance of an older instrument in the same region, denies one possible connection. Aign and Anderson, in proposing an evolution of harp into lyre, deny a connection between Minoan lyres and their oriental counterparts; Guillemin and Duchesne, on the other hand, deny the possibility of a connection between the ancient Cycladic harps and later Minoan lyres by arguing that the latter were imports from the East. The truest answer, however, may lie somewhere between these two arguments.

The case for Guillemin and Duchesne is certainly stronger than can be made for Aign and Anderson; a larger

⁶¹ The oldest objects thought to be plectra are late Bronze-Age ivory fragments found at Mycenae in the Peloponnesus and at Menidi in Attica; Maas/Snyder 1989, p. 7; West 1992, p. 65 n. 78. Another group plectra were unearthed in the excavation of the temple of Artemis Orthia at Sparta, and have been dated to the seventh century. There are four of them, made from ivory and bone; they are discussed and illustrated in Maas/Snyder 1989, pp. 37, 48 fig. 13d.

body of evidence is on their side, and it outweighs the three Middle Minoan sealstones and two graffiti considerably. Yet there are certain elements to the story that neither argument deals with adequately.

The first is the issue of ornamentation. The soundbox of the Sumerian lyre was usually ornamented with the head or whole body of a bull; the Egyptian lyres have horses' heads decorating the arms just below the crossbar; Minoan lyres show swans' heads in the same position.⁶² Cycladic harps also possessed a swan's-head ornament on the upper frame of the instrument. Assuming that Guillemin and Duchesne's migration theory is essentially correct, and that lyres began to appear in the Aegean early in the second millennium,⁶³ Egypt and Syria being the immediate geographical source, it is not surprising to see that they were ornamented. It is interesting, however, that their ornaments were not bulls or horses (animals whose religious significance was evidently not shared by the Minoans), but swans. It seems likely, then, that the Minoans, having been influenced in the past by Cycladic culture, first received the Egyptian lyre with its horse-ornament and modified it with a more familiar Aegean swan-ornament, placed identically

⁶² Plants also appear to have been a regular feature. Compare the 16th-century Minoan lyre (Anderson 1994, p. 8. fig. 5) with the ca. 1400 B.C. Minoan lyre (fig. 7; Anderson 1994, p. 9 fig. 6), and the ca. 1300 B.C. Mycenaean lyre (fig. 12; Anderson, p. 13 fig. 10). The birds' heads are always present; phytomorphic ornaments occasionally adorn the upper ends of the arms above the crossbar.

⁶³ Lawergren (1993, p. 71) argues that lyres did not cross from East to West in the second millennium, which suggests an earlier entry date. There is, unfortunately, no third-millennium archaeological evidence to help attest this dating.

to that of the Egyptian lyre. It appears probable that whatever religious connections were held between birds and music were transmitted at least in part to the Minoans, and that it was this influence which inspired the uniquely Aegean detail in the instrument's development.⁶⁴

The form of ornamentation on Minoan lyres, then, suggests that the development of the instrument during the silent years prior to its sudden appearance in Minoan art in the sixteenth century was not simply the arrival of a foreign instrument. Rather, it would seem that a domestic adaptation of the instrument occurred, and that this adaptation was shaped by Cycladic influence, or at least by a prevailing Aegean influence visible in both Cycladic and Minoan

⁶⁴ The religious associations of birds, especially swans, in the Aegean has been discussed above (vide supra, n. 2). Maas and Snyder (1989, p. 2) note that birds had associations with the divine for the Minoans, and that they often appear near the lyre player in Minoan art (see fig. 11). They also mention four other representations that seem to depict the heads of snakes, instead of swans, on the curled upper arms of the lyre. Snakes "also played an important role in Minoan religion" (p. 2). Martin P. Nilsson, in The Minoan-Mycenean Religion and its Survival in Greek Religion (Lund: C. W. K. Gleerup, 1927) p. 287, addresses the symbolism of both animals for the Minoans: "The bird as well as the snake is the embodiment of the deity, the form of its epiphany." He also connects the worship of a female deity, "accompanied by snakes and birds", with the Palakaistro terra-cotta group, one of the figures of which plays a lyre (p. 96). In his discussion of the Hagia Triada fresco (fig. 7) and its lyre-player, he argues that the entire scene is one of "the divine cult" (p. 377), thus implying that the instrument itself (whose arms form the necks of swans), thus ornamented, had a perhaps exclusively religious function. Lyvia Morgan deals with the iconography of birds in the Aegean at some length in The Miniature Wall Paintings of Thera: A Study in Aegean Culture and Iconography (Cambridge: Cambridge University Press, 1988) pp. 63-67. "Birds," she writes, "appear in two major roles in Aegean iconography: as an aspect of nature associated with the appropriate environment of the species; and as an emblem or attribute. The former is literalistic, describing the natural state of being a bird; the latter is symbolic, evoking a cultural idea, often of divine presence" (p. 63). The bird-ornament found on many Aegean instruments appears to be an example of the latter.



Fig. 11. Khania XM 2308: Minoan pyxis, Kalamion, Late Minoan III, 1400-1100 B.C. Minoan box-lyre. [Maas/Snyder 1989, p. 16 fig. 2b.]

cultures. While the Cycladic harp may not have on its own, "without any indication of significant foreign influence", as Anderson claims,⁶⁵ evolved into the Minoan lyre, it may well have strongly affected the way in which the newly-arrived lyre was adapted for Minoan use.

There remains the question of the Middle Minoan carvings, the nineteenth- and eighteenth-century seal-stones and graffiti cited by Aign and Anderson in support of their evolution theory. It is unfortunate that there appears to have been no recent discourse linking both theories,⁶⁶ or this problem might have by now been addressed. What do we make of the carvings? Are they harps? Are they lyres? Or are they something else again? Maas and Snyder are circumspect on this point, not allowing that any of the carvings are positively identifiable with any instrument.⁶⁷ This is perhaps the safest view; a sensible caution must be maintained when dealing with artifacts as small and lacking in detail and accuracy as these.

They must, however, represent something, and it is most probable that that something was either a lyre or a harp.⁶⁸ But if the instruments in question do fall somewhere

⁶⁵ 1994, p. 6.

⁶⁶ West (1992, p. 50) says only that the recurrence of certain similar features between Sumerian lyres of the fourth millennium and Greek lyres of the Archaic Period "argue some continuity of tradition." R. P. Winnington-Ingram, in his article "Ancient Greek Music 1932-1957", *Lustrum* 3(1958):5-57, simply outlines and briefly discusses Guillemin and Duchesne's theory (p. 14). Helen Roberts seems to have been the only scholar to discuss these theories at any length; unfortunately this was in her unpublished PhD. dissertation (1974, p. 1 ff.).

⁶⁷ vide supra, n. 18.

⁶⁸ Roberts takes both graffito-instruments to be lyres (1974, p. 2); the seal-stones she takes to represent harps (p. 5).

within a "transitional sequence", as Anderson says,⁶⁹ neither wholly harp nor wholly lyre, then the most plausible way to account for it is that since they are of Cretan provenance -- Crete being the location of the lyre's initial arrival in the Aegean according to Guillemin and Duchesne -- they may represent the transformation of the Cycladic harp under the influence of the newly-arrived lyre. There is no question that the harp died out in the Aegean before the middle of the second millennium; what these five carvings may represent, then, are the death-throes of an ancient instrument as it gradually disappeared from use, along with the culture to which it originally belonged. If Lawergren's theory is correct, and the arrival of the lyre occurred before 2000 B.C. and not after,⁷⁰ this process may have begun on Crete very early in the second millennium. The impression of a sealstone from Knossos of very early date (ca. 1900-1700 B.C.), included by Maas and Snyder, may further support this dating, if, in fact, it represents a lyre at all.⁷¹

⁶⁹ 1994, p. 5.

⁷⁰ vide supra, n. 63. The problem with such an early arrival date for the lyre is that nothing suggests it was even heard of in Egypt before 2000 B.C., and the assumption has been that it was not appropriated by Egyptian musicians (or passed on to Crete) until sometime before 1500 B.C. Guillemin and Duchesne's theory does not allow for Lawergren's early dating; Lawergren's dating, on the other hand, leaves no room for Guillemin and Duchesne's theory. Roberts notes internal dating discrepancies within Guillemin and Duchesne's argument, and seeks to resolve these by reassessing the migration route they propose (1974, p. 3). More work must be done in this area before the issue is to become any clearer.

⁷¹ This is not certain; the seal-stone's present location is unknown, and a drawing of its impression is reprinted from Arthur Evans, The Palace of Minos at Knossos, vol. 4 (London: MacMillan, 1921-1935) p. 151, by Maas and Snyder (1989, p. 17 fig. 2d; see also supporting discussion, pp. 2-3).

Despite the problems, many of which will not be properly addressed until there has been broader dialogue among scholars of ancient music, certain conclusions may nonetheless be drawn. For the purposes of this thesis it may be reasonably concluded from the evidence so far discussed that: (a) the lyre did not originate in the Aegean, but in Mesopotamia; (b) that its westward migration reached the Aegean before the sixteenth century B.C.; and (c) that the Minoans, among whom the lyre first flourished as a court instrument in the Aegean, adapted it under a characteristically Aegean cultural influence, which is hardly surprising. The instrument depicted in the Minoan Hagia Triada fresco is, then, a lyre whose shape owes both to eastern and western influences, and yet it is already set apart by its form as a distinctive new development. It was to become the pattern for Mycenaean lyres, and its influence on lyres of the Aegean, and further west, was to be seen for more than a millennium to come.

CHAPTER 2:

**The Myceneans and the Appearance of the
Tortoise-Shell Lyre**

Mycenean civilization, which had dominated the island of Crete by the early fourteenth century B.C.,¹ is assumed to have been the heir of much of the cultural achievement of Minoan civilization. Given that the seven surviving fragments and depictions of Mycenean lyres² indicate a striking resemblance to their Minoan predecessors, this assumption has been carried over to the achievements of musical culture as well, without any significant argument to the contrary.³

It was in the century prior to the collapse of Mycenean civilization that an entirely new type of lyre made its first appearance: this was the tortoise-shell lyre, or *lyra*.⁴ The basic principles of its construction were similar to those of the Minoan and Mycenean lyres: it was fabricated

¹ Maas/Snyder 1989, p. 3.

² Listed by Maas and Snyder (1989, p. 7); see fig. 12.

³ Maas and Snyder offer caution, but little cause for doubt (1989, p. 3). West is unequivocal: "It was from the Minoans that the Myceneans acquired the lyre, an instrument that had been slowly evolving in the Near East for over a millennium" (1992, p. 327). Anderson cites the fresco of a lyre-player at the Mycenean palace at Pylos (ca. 1300 B.C.) as a representation which "links Minoan musical culture with Mycenean, one of the very few such links that we possess" (1994, p. 12 and 13 fig. 10).

⁴ The term *lyra* will be used throughout this thesis to distinguish the bowl-lyre specifically from the instruments of the lyre family generally; see Preface.

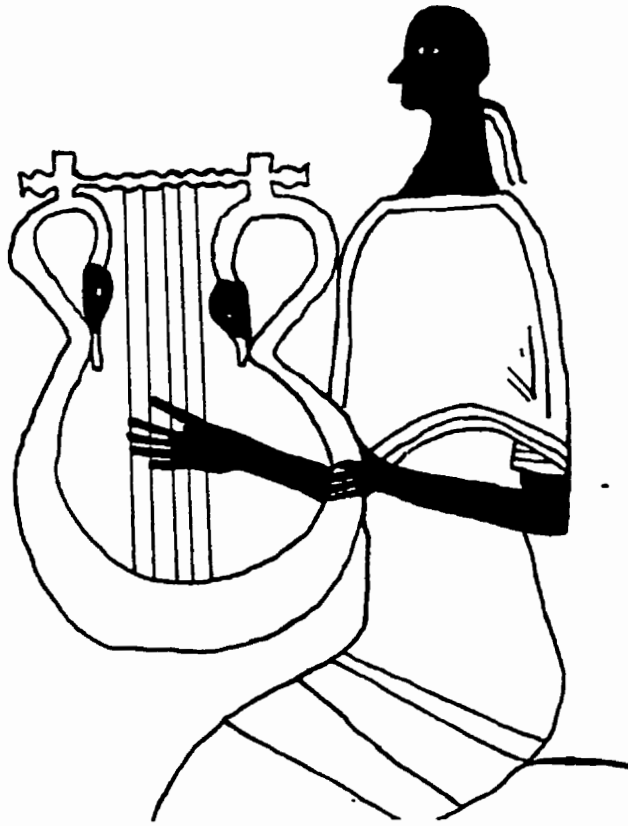


Fig. 12. Pylos: Fresco from the Palace of Nestor. Mycenaean, ca. 1300 B.C. [Anderson 1994, p. 13 fig. 10; Barker 1984, p. 5 fig. 2.]

from the same elements of soundbox, roughly parallel arms, crossed by a transverse bar to which strings of equal length were attached; they crossed the soundbox and were made fast at its base. What distinguished it as something altogether new, however, is that the soundbox was no longer wooden, but made from the hollowed shell of a tortoise with animal hide stretched over the opening to form the front face of the instrument; straight or very slightly curved, minimally divergent arms were set into the shell in the spaces left by the removal of the tortoise's hind legs (or sometimes forelegs). It appears to have been a smaller, lighter, simpler instrument than we have seen thus far.

Only one Aegean location provides archaeological data to indicate the presence of the lyra in the Bronze Age, although several other sites offer evidence from the Archaic and Classical Periods. The first graphic representation of the lyra appears on an Archaic potsherd of Attic provenance. Later still, we find the first literary reference to this new instrument in the *Homeric Hymn to Hermes*. These three groups of evidence for the appearance of the lyra as a new and distinct type of lyre in the Aegean will each be discussed in turn.

ARCHAEOLOGICAL EVIDENCE

An excavation by the British School of Archaeology at Athens has provided the only evidence suggesting that tortoise-shell lyres were known in the Aegean before the Dark

Ages. The British School's excavation was led by Duncan Mackenzie and Colin Renfrew between 1974 and 1977 on the southwestern Cycladic island of Melos, at a site near the island's northeastern tip bearing the modern name of Phylakopi.⁵ Previous excavations (between 1896 and 1899, and again only briefly in 1911) had proven Phylakopi to have been the site of a Mycenaean settlement, whose features included fortifications, many small buildings, a megaron, pillar rooms, and a sanctuary. It was the latter which became the focus of the British School's 1974-77 excavation.

The East and West Shrines of the sanctuary together yielded 41 fragments of tortoise shell and two nearly complete carapaces from seven different contexts ranging in date from ca. 1300 to 1100 B.C.⁶ The two nearly complete shells exhibit no signs of human alteration, and Renfrew accordingly concludes that either "they were not part of lyres" or that they were incorporated into the instruments in such a way as to have left no trace.⁷ Of the 41 fragments, which range in size from just larger than a two-dollar coin (3.5 x 2.0 cm) to around the size of a credit card (7.2 x 6.3 cm), 37 show no visible signs of having been worked in any way; the remaining four fragments, all dated to within the twelfth century, contain drilled holes 0.1 to 0.3 cm in diameter (see fig. 13).⁸

⁵ The procedure of the excavation and an analysis of the finds is recorded in detail by Colin Renfrew in The Archaeology of Cult: The Sanctuary at Phylakopi (London: Thames and Hudson, 1985).

⁶ Renfrew 1985, pp. 325-326; absolute chronology of contexts, pp. 84-87.

⁷ Renfrew 1985, p. 325; the shells are shown at pl. 63.

⁸ Phylakopi SF 814-815; Renfrew 1985, p. 326 table 8.7, pl. 64(d).



Fig. 13. Phylakopi SF 814:
tortoise-shell fragments showing
drill-holes. Mycenaean, ca. 1130
B.C. [Renfrew 1985, pl. 64(d).]

It is clear from more complete examples from the Archaic Period that in carapaces used for lyras, holes were drilled for three separate purposes: holes drilled in the top of the shell's convex exterior provided for the interior anchoring of the instrument's arms;⁹ holes drilled in the marginal scutes (along the shell's perimeter) at regular intervals (every 2 cm approximately) allowed for the fastening of the skin across the opening of the shell;¹⁰ and two slightly larger holes assisted in the attachment of a tailpiece at the bottom end of the soundbox (see section (g) of Appendix).¹¹ The four fragments bearing drilled holes appear to be from either the costal or the vertebral scutes of the carapace (see fig. 14), suggesting that if the shell did indeed form the the soundbox of a lyra, the pieces in question were located at the back of the soundbox, near the place where the arms were made fast inside the shell.¹²

The question of whether these fragments actually constitute the remnants of a lyra is not in serious doubt. Tortoise shell with drilled holes is not known to have had any other use in the ancient Aegean,¹³ and it is hard to

⁹ Renfrew 1985, p. 325; P. Phaklariis, "ΧΕΛΥΣ", *Ἀρχαιολογικὸν Δελτίον* 32(1982):218-233, especially p. 227 fig. 8; Courbin 1980, p. 99 fig. 8.

¹⁰ Renfrew 1985, p. 325; Phaklariis 1982, p. 222 fig. 4.

¹¹ Phaklariis 1982, pp. 223, 227.

¹² Renfrew 1985, p. 325.

¹³ Renfrew 1985, p. 325.

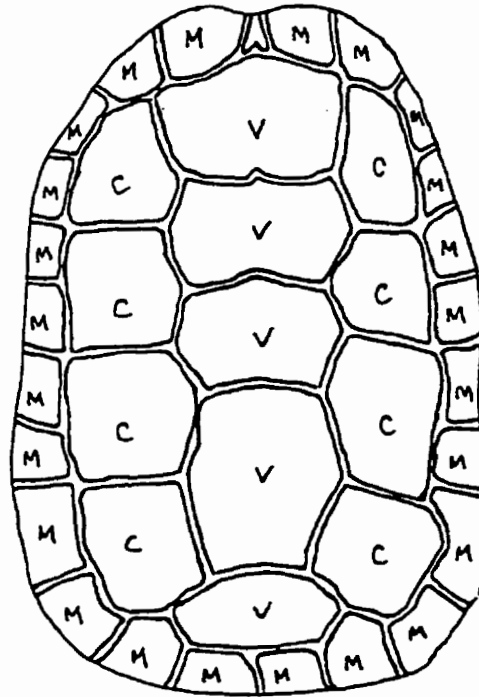


Fig. 14. Dorsal face of carapace from tortoise *Mauremys caspica leprosa*, showing scutes:

M = marginal

C = costal

V = vertebral

Members of the family *Testudinidae*, of which *Testudo* is another genus, all possess an essentially similar carapace structure. *T. graeca* and *T. hermanni*, the two widest-ranging species of Aegean tortoise, are nearly identical, but can be distinguished by observing that where *T. hermanni* has two posterior marginal scutes (as has *M. caspica leprosa*, above), *T. graeca* has one undivided posterior marginal scute.

imagine another function it might have served.¹⁴ Furthermore, the fragments were all found in a sanctuary, which is hardly a surprising place to find a lyre considering the religious role of earlier Aegean lyres.¹⁵ The measurements of the drilled holes in later examples match those of the Phylakopi fragments for size, and the length of the nearly complete shells, if they can be trusted as an indication of the full dimensions of the shell(s) to which the fragments originally belonged, is comparable to that of later finds.¹⁶ The strength of this evidence led Renfrew to a positive identification of the Phylakopi fragments as pieces of a lyra soundbox:

The drilled tortoise shell from the Phylakopi Sanctuary may thus be regarded as the earliest direct evidence for the use in the Aegean of the tortoise-shell lyre proper and it provides a useful addition to our knowledge of Bronze Age

¹⁴ West suggests the possibility of other interpretations (1992, p. 57 n. 38). He notes that Egyptian lutes used soundboxes of tortoise shell, implying that the Phylakopi fragments may constitute the remains of a lute. This is not a very plausible suggestion, however, since the lute did not appear in Greece until the fourth century (West 1992, p. 79), whereas the lyra is attested for the Archaic Period. Professor John Younger, presently at Duke University, was directly involved in the excavation of the shell fragments at the Phylakopi site. He describes "how neatly drilled the holes were" and agrees with Phaklariis "that they should be for attaching the arms to the inside of the shellbox" (private communication, July 21, 1997).

¹⁵ vide supra, ch. 1 n. 64.

¹⁶ The two nearly complete carapaces found at the Phylakopi sanctuary measure 18.4 x 12.0 and 18.0 x 14.0 cm; other later examples range from 15.6 to 17.0 cm in length, and from 12.0 to 14.0 cm in width; Renfrew 1985, pp. 325, 326 table 8.7; Courbin 1980, p. 102 n. 22; Phaklariis 1982, p. 221-222. One exceptionally large shell (the Reggio carapace) measures approximately 30 cm in length; Helen Roberts, "Reconstructing the Greek Tortoise-shell Lyre", World Archaeology 12(1981):303-312, p. 303 and pl. 70.

instruments.¹⁷

GRAPHIC EVIDENCE

The earliest artistic representations of the lyra are over four hundred years more recent than the Phylakopi fragments. Two hydriae (intact) and one pottery fragment, all from Attica and dating from the end of the eighth century, depict musical or religious processions in which a man is shown playing an instrument (see fig. 15).¹⁸ The instrument is certainly of lyre type, but is not at all like the thick-framed descendant of the Mycenaean lyre (generally designated as the *φόρμιγξ* of the Homeric epics by most modern scholars) visible on many geometric vases of parallel date. The frame is simple, consisting of two perfectly straight arms and a slightly thinner, equally straight crossbar, and a round soundbox. This is the novelty. Aegean lyres in the second millennium presented the surprising new development of a round-based soundbox where their eastern predecessors had always had a squarish one; yet these early Aegean lyres continued to be made out of wood in a familiar heavy-looking style. The Archaic Attic vase-paintings, however, show a soundbox which is altogether round, and by the evidence of one vase¹⁹ clearly not made of wood, but of the shell of a

¹⁷ Renfrew 1985, p. 325.

¹⁸ Athens 313, Athens Agora P 10154, Cambridge Museum of Classical Archaeology 345; Maas/Snyder 1989, pp. 36, 48 fig. 13a, 224 n. 66; Anderson 1994, p. 14 fig. 11.

¹⁹ Cambridge Museum of Classical Archaeology 345; Maas/Snyder 1989, p. 37.



Fig. 15. Athens 313: hydria,
Analatos, ca. 700 B.C. [Maas/Snyder
1989, p. 48 fig. 13a;
Guillemin/Duchesne 1935, pl. VIII
fig. 35; Anderson 1994, p. 14 fig.
11.]

tortoise.

The tortoise-shell soundbox, indicated by the Attic hydriae and fragment, is further attested by the clarity of six votive offerings in lead discovered in the excavation of the temple of Artemis Orthia at Sparta.²⁰ They range in date from 700 to 600 B.C., and all depict lyras, either in the hands of a performer or alone. One in particular (see fig. 16)²¹ provides a back view of the instrument, showing the tortoise shell quite clearly, along with seven slightly damaged strings. In form, this instrument is essentially identical to the later classical lyra, particularly in the thinness and shape of the gracefully inward-curving arms, which distinguish it further from its contemporary, the φόρμιγγς of Homeric epic (see fig. 17).

TEXTUAL AND LINGUISTIC EVIDENCE

The earliest literary reference to an instrument which can be distinguished with certainty as a tortoise-shell lyre is in the *Homeric Hymn to Hermes*. The date of the Hymn's composition is at least as late as the end of the seventh century, or perhaps even the beginning of the sixth.²²

²⁰ Maas/Snyder 1989, pp. 37, 48 figs. 13b-c.

²¹ Maas/Snyder 1989, p. 48 fig. 13b.

²² Andrew Barker, Greek Musical Writings I: The Musician and his Art (Cambridge: Cambridge University Press, 1984) p. 38; Anderson 1994, p. 174; Maas/Snyder 1989, p. 35. Susan Shelmerdine favours an even later date: "Studies in the hymn's meter and language suggest a date near the end of the 6th-century and an origin on the mainland of Greece" (The Homeric Hymns (Newburyport, Massachusetts: Focus Books, 1995) p. 91). Barker (1984, p. 49) takes a more traditional position than Shelmerdine and dates it earlier, to the late seventh or early sixth century B.C.



Fig. 16. Votive figure of lyra in lead, temple of Artemis Orthia, Sparta. Seventh century B.C. [Maas/Snyder 1989, p. 48 fig. 13b.]



Fig. 17. Tübingen 2657: Attic Geometric amphora, mid-eighth century B.C. Musician with phorminx. [Maas/Snyder 1989, p. 20 fig. 7a; Paquette 1984, pp. 88-89.]

It narrates the birth of Hermes, his invention of the lyra, his theft of Apollo's cattle, and, when Apollo discovers the theft, his gift of the lyra to Apollo as a peace-offering, the ensuing friendship between the two, and the appointing of Hermes as Apollo's cattle-herd. The narrative itself may have been based on an ancient Arcadian myth, to which Pausanias refers in his *Description of Greece*.²³ In the context of Greek mythology, it is an aetiological story explaining not only the origins of the lyra, but perhaps more importantly the birth of Hermes, and how he became a god "of many wiles, a cunning deceiver, a thief, a cattle-driver, a bringer of dreams, a spy in the night, a watcher at the gates", a "killer of oxen", a "schemer", a "busy worker", a "comrade of the feast".²⁴ The primary function of the myth in its specifically Greek context was to give the origin of Hermes' patronal sphere, and to explain his relation to the other gods, particularly Apollo. The hymn draws together the elements of his trickster character, his patronage over cattle and herdsman, and his function as a divine messenger, all in one explanatory story.

In a more general capacity, however, the hymn contains a primitive aetiological myth of the origin of the lyra, and this type of story is common to the mythology of other lyra-playing cultures. The Pokot tribe, for example, who presently inhabit an area around the lower Kerio valley

²³ Anderson 1994, p. 56. Athenaeus makes lengthy mention of the great extent to which music was incorporated into the culture and educational system of the Arcadians from very early times (*Deipnosophistae* 14.626b-d).

²⁴ *Homeric Hymn to Hermes*, ll. 13-15, 436, trans. Barker (1984, pp. 42, 44).

in northwestern Kenya, possess a lyra which is in many respects identical to that of the ancient Greeks. Although it has been constructed with a wooden or metal soundbox and with metal strings²⁵ for the past generation, prior to the 1950s its soundbox was still made from the carapace of a tortoise, and the strings were made from tendon. In both these details the Greek instrument was made of similar materials, although strings were more commonly of gut than of tendon.²⁶ Some details of the Pokot lyre, or *pkán*,²⁷ are astonishing in their similarity to those of Greek lyra

²⁵ Gwendolen Plumley (*El Tanbur* (Cambridge: Town and Gown Press, 1966) p. 10) notes that in present-day Sudan lyra-strings are very often made from "the twisted strands of wire from a bicycle brake cable", or "from any wire which can be obtained locally". The governing principle, which held equally for the Greeks, has always been the ease with which any suitable material may be obtained.

²⁶ See section (e) of Appendix. Though the Pokot lyra's soundbox was made from a tortoise shell, the instrument's arms were inserted into the shell not through the holes left by the fore- or hind legs (as in Greek lyras), but through the holes of one foreleg and one hind leg, thus making a broader (instead of a taller) soundbox out of the shell's roughly oval shape. .

²⁷ The Pokot word for lyra, *pkán*, has many parallels among other North- and East-African tribes. The name seems to be derived from the Ethiopian *beganna*, one of two main types of Ethiopian lyre. This instrument appears to have migrated away from Nubia in two directions, eastward to Ethiopia and Somalia, and southward up the White Nile toward Lake Victoria, travelling with the various waves of migration of Nilotic tribes which have continued up until the last century. The names of the lyra among the various Nilotic tribes (and their Bantu neighbours to whom it also passed) bear witness to this movement: it is called *bukhana* by the Tiriki, *bugandit* by the Sabaot, *pkán*, *pgán*, or *pukan* by the Endo and Pokot, *kibukan* by the Tugen, and *kipukandet* by the Keyo. Altogether there are over forty tribes, ranging from the Upper Nile in the Sudan, east through Ethiopia and Somalia to the Indian Ocean, and south to the lowlands around Lake Victoria, who possess some form of lyre. The majority are Nilotic or Cushitic, and approximately one-sixth are Bantu. See Frank Denyer, "The Lyre in the Northern Kerio Valley", paper no. 137 (Nairobi: Institute of African Studies, University of Nairobi, 1980) pp. 1-2; Washington Omondi, "The Lyre, 'Thum', in Luo Society: A Historical Sketch", *Nilotic Studies* 1(1982):127-144; Plumley 1966, *passim*.

construction: the method of attachment of the strings to the yoke, for example, and of the yoke to the arms, which is effected by boring or burning holes in the yoke and inserting the narrowed upper ends of the arms into them.²⁸ These were both characteristics of the Greek lyra in ancient times (see sections (c) and (d) of Appendix).

It is not surprising, then, to find, among a people to whom the lyra is so important, a myth of its origin. What is surprising, perhaps, and likely only coincidental, is the similarity between the ancient Arcadian myth adapted by the poet of the *Homeric Hymn to Hermes* and a myth current among the modern Pokot of Kenya. According to the *Homeric Hymn*, the manner of the lyra's invention was as follows: Hermes, on the morning of his birth, left the cave where he was born and found a tortoise at the cave's entrance. Delighted, he "up-ended it, and with a grey iron chisel he scooped out the life of the mountain tortoise." He then

cut stalks to measure and fixed them, fastening them by the ends through the back of the tortoise's shell. Then he stretched oxhide over it by his skill, and added arms, with a crossbar fixed across the two of them; and he stretched seven harmonious strings of sheep-gut.²⁹

The hymn goes on to describe how Hermes tested his new instrument, singing and improvising with it. After he had

²⁸ Denyer 1980, p. 4; Plumley 1966, pp. 16-17.

²⁹ *Homeric Hymn to Hermes*, ll. 41-51, trans. Barker (1984, p. 43). Details of lyra construction are discussed in the Appendix.

been caught for stealing Apollo's cattle near the end of the poem, he played and sang at length, to Apollo's great delight:

And Phoebus Apollo laughed with
delight as the lovely clamour of the
divine sound went through his heart,
and sweet longing took hold of his
spirit as he listened. ... "Killer
of oxen, schemer, busy worker,
comrade of the feast, this invention
of yours is worth fifty cows."³⁰

Since his invention pleased Apollo so greatly Hermes gave it to him as a gift, thus turning aside the anger of Apollo. Apollo in return gave Hermes the office of tending his herds. It is interesting to note that the hymn appears to associate the invention of the lyra with the prolificacy of the herds, an element which is echoed by the Pokot myth: "For my part, Far-Worker," says Hermes, "I shall pasture the roaming cattle on pastures in the mountains and the horse-feeding plain; and the cows will mate with the bulls and bear abundant calves, male and female."³¹

The Pokot myth of the lyra's origin consists of some similar elements.³² The hero is human rather than divine, a Samburu³³ named Cheptiti, taken in battle as a boy, and later adopted as a Pokot. A very musical man, he had

³⁰ Ibid., ll. 420-423, 436-437.

³¹ Ibid., ll. 491-494.

³² The entire story is recorded by Denyer (1980, pp. 10-12).

³³ The Samburu are a branch of the Maasai tribe of the Kenyan and Tanzanian Rift Valley, famous in East Africa as cattle-herders. Cattle are central to their livelihood and are a prominent element in their mythology; the same is true of most nomadic and semi-nomadic Nilotic tribes, including the Pokot.

discovered that praying to the Sun³⁴ for the safety of his cattle with the aid of a musical instrument (two sticks beaten together, or a drum) resulted in the miraculous increase of his herds. One day he found a tortoise by the bank of the Kerio River, killed it, and made a lyra from its shell, by first covering the hollowed-out shell with cowhide, then inserting two sticks and adding a crossbar which he secured to the shell with a tendon. Discovering that the tendon gave out a pleasant sound when plucked, he added five more one by one until there were six, and the sound of the strings pleased him. So Cheptiti called his community together and played and sang for them, and after his adopted father had named the instrument *pkan* after himself (his name being Lo'pkan), declared that the *pkan* would be the instrument of his family, with which they would "keep the herds healthy and happy and teach the people the right way to live".³⁵

Each story serves the function of explaining the origin of the lyra, along with its religious and societal roles in each culture. The African lyra-cultures, as we shall see, help provide useful parallels of a different kind, but for the moment the Pokot story simply serves to place the lyra-invention myth of the *Homeric Hymn* into a broader context: it is a type of myth shared by other lyra-playing peoples, serving a similar function and carrying similar

³⁴ It is interesting, though probably entirely coincidental, that Apollo also had a solar aspect.

³⁵ Denyer 1980, p. 12. Plumley notes that among the Dinka of the Sudan the lyra (called *thom*) is played by cowherds in their camps at night to help guard against cattle-thieves (1966, p. 39). This is an ironic little twist of tradition, considering the Greek Hermes myth.

elements.

What is specifically useful about the *Homeric Hymn to Hermes* in its Hellenic context is that it provides an insight into many aspects of what the lyra was to the Archaic Greeks: the specifics of its construction are fairly well conveyed; a sense of its importance and place in Greek life, both domestic and ritual, is given; and a simple explanation is provided, in mythic language, telling how it came to be so closely associated with the cult and identity of Apollo. The hymn also attaches a name, for the first time, to a very concrete definition of the instrument whose development we have been following.

The difficulty, however, is that the instrument is not referred to consistently by one name in the poem, but by several. This is, in a sense, hardly surprising: it is a poem after all, and poetic diction takes certain liberties. The noun λύρα occurs (in its Ionic form, λύρη) only once,³⁶ κίθαρις occurs three times, always as a word for the instrument itself (rather than in the generalized sense of "lyre-playing"),³⁷ φόρμιγξ occurs twice,³⁸ and χέλυς (referring specifically to the instrument and not the live tortoise) occurs twice as well.³⁹ The first time a verb is used to describe the action of Hermes playing on the lyra, it is

³⁶ l. 423. This may be its second occurrence, the first being at l. 418, but this reading is disputed; Thomas W. Allen, ed., Homeri Opera, vol. V (1912; Oxford: Oxford U. Press, 1969) p. 58.

³⁷ ll. 499, 509, 515.

³⁸ ll. 64, 506.

³⁹ ll. 153, 242.

ἐγκιθαρίζω;⁴⁰ it only occurs once in this form, and the four subsequent occurrences of a verb meaning "to play the lyre" are all of the simpler form κιθαρίζω.⁴¹ In four of these five occurrences the verb is intransitive, and thus omits a noun for the instrument; on the one occasion where the instrument is specified the noun is λύρα.⁴²

It is not easy to generalize from such a scattered set of terms. Several things, however, clarify themselves at first glance. If the problem is to ascertain from the hymn what was the common Archaic Greek terminology for the instrument it describes, then certainly the word χέλυς (tortoise) is unambiguous: it could not be applied to any other type of lyre. This noun is only used when the instrument is described as a toy in the infant Hermes' cradle, never when he is playing it, and so it may have been more poetic than common vocabulary. In the passage where the instrument is played the word used is λύρα, which appears to be a more strictly accurate usage than the nick-name χέλυς. The other two nouns, φόρμιγξ and κίθαρις, are both Homeric --

⁴⁰ l. 17.

⁴¹ ll. 423, 433, 475, 510. The verb φορμίζω is used in the Homeric epics ([*Iliad* 18.605], *Odyssey* 1.155, 4.18, 8.266), but a verb formed on the noun λύρα (λυρίζω) does not appear until the third century B.C. (Chrysippus 3.140).

⁴² l. 423.

indeed, these are the only words Homer uses for the lyre.⁴³ Given the late date of the poem, it may be safe to assume that the use of these Homeric nouns was one of the poet's archaizing tendencies; they do, after all, occur quite near the end of the poem, and Barker claims that they are "plainly used as straightforward synonyms for *lyra*".⁴⁴

By this argument the poem gives at least a plausible hint that the common name for the tortoise-shell lyre in the Archaic Period was *λύρα*, and that the ordinary verb meaning to play it was *κιθαρίζω*. If this was the case as early as the composition of the *Homeric Hymn to Hermes*, as it certainly was later,⁴⁵ then we must look back to the seventh century for earlier occurrences of the same word.

The very first known occurrence of the noun *λύρα* is on an inscription on Paros which quotes the seventh-century Parian elegist Archilochus.⁴⁶ The inscription is late (first

⁴³ Nowhere does Homer, among his many references to music, bards, and musical occasions, use the terms *λύρα* or *χέλυς*. *φόρμιγξ* occurs 21 times in the epics, and *κιθαρίς* only five; in four of these, *κιθαρίς* seems to be used to mean "lyre-playing" generally, rather than to denote the instrument itself (Maas/Snyder 1989, p. 4; Anderson 1994, p. 36; West 1992, p. 50; Barker 1984, p. 25 n. 19). The *φόρμιγξ* or *κιθαρίς* of Homeric epic is thought by most scholars to have been not the *lyra*, but the dark-age descendant of the Mycenaean lyre, depicted on many Geometric vase-paintings. This wooden-framed instrument bears a closer resemblance to the Classical Greek and Etruscan "cradle-kithara" than it does to the tortoise-shell lyre.

⁴⁴ Barker 1984, p. 45 n. 27.

⁴⁵ The word was often used in a generic sense by some authors, even in the Classical Period (Maas/Snyder 1989, p. 34, 79-80; West 1992, p. 50; Barker 1984, p. 25 n. 19). In most fourth-century writers, however, the terms *κιθάρα*, *βάρβιτος* and *λύρα* were used to distinguish clearly between the different instruments of the lyre family (West 1992, p. 51).

⁴⁶ Fr. 93a in M. L. West, ed., *Iambi et Elegi Graeci*, vol. I (Oxford: Oxford University Press, 1971) pp. 36-37; see also Barker 1984, p. 49.

century B.C.) and quite damaged, but seems to describe a diplomatic mission sent to Thrace with gifts, hoping to find a peaceful end to a quarrel between Greeks and Thracians. Along with the gold,⁴⁷ performers on the aulos and lyra accompanied the expedition (ἄνδρας ..(.)ωλεῖν αὐλὸν καὶ λύρην ἀνήγαγεν).⁴⁸ The word λύρα could here be referring to the tortoise-shell lyre specifically; then again, it could mean simply "any kind of lyre-type instrument" -- and to judge by vase-paintings contemporary with Archilochus, there were at least two prominent varieties in use at the time.

Through the seventh and early sixth centuries more occurrences of the term λύρα appear: in Alcman,⁴⁹ Stesichorus,⁵⁰ Sappho,⁵¹ Theognis,⁵² an anonymous comic poem entitled *Margites*,⁵³ and in a sixth-century Attic *skolion*, or drinking-song, of unknown authorship.⁵⁴ The question of whether these authors intended to indicate tortoise-shell lyres specifically by their use of the term will not become any clearer; no descriptions are given to elucidate the

⁴⁷ χρυσός, l. 7.

⁴⁸ l. 5; Maas and Snyder suggest "men who sounded well (?) the aulos and lyra" (1989, p. 34).

⁴⁹ Fr. 140 in D.L. Page, ed., *Poetae Melici Graeci* (Oxford: Oxford University Press, 1962) p. 78; Maas/Snyder 1989, p. 34.

⁵⁰ Fr. 278 in Page (1962, p. 137); Maas/Snyder 1989, pp. 34-35; Anderson 1994, p. 75.

⁵¹ Once as a noun (Anderson 1994, p. 75; Maas/Snyder 1989, p. 35); once as an adjective, εὐλυρος ("having a beautiful lyra", or "playing beautifully on the lyra"), of Apollo, fr. 44.33 in Edgar Lobel and Denys Page, eds., *Poetarum Lesbiorum Fragmenta* (Oxford: Oxford University Press, 1968) p. 37; Maas/Snyder 1989, p. 35.

⁵² 1.533-534, 973-976; Maas/Snyder 1989, p. 35.

⁵³ Maas/Snyder 1989, p. 35.

⁵⁴ *Carmina Convivialia*, fr. 900 (Page 1962, p. 476); Maas/Snyder 1989, p. 35; Anderson 1994, p. 75.

instrument's structure.⁵⁵

The origin of the name λύρα is equally unhelpful. Although some attempts have been made to connect it to an Indo-European root,⁵⁶ there has been general agreement that the word is non-Indo-European; certainly it is non-Greek.⁵⁷ Whether this points to a non-Indo-European, or even a non-Greek, origin for the lyra, is difficult to tell. Words designating objects such as musical instruments are notorious for changing their sense when they are loaned into different languages: the modern European guitar, for example, derives its name from the Greek κιθάρα; yet its form, as a necked, fretted instrument more akin to the lute of antiquity, ostensibly owes nothing to the Greek instrument from which

⁵⁵ Barker, commenting on Archilochus' use of the term λύρα, says: "What he meant by it we do not know, but the late seventh or early sixth century gives us, in [the Homeric] *Hymn to Hermes*, a detailed description of the tortoiseshell instrument that came to monopolise the name" (1984, p. 49).

⁵⁶ Émile Boisacq, in his Dictionnaire étymologique de la langue grecque (Heidelberg: Carl Winter, 1950) p. 592 (cited by Maas and Snyder, 1989, p. 229 n. 7), proposes a derivation "from I.E. *lu-, *leu-d (as in Latin *laus*, *laudis*)."

⁵⁷ Maas/Snyder 1989, p. 80; Guillemin/Duchesne 1935, p. 118 n. 3. Pierre Chantraine (Dictionnaire étymologique de la langue grecque (Paris: Klincksieck, 1974) p. 651) says only that its origin is "inconnue" and that it is "peut-être terme emprunté". Hjalmar Frisk (Griechisches Etymologisches Wörterbuch (Heidelberg: Carl Winter, 1954-70) p. 146, cited by Maas and Snyder, 1989, p. 229 n. 7) apparently agrees. West (1992, p. 50 n. 5) says that it is a "loan-word from a non-Greek language, but its source has not been traced". None of the other names for Greek lyres (φόρμιγξ, κιθαρίς, κιθάρα, βάρβιτος), except χέλυς, can be traced with any certainty to a Greek root either.

its name its descended.⁵⁸ The Greek lyra may have been adopted from a non-Greek culture along with its name. Or, perhaps, the lyra may have been an early Greek (i.e., Mycenaean) invention, whose name was borrowed from another language, thus producing a situation akin to that of the modern guitar, whose ancestry is different from that of its name. To come to a clearer sense of the origin of the lyra, the evidence of its appearance in archaeological remains, in artistic representations and in early Greek literature must be considered together with that of modern African lyres.

AFRICAN BOWL-LYRES AND THE SOUTHWARD
MIGRATION OF THE GREEK LYRA

A synthesis of the material presented in this chapter so far seems to produce a fairly coherent picture of the early centuries of the lyra's presence in the Aegean. It makes its first appearance near the end of the Mycenaean era, perhaps evolves during -- but certainly survives -- the Dark Ages, reappears on Attic pottery around the end of the eighth century, is probably referred to by a handful of Archaic authors beginning with Archilochus of Paros, and is given its first detailed description in the roughly sixth-century *Homeric Hymn to Hermes*. But does this picture clarify the

⁵⁸ Another example of the same phenomenon is the peg-turning key or wrench used to tune the wire strings of a species of mediaeval European harp: its name in Middle High German was *plectrûn* -- the word, though derived from the Greek *πλήκτρον*, meant nothing of the kind. Like the Greek lyre-player's plectrum, it was a small, palm-sized accessory whose only use was in association with the instrument; since the harp was not played with a plectrum, it was an easy matter to name the one after the other (Sachs 1940, p. 263).

question of its origin?

Before treating this question, let us add to the ancient evidence for the presence of lyras in Greek lands the modern evidence of the presence of the bowl-lyre among dozens of northeast African tribes.⁵⁹ Before going into detail, we may observe that these two factors taken together can suggest one of two main possibilities: assuming that the lyra was a variant of some other form of lyre -- a family whose origins can be traced to fourth-millennium Mesopotamia -- either (a) two separate inventions were made, one north of the Mediterranean, and the other south of it, in Africa, both influenced by an originally Mesopotamian instrument; or (b) both the Aegean and the African lyras can be traced to a common ancestor.

Against the first conclusion, in favour of a monogenetic hypothesis for the origins of cultural elements generally, stands an attitude prevalent among some ethnological scholars of the early part of this century, expressed by Erich von Hornbostel in 1933: "All phenomena, wherever they occur, are traceable to a common origin, unless there is historic proof of their mutual independence."⁶⁰ This is a less than cautious approach, especially when dealing with evidence which is unclear. Perhaps the opposite attitude would be safer in this case: it must be ascertained whether there is enough evidence to suggest a common origin for Aegean and African lyras, and whether this evidence is

⁵⁹ vide supra, n. 27.

⁶⁰ Erich M. von Hornbostel, "The Ethnology of African Sound Instruments: Comments on Geist und Werden der Musikinstrumente by C. Sachs", Africa 6(1933):129-158, p. 147; cited by Omondi (1982, p. 137).

significant enough to count against an assumption of their mutual independence. The following discussion will accordingly focus on the need to prove, rather than disprove, possible links between instruments along the course of the lyra's history.

Returning, then, to the evidence examined so far, we can set the earliest date of any hint of the lyra's existence at some point in the twelfth century B.C., from the drilled tortoise-shell fragments found in the Mycenaean shrine at Phylakopi on Melos. The Myceneans, then, were the first people known to have possessed the instrument. The Dark Ages (ca. 1100-800 B.C.) tell us nothing, but we know from Archaic Greek art that the lyra was common throughout the Aegean in the seventh century and later, and Etruscan pottery begins to show its presence in northwestern Italy by the second half of the sixth century.⁶¹ Egypt, which had a type of oriental box-lyre from at least the early second millennium, appears not to have known the lyra until Hellenistic times.⁶² The immediate homeland of the African bowl-lyre seems to be

⁶¹ Jean René Jannot, "La lyre et la cithare: les instruments à cordes de la musique étrusque", L'Antiquité classique 48(1979):469-507, pp. 473-478.

⁶² Behn 1954, p. 83; Roberts 1974, p. 17.

Nubia, where it is today called *kissar*.⁶³ The shape of the *kissar* of present-day Sudan is striking in its resemblance to the Greek lyra; in addition it is played with a plectrum, and the strap for the left hand (the Greek *τελαμών*) is still present, though in a modified form.⁶⁴

From its African homeland in Upper Egypt or the northern Sudan, the *kissar* appears to have migrated in two directions: eastward up the Blue Nile into Ethiopia and

⁶³ Most authorities agree that the name of the Nubian *kissar* is derived from the Greek *κιθάρα*. The Semitic word for box-lyre, *k'nn'r*, appears not to have been an influence on the Nubian word. Adopted by the Egyptians, who had no word for the instrument in their own language, *k'nn'r* appears first in Egyptian writings of ca. 1300 B.C., and was equivalent to the Hebrew *kinnor*, the Arabic *kinnāra*, and the Coptic *ginēra* (Sachs 1940, p. 102). It seems more likely that the Nubian word *kissar* should be derived either from the Greek *κιθάρα* during Hellenistic times, or from its Latin equivalent, *cithara*, not long afterward. Behn (1954, p. 84) and Plumley (1966, p. 7) favour a derivation of *kissar* from *κιθάρα*, without specifying how this came about. The instrument is, however, not a kithara (or box-lyre), but a lyra (or bowl-lyre), and so its mis-applied name shows it to be yet another example of an instrument whose history is different from that of its present name.

⁶⁴ Like the Greek *τελαμών* (see ch. 1 n. 26), it consists of a strap of fabric or leather attached to the outer arm of the lyra, of which the Greeks made a loop for the left wrist. In the Nubian version, however, the loop is cut, leaving two tails. One of these runs across the lyre behind the strings (parallel to the yoke) and is made fast to the inner arm; the player's left hand is positioned between it and the strings while the instrument is being played. The other tail-end of the strap serves as a tether for the cowhide plectrum (Plumley 1966, pp. 20, 24).

Somalia,⁶⁵ and southward up the White Nile into the lowlands around Lake Victoria, as discussed above.⁶⁶ Several factors indicate a north-to-south direction for the latter migration, against the possibility of a central African genesis for the instrument and a subsequent south-to-north migration.

Firstly, of the tribes living in the White Nile/Lake Victoria regions who possess the lyra, almost all are Nilotic. The homeland of the Nilotic tribes is generally agreed to have been the shortgrass plains of what is now the eastern Sudan, where they had emerged as a distinct ethnic group by about 1000 A.D. Over the last millennium they have migrated south in various waves which continued until about the end of the last century.⁶⁷ The fact that the lyra is confined in Africa (excluding Ethiopia and Somalia) to the areas occupied by Nilotic peoples, who moved south to fill these areas, and that the non-Nilotic tribes of this region among whom the lyra is found are in the minority, strongly suggests a southward movement of the instrument along with the Nilotes (see table 1).

⁶⁵ Ethiopia possesses two distinct types of lyre, each sharing different features of the Nubian *kissar*. The *beganna* looks like a box-lyre by the squarish shape of its soundbox, but it is lightly constructed and has a version of the hand-strap similar to the Nubian one, and as many as ten strings. The *krar* (a word which means "stringed" in Amharic, but may also be linked to *kissar*) is of bowl-lyre shape, but lacks the wrist-strap, and has usually only five strings. The word *beganna* appears to be the etymological root for many of the names of the southern branch of Nilotic lyras (vide supra, n. 27), and yet these lyras resemble the *krar* and *kissar* more closely in shape and string number. This mixture of elements may suggest two separate eastward migrations of the *kissar* from Nubia into Ethiopia (Sachs 1940, p. 134; Plumley 1966, pp. 20-25).

⁶⁶ n. 27.

⁶⁷ Omondi 1982, p. 130.

Table 1:

List of White Nile/Lake Victoria
Peoples Who Possess Some Form of Lyra⁶⁸

<u>Sudan</u>	<u>Congo</u>	<u>Uganda</u>	<u>Kenya</u>	<u>Tanzania</u>
Zande (<i>gaza</i>)	Zande (<i>gaza</i>)	*Ganda	Endo (<i>pkani</i>)	Gaia
Nuba (<i>kissar</i>)	Mundu	*Soga	*Gusii	*Shashi
Dinka (<i>thom</i>)	Dinka Agher (<i>tam</i>)	Jopadhola	Luo (<i>thum</i>)	Luo (<i>thum</i>)
Shilluk (<i>thom</i>)	Shilluk (<i>tum</i>)	Gwe	*Kuria	*Kuria
Nuer (<i>thom</i>)	Baka	*Gishu	*Luhya	
Moru	Logo	Lugbara	Kalenjin:	
Bari (<i>tom</i>)	Mabudu	Kakwa (<i>tom</i>)	Pokot (<i>pkani</i>)	
Mittu (<i>tohm</i>)	Balese	Madi	Markweta	
Jawamaa		*Toro	Tugen (<i>kibukan</i>)	
Ma'alia		Teso	Kipsigis (<i>achemonge</i>)	
Dongola			Nandi (<i>achemonge</i>)	
Fehlani			Keyo (<i>kipukandet</i>)	
Bisharin (<i>bazamkub</i>)			Sabaot (<i>bugandit</i>)	
			Tiriki (<i>bukhana</i>)	

⁶⁸ Names for the instrument, when known, are included in brackets. Bantu tribes are noted with an asterisk; others are Nilotic. Some tribes appear more than once, if they inhabit more than one country. It will be noted that such tribes do not necessarily have the same word for the lyra in each region they occupy. Table information compiled from Denyer 1980, pp. 1-2; Omondi 1982, pp. 139-140; Plumley 1966, pp. 7-9.

Secondly, the Nubian *kissar*, with its plectrum and left-hand-strap, more closely resembles the Greek instrument than do the more southerly varieties of *lyra*. Further up the White Nile, the hand-strap and plectrum gradually disappear, as does the name *kissar*, and though the instrument continues to be made from a round soundbox (no longer a tortoise shell, generally), its strings are plucked or strummed with the fingers, and its name varies, but is often a variant of the Ethiopian name *beganna*, the Arabic *tanbur*,⁶⁹ or one of a number of apparently unrelated words.⁷⁰

For these reasons it seems safe to assume that the African *lyras* did not originate in the southern part of their present range, but arrived there gradually with the southward migration of Nilotic tribes that has occurred since 1000 A.D.⁷¹ This conclusion suggests that some time before 1000 A.D. there was a species of *lyra* used in the area around Nubia. It may have been of independent genesis from the Greek *lyra*, either as a Nubian invention or as an Egyptian

⁶⁹ Yet another misnomer, *tanbur* is the Arabic word for a type of long lute descended from the ancient Babylonian and Egyptian lutes (Sachs 1940, pp. 255-256). The name is used in the Arabic of the Sudan to designate a bowl-lyre which Plumley equates with the *kissar* (1966, p. 7). Sayed Mohamed Abdulla writes of the *tanbur*: "Its Nubian name is 'Kissar', and it is an ancient Nubian name in the Sukut area [near the northern (Egyptian) border of the Sudan, just east of the Nile near the third cataract]" (trans. Hussan Mousa Yousef, cited by Plumley, 1966, p. 33). The name *tanbur* may be the origin of the group of Nilotic lyre-names which include *tohmu* (Mittu), *thom* (Sudanese Shilluk, Sudanese Dinka, Nuer), *tom* (Bari, Kakwa), *thum* (Luo), *tum* (Congolese Shilluk), and *tam* (Congolese Dinka Agher); see table 1.

⁷⁰ Among these are *ndi mo*, *ngbungo*, *ngo* (Sudanese Zande), *jingir* (Ingassana Hills region of the eastern Sudan), *kuninya* (Nyima Hills region of Dilling District, the Sudan), *achemonge* (Kipsigis and Nandi groups of the Kenyan Kalenjin).

⁷¹ Omondi (1982, pp. 140-141) supports this view in his consideration of the origin of the Luo *lyra*, or *thum*.

variation of the older Asiatic box-lyre which spread to Nubia. The fact that its descendent, the modern Sudanese *tanbur* or *kissar*, resembles the Greek lyra in its shape and construction much more closely than it does the lyre of dynastic Egypt, and its employment of the wrist-strap and plectrum (uncommon or unknown among Egyptian lyre-players), along with its Nubian name *kissar*, which is more likely to be derived from Greek or Latin than from Egyptian, Arabic or Coptic,⁷² all lean heavily toward a non-Egyptian, non-African genesis for the lyra. In further support of this conclusion, against the Greek authors who place its origin in Egypt,⁷³ stands the Egyptian archaeological record, which can produce no hint of an instrument resembling the lyra until the Hellenistic period.⁷⁴

What the Egyptian and African evidence suggests, then, is the arrival of the lyra in Egypt not earlier than the end of the fourth century B.C., from Greece.⁷⁵ If the lyra was imported into Egypt from Greece, and not the other way around, its origins are at least somewhat clarified. It can now be isolated as an instrument which either originated with the Myceneans, or was introduced to the Aegean during the period of their ascendancy in the region.

⁷² vide supra, n. 63.

⁷³ Diodorus, Servius and Eusebius (Roberts 1974, p. 17; Behn 1954, p. 83).

⁷⁴ Roberts 1974, p. 17; Behn 1954, p. 83.

⁷⁵ Another supporting factor is the presence in modern Nubia of lyras with arms made of horn, a development which appears not to have occurred in Greece until as late as Hellenistic or Roman times (see section (b) of Appendix).

THE IMPROBABILITY OF A EUROPEAN ORIGIN FOR THE LYRA

Following a Greek literary tradition that traces the earliest musicians to Thrace,⁷⁶ several twentieth-century musicologists have suggested a European origin for the lyra.⁷⁷ Behn even went so far, in his 1954 book Musikleben im Altertum und Frühen Mittelalter, as to claim a north Balkan origin for the lyra, and a subsequent southward migration and introduction into the Aegean by Dorian Greeks at the end of the Bronze Age.⁷⁸ His principal support consists of three artistic representations of lyre-type instruments found in Hungary (see figs. 18-20),⁷⁹ belonging to the Hallstatt culture, which flourished in that area between roughly 1100 and 450 B.C. These instruments, he claims, are the earliest ancestors of the Greek lyra.

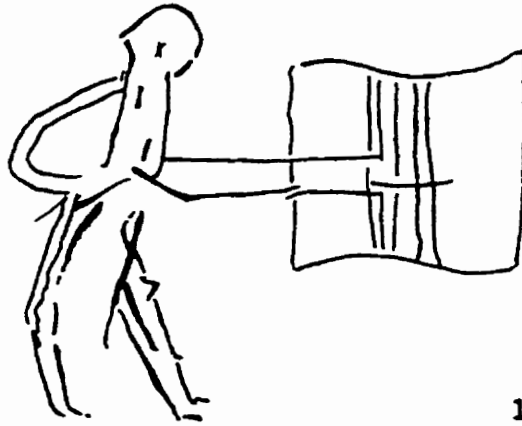
There are three main difficulties with this hypothesis. Firstly, even the earliest date of the rise of

⁷⁶ Strabo, in his *Geography*, notes that Orpheus and Thamyris, among other quasi-mythological Greek musical figures, were Thracians (10.3.17); but in the same passage he claims all Thracian music to have been of Asiatic origin. The author of the pseudo-Plutarchian *De Musica* also counts Thamyris, who "sang more sweetly and melodiously than all men of that time" (εὐφωνότερον καὶ ἐμμελέστερον πάντων τῶν τότε ἄσαι), as a Thracian by birth (1132b). Although Greek tradition links Orpheus with Thrace as well, some scholars have questioned the nature of this link. William Guthrie has claimed that rather than being a Thracian living in Greece, it is more probable that Orpheus was "a Hellene living in Thrace, offering opposition to Dionysos in his own native land" (William K. C. Guthrie, The Greeks and Their Gods (Boston: Beacon Press, 1956) p. 315; cited by Anderson, 1994, p. 28). Whichever version is the truer, the story illustrates the close cultural links between Greeks and Thracians in very early times, and indicates the freedom of musical exchange which was possible between the two regions.

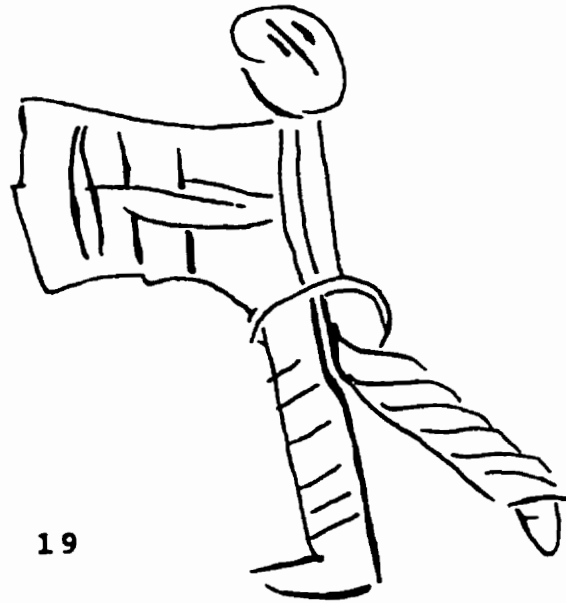
⁷⁷ Sachs 1940, p. 260; Behn 1954, p. 84.

⁷⁸ Behn 1954, pp. 84-85.

⁷⁹ Behn 1954, pl. 5 fig. 11.



18



19

Figs. 18-19. Hallstatt vase-paintings from Hungary. [Behn 1954, pl. 5 fig. 11.]

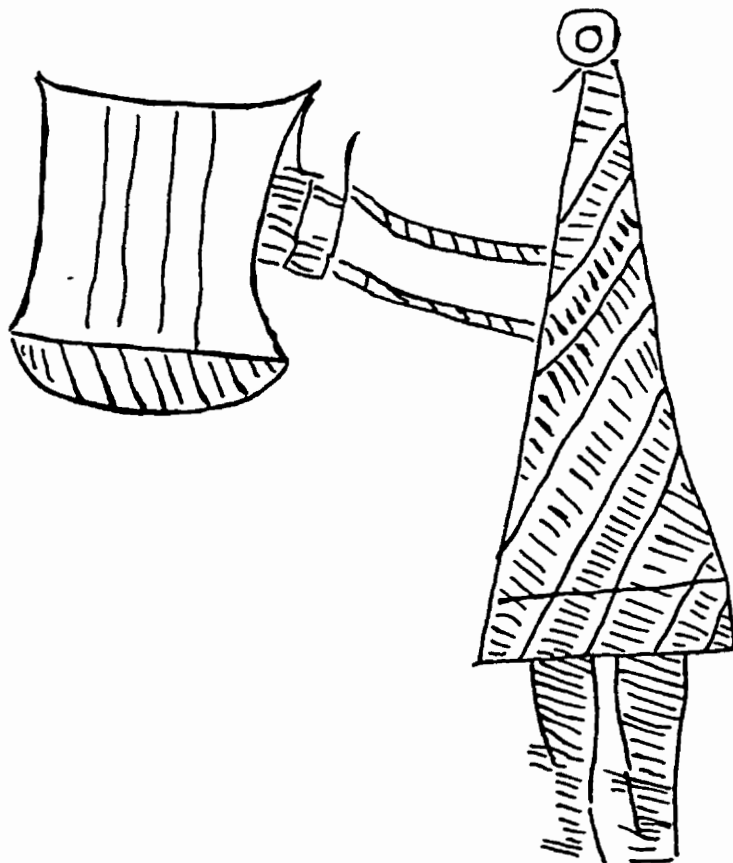


Fig. 20. Hallstatt vase-painting
from Hungary. [Behn 1954, pl. 5
fig. 11.]

the Hallstatt culture is likely too late to have influenced the Dorians before they entered Greek lands, and is predated by the twelfth-century Phylakopi fragments. Moreover, the presence of these fragments in a sanctuary do not suggest that they are the remains of an instrument left behind by a Dorian raiding party, but rather of an instrument used in regular religious activities. The Phylakopi site appears to have collapsed due to abandonment rather than destruction. Although Hallstatt sites have yielded Greek pottery dating from the Geometric Period, this again is too late, and merely indicates trade at a time well after the lyra had first appeared in Greek lands.

Secondly, the availability of tortoise shells of suitable size as far north as Austria and Hungary is questionable. Greek lyras were made from the carapaces of any of three species of sub-tropical tortoise, of the genus *Testudo*: *T. marginata* (which grows up to 35 cm in length), *T. graeca* (L. up to 30 cm) and *T. hermanni* (L. up to 20 cm). At present, *T. marginata* is confined almost exclusively to Greece; *T. graeca*'s range encircles the Mediterranean, but is not found northwest of Bosnia; *T. hermanni* is found along the Adriatic coast only as far north as Albania, but is known to have ranged much farther north in Neolithic times.⁸⁰ It may then have lived far enough north to have been used in lyra construction during the Hallstatt period, but this is by no

⁸⁰ The IUCN Amphibia-Reptilia Red Data Book, Part I: Testudines, Crocodylia, Rhynchocephalia, edited by Brian Groombridge (Gland, Switzerland: International Union for the Conservation of Nature and Natural Resources, 1982) pp. 123-131; Bernhard Grzimek, Grzimek's Animal Life Encyclopedia (New York: Van Nostrand Reinhold, 1975) 6:101-103.

means certain. Archaeological remains of Greek lyras provide no examples of a carapace less than 15 cm in length, thus making it unlikely that any other species could have been used.

Thirdly, and most importantly, Behn's bold assertion about the representations of Hallstatt instruments, "Es sind Lyren, nicht Kitharen",⁸¹ is plainly contradicted by the images themselves. No conclusion could have been more careless: the two more primitive vase-paintings (figs. 18-19) indicate a very rectangular instrument so crudely rendered that no soundbox is shown at all, although their position in the hands of their standing players may indicate some variety of lyre. The third, slightly more detailed representation (fig. 20) shows an instrument which is certainly of lyre type; the arms, yoke and four parallel strings can be made out; the figure who holds the instrument seems not to be playing it but merely holding it out; and the half-moon shaped soundbox certainly does not suggest a tortoise shell. The instrument resembles much more closely the lyres depicted in Minoan art, with its round-bottomed soundbox and parallel arms (for a Minoan parallel, see fig. 11). The presence of a box-lyre in central Europe is not in itself surprising; depictions of lyres are not uncommon in mediaeval manuscript illuminations.⁸² The European lyres of the first millennium B.C. and the first millennium A.D. may

⁸¹ Behn 1954, p. 85.

⁸² One such illustration depicts a box-lyre and a Celtic harp side by side, accompanied by the inscriptions "Cythara teutonica" and "Cythara anglica", indicating the prevalence of the lyre among Germanic peoples in mediaeval Europe (Behn 1954, pl. 87 fig. 199; see also pls. 88-89, 91, 95).

have derived their ancestry from Bronze Age Aegean lyres, or perhaps more directly from Mesopotamian lyres; their round-bottomed soundboxes (a trait they alone share with the Minoan and Mycenaean instruments) suggest the former, but a clear picture of their origin is difficult to ascertain.⁸³ In any case, having dismissed Behn's interpretation of the Hallstatt vase-paintings as very dubious, it may be concluded that there is no evidence to suggest that the lyra was ever known in central Europe, much less that it originated there.⁸⁴

CONCLUSION

The lack of evidence to indicate either Europe or Egypt as possible areas of origin for the Greek lyra narrows the field somewhat. Positive conclusions, however, are not easily made. In the absence of any foreign clues, it does seem probable that a monogenetic hypothesis for the lyra's origin may be appropriate, and what evidence there is points to the Aegean as the likeliest site of this genesis. But whether the instrument was first made by Myceneans, or by Minoans and passed on to the Myceneans (as was so much else of cultural importance), or whether it was introduced to the Aegean from Thrace or Asia Minor during the Bronze Age -- these are details of the lyra's prehistory for which there remains too little evidence to validate any hypothesis. It is unlikely that the lyra's invention occurred without

⁸³ Sachs 1940, pp. 264-268.

⁸⁴ The Etruscans appear to have been the northernmost people to have possessed the lyra.

inspiration from some other lyre-type instrument; thus, if the lyra was first constructed in the Aegean, it was likely during a time when box-lyres had become known there -- that is to say, at some point during the second millennium. If, as with the Greeks, it had always been a domestic rather than a ceremonial instrument, the fact that it does not appear in Minoan and Mycenaean art can be attributed to the general lack of domestic scenes in most Minoan-Mycenaean art. The non-Greek, and probably non-Indo-European, origin of its Greek name λύρα hints at a pre-Mycenaean origin for the instrument as well, but this again is not certain.

What is certain, however, is that the lyra, Greek or non-Greek, was to become the most popular musical instrument in the Aegean by the Classical Period, achieving an unparalleled status which led to its adoption as the instrument of preference in the musical education of young aristocrats; it was also to become the instrumental basis of much of fundamental Greek music theory. If the lyra was not Greek in its origin, the Greeks, more than any other culture in antiquity, deserve the right to call it their own, so thoroughly was it appropriated and assimilated by Hellenic culture.

APPENDIX:
The Construction of the Lyra

The purpose of this appendix is to provide a concise overview of the materials and methods of the lyra's assembly, as far as these can be illuminated by the literary, graphic and archaeological evidence, and supplemented by some helpful modern parallels from African lyres. It is intended to serve as an illustration of those details of the lyra's structure which could not be elaborated on in the course of the foregoing discussion. The material is organized according to the various parts of the instrument, under seven headings: soundbox, arms, crossbar, tuning bulges, strings, bridge and tailpiece (see fig. 21). The essential lyra accessories, the hand-strap and the plectrum, have been discussed briefly above.¹ The descriptions are by no means exhaustive, but are intended merely to help present a brief but accurate structural synthesis of the instrument as it existed in pre-Hellenistic Greece.

(a) Soundbox:

The soundbox (ἤχεϊον²) of the lyra was ordinarily

¹ Hand-strap: ch. 1 n. 26, ch. 2 n. 64; plectrum: ch. 1 n. 28.

² Michaelides 1978, p. 190.

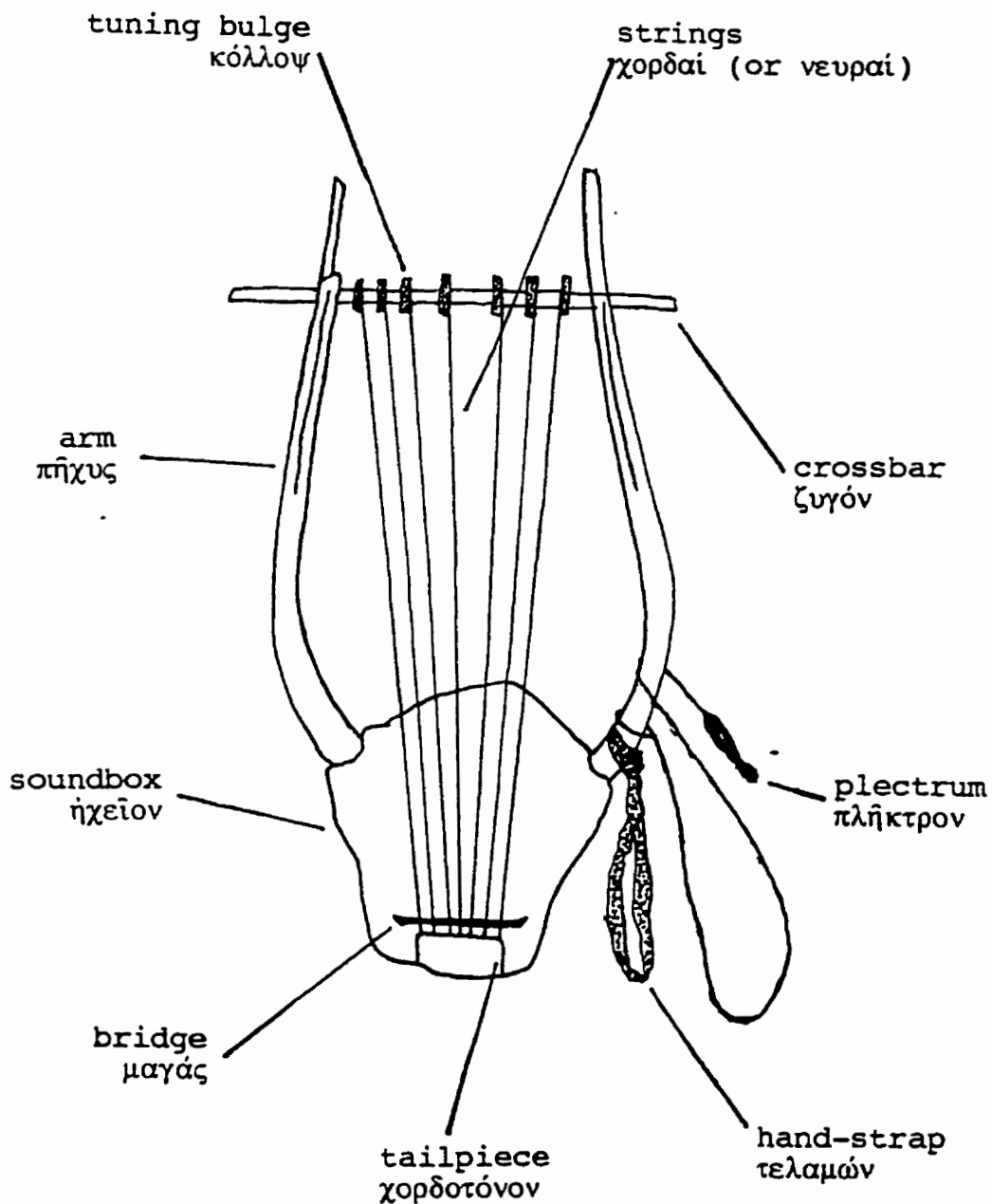


Fig. 21. The Greek lyra and its parts. [Lyra based on those depicted on Boston 13.202 and Athens Agora P 43; Maas/Snyder 1989, pp. 112 fig. 29, 111 fig. 27.]

made from the carapace of one of three species of tortoises native to the Aegean area: *Testudo marginata*, *T. graeca* and *T. hermanni*. The most common of these in the manufacture of lyras appears to have been *T. marginata* on account of its superior size,³ although of the existing archaeological finds only one shell measures over 19 cm.⁴ It appears that there was a great degree of variability in the acceptable dimensions of the lyra's soundbox, which is understandable given the variable nature of the material. Most vase paintings depict the length of the soundbox as less than the length of the player's forearm (from elbow to wrist), which corresponds to the archaeological evidence.

Remnants of carapaces used as lyra soundboxes have been found in excavations at Arta, Bassae, Argos, Eleusis, Kerkyra and Locri Epizephyrii in Calabria,⁵ all dating from the Archaic and Classical Periods, as well as one group of Bronze-Age fragments from Melos.⁶ All of these carapaces exhibit drilled holes, either in the back of the carapace (piercing the costal or vertebral scutes) or around its perimeter (piercing the marginal scutes⁷); where the shells are complete enough, drill-holes are sometimes found in both areas.

The regular perforations in the marginal scutes (most visible in the Locri Epizephyrii carapace, fig. 22) may

³ Maas/Snyder 1989, p. 95; Roberts 1974, p. 18.

⁴ This is the Reggio carapace; see Roberts 1974, p. 55 fig. 16; 1981, pl. 70.

⁵ Renfrew 1985, p. 325.

⁶ Discussed above in Chapter 2.

⁷ See fig. 14.

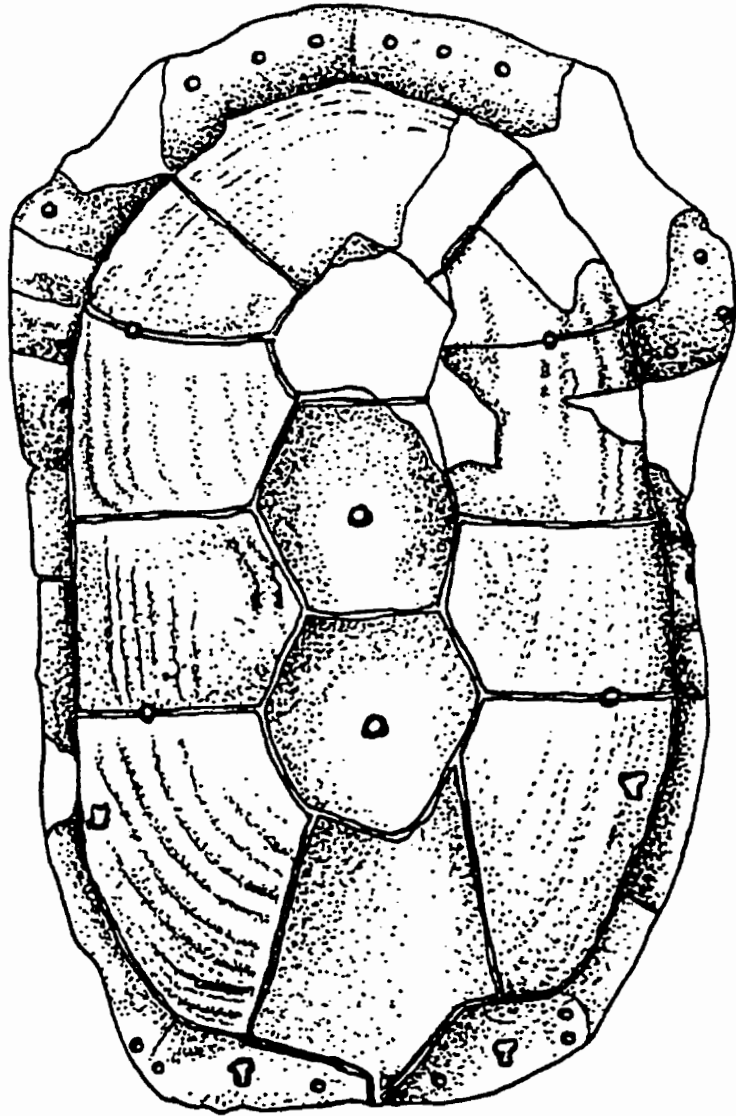


Fig. 22. Calabria: Locri
Epizephyrii carapace. [Phaklaris
1982, p. 225 fig. 7.]

have been for the attachment of a skin covering which was stretched over the open side of the shell.⁸ Another possible function of these holes may have been to anchor the δόνακες καλάμιο (stalks of reed) which the infant Hermes is said to have fastened into the tortoise shell.⁹ Barker believes that these reeds "were inserted through holes in the tortoiseshell, in such a way as to lie horizontally across its opening", and that their function was "to affix and support the oxhide membrane".¹⁰ The holes in the marginal scutes may then have served a dual purpose, both anchoring the reed stalks and facilitating the attachment of the skin covering; however, the lack of any such holes on the nearly complete Bassae carapace suggests that there may have been other ways of attaching both skin and reeds to the tortoise shell, or that reeds were not always used.¹¹

Holes in the vertebral and costal scutes are generally agreed to have been drilled for the attachment of the lower ends of the lyra's arms inside the shell. The patterns of drill-holes on the backs of surviving shells differ, suggesting that the method of interior attachment was not standard. Differing reconstructions of this feature have

⁸ Phaklaris 1982, p. 225. They were certainly not for the attachment of strings to the upper edge of the soundbox, as shown in a rather unfortunate illustration in Peter Levi, Atlas of the Greek World (Oxford: Equinox Books, 1991) p. 155.

⁹ *Homeric Hymn to Hermes*, ll. 47-48.

¹⁰ Barker 1984, p. 43 n. 17.

¹¹ Phaklaris 1982, p. 221. Plumley records the procedure of the construction of a Nubian kissar, whose skin covering is attached to a gourd soundbox by means of leather stitching across the back of the soundbox, thus eliminating the need for drilled holes; no reed was used (1966, pp. 12-16).

been proposed by Courbin, Roberts and Phaklaris.¹²

(b) Arms:

The *Homeric Hymn to Hermes* relates that the next stage in the lyra's construction was the insertion of "arms" into the soundbox ("καὶ πήχεις ἐνέθηκ'¹³). Literally, πήχυς means "forearm" (i.e., from the elbow to the wrist), and this provides not only a good illustrative description, but also an accurate approximation of their length, to judge by the vase paintings.

They were generally of hardwood; the arms of the

¹² Courbin 1980, pp. 103-106; Roberts 1981; Phaklaris 1982, pp. 227-228.

¹³ *Homeric Hymn to Hermes*, l. 50.

Elgin Lyre at the British Museum are made of sycamore.¹⁴ They were also referred to as κέρατα (horns),¹⁵ and Bélis has concluded, against the view held by many of her predecessors and contemporaries (Reinach, Chailley and Michaelides) that this was a later development, rather than an early trend in

¹⁴ Roberts 1981, p. 304. In her reconstruction of a lyra discussed in this article, Roberts used sycamore for the crossbar as well, but records that the wood was not hard enough to withstand the pressure of the strings: "In an attempt to copy the Elgin lyre fragments as closely as possible, the crossbar was constructed out of sycamore. The strings were then tied around sycamore pegs and the crossbar in such a way that a pull on the peg tightened or loosened the string. After a few days, however, the strings had cut into the crossbar and indentations appeared on the side of the peg in contact with the crossbar. Obviously the crossbar and pegs should have been made of harder wood" (Roberts 1981, p. 305). Roberts' difficulties may have been caused by an incorrect choice of wood. There are three trees of very different type which are commonly given the name "sycamore". The tree most often called "sycamore" in North America is in fact a plane-tree, *Planatus occidentalis*. A very similar species is found in Britain and Europe, *Planatus orientalis*. In Britain, however, this species is always called "plane-tree"; since Roberts' home is in England, she would not likely have used this wood in her reconstruction and called it "sycamore". The tree most commonly called "sycamore" in Britain is in fact a species of maple, *Acer pseudoplatanus*. It does have a hard wood, but not nearly so hard as that of the true sycamore, which is in reality a variety of fig, *Ficus sycomorus*. This tree, which is tropical and hence not native to northern Europe or Britain, is the συκομόρος (σῦκον = fig) known to the Greeks, which grew in Palestine (cf. Luke 19.4) and Egypt as well. This true sycamore was known in antiquity for its very hard wood: "The wood is valuable for its hardness, so much so that in Ancient Egypt it was used to make sarcophagi" (Paola Lanzara and Mariella Pizzetti, *Guide to Trees*, ed. Arnaldo Mondadori, trans. Hugh Young (New York: Simon and Schuster, 1977) \$116). It is likely, then, that Roberts used the wood of *Acer pseudoplatanus*, the maple more commonly called "sycamore" in England, instead of *Ficus sycomorus*, the true sycamore of which the Elgin lyre's arms and crossbar were really made. Had she been able to obtain true sycamore wood, she would likely have found it hard enough for the task.

¹⁵ Philostratus 1.10.

lyra construction.¹⁶ Jannot's careless assertion that "les bras (πήχεις) sont d'abord de roseau" (for which he cites the word κάλαμος from l. 47 of the *Homeric Hymn to Hermes*)¹⁷ is entirely without warrant, and appears to be a misunderstanding of the text. Reed is mentioned in line 47, but it is certainly not used to describe the πήχεις, which make their appearance in line 50, a sentence later.¹⁸

The shape of the arms was generally curved rather than straight in Greek lyras. Typically, they curved outward as they left the soundbox, and inward again slightly as they neared the crossbar, and Maas has suggested that they may have curved forward as well, an aspect seldom within the scope of ancient vase-painters to represent.¹⁹ The ends of

¹⁶ "Si toutes les représentations des lyres, sans aucune exception, montrent à l'évidence que leurs bras sont en bois -- leur forme ne prête pas au doute --, on ne peut s'autoriser que de témoignages tardifs pour dire qu'ils auraient été faits en corne. Philostrate est à ma connaissance le seul à l'affirmer. ... Il faut donc...admettre que ce n'est qu'à époque tardive que les musiciens adaptent à leurs instruments des bras en corne" (Annie Bélis, "À propos de la construction de la lyre", Bulletin de correspondance hellénique 109(1985):201-220, pp. 203-204). A Roman fresco from the Basilica of Herculaneum (BM/C/GR/038), depicting the centaur Chiron teaching Achilles to play the lyra, clearly depicts arms of horn, not of wood, on the instrument (Roberts 1974, p. 135 fig. 5). Although this detail in the fresco appears to have escaped Bélis' notice (she refers to it in a different context, p. 217 n. 34), its late date serves only to strengthen her claim. Plumley includes a Roman lyra from a second-century A.D. tomb relief showing arms made of horn, and several varieties of modern Sudanese lyras whose arms are at least partially of horn (1966, p. 36 pl. I fig. 12, p. 38 pl. II figs. 1-2).

¹⁷ Jannot 1979, p. 471, and again, p. 473.

¹⁸ πήξε δ' ἄρ' ἐν μέτροισι ταμῶν δόνακας καλάμοιο
 κειρήνας διὰ νῶτα διὰ ῥινοῖο χελώνης.
 ἀμφὶ δὲ δέρμα τάνυσσε βοός πραπίδεςσιν ἔησι,
 καὶ πήχεις ἐνέθηκ', ἐπὶ δὲ ζυγὸν ἦραρεν ἀμφοῖν,
 ἐπτά δὲ συμφώνους ὅϊων ἐτανύσσατο χορδὰς (ll. 47-51).

¹⁹ Martha Maas, "On the Shape of the Ancient Greek Lyre", Galpin Society Journal 27(1974):113-117. Bélis has supported this hypothesis (1985, pp. 219-220).

the arms usually extended beyond the crossbar, and often appear thinner at this extremity, a possible reason for which will be discussed in the following section.

(c) Crossbar:

The crossbar, or ζυγόν, was so named because it "yoked" together the arms. Homer uses the word when describing the φόρμιγξ Achilles is found playing in the embassy scene of the *Iliad*;²⁰ it is also used in the description of Hermes' construction of the lyra.²¹ It appears to have been the standard term for the crossbar (or yoke) of all the instruments of the lyre family.

Its function was to support the tension of the strings at the end opposite the soundbox. How exactly it was attached to the arms is not at all clear from the vase-paintings, as some painters show simply a criss-cross of lines, others a slight lip in the upper part of each arm, in which the crossbar appears to rest, and others a combination of these.²² Using over half a dozen of the more carefully rendered artistic representations and the fragmentary arms and yoke of the Elgin lyre, Bélis has proposed a reconstruction of the attachment (see fig. 23). She believes that the upper ends of the arms were cut longitudinally in half as far down as the lip depicted in some vase-paintings,

²⁰ *Iliad* 9.187.

²¹ *Homeric Hymn to Hermes*, l. 50.

²² A good example of the general inconsistency of many vase-painters in this regard is Boston 12.202, which was the basis for fig. 21. The left arm shows a lip, the right simply criss-crossed lines.

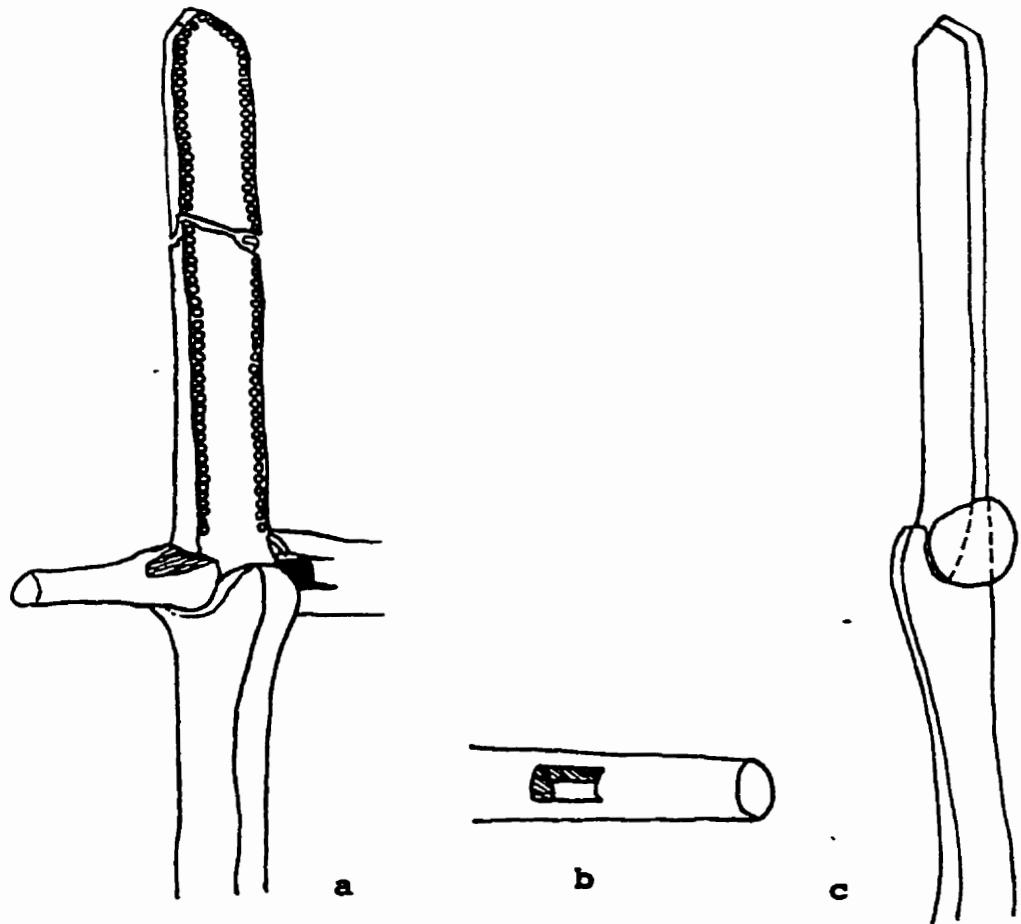


Fig. 23. Bélis' reconstruction of crossbar/arm attachment.

- a.** Present state of left arm and crossbar join of Elgin lyre;
- b.** Proposed reconstruction of crossbar end;
- c.** Profile of arm and proposed reconstruction of crossbar/arm join.

leaving a flat side parallel to the surface of the soundbox. A hole was cut in each end of the crossbar, and the latter was then lowered over the narrowed upper ends of the arms, descending as far as the lip, in which it would rest.²³ An advantage to this method of attachment is that the yoke would not be allowed to roll under the pressure of the strings.²⁴ The crossbar is always depicted as extending a short distance beyond the arms to either side.

(d) Tuning Bulges:

Called κόλλοπες by Homer,²⁵ these were the standard means of attaching the strings to the yoke until the end of the fifth century B.C., perhaps even later.²⁶ In the majority of vase-paintings they appear as thick lumps or bulges on the crossbar, yet their function as tuning devices is well documented by ancient authors. Each κόλλοψ consisted of a strip of leather to which the string was attached, the whole thing being wound around the crossbar starting with the leather strip and ending with the lyra-string. The κόλλοψ,

²³ Bélis 1985, pp. 214-215. Almost all African lyres exhibit a similar assembly of arms and crossbar: cf. Plumley 1966, p. 16; Denyer 1980, p. 4; Washington Omondi, "Tuning of the Thum, the Luo Lyre: A Systematic Analysis", Selected Reports in Ethnomusicology 5(1984):263-281, p. 164 fig. 1, p. 165 fig. 5. Roberts, who did not take this approach to the joining of arms and crossbar in her reconstructions of a lyra and a barbitos, has been criticized by Anderson (1994, p. 174, on Helen Roberts, "The Technique of Playing Ancient Greek Instruments of the Lyre Type", British Museum Yearbook 4(1980):43-76).

²⁴ Bélis 1985, p. 215; Daniel Paquette, L'Instrument de musique dans la céramique de la Grèce antique (Paris: Boccard, 1984) p. 164.

²⁵ *Odyssey* 21.407.

²⁶ Bélis 1985, p. 219. Roberts favours an earlier date (1981, pp. 306-307).

thus wound, formed a collar which could be twisted round the stationary yoke to tighten or loosen the string, consequently sharpening or flattening its pitch. Although this method of tuning may seem primitive and laborious, a high degree of accuracy is nonetheless possible. Many modern African lyres still use this method of string attachment (see fig. 24), employing either cloth or leather as the material,²⁷ and Anderson gives the example of a modern Gambian kora player who was able to retune his strings to within 1/200 of a semitone using this method.²⁸ Some African lyres exhibit a modification of this simple structure with the addition of a short stick inserted into the winding at right angles to the crossbar. Thus tied to the tuning bulge, the stick provides more leverage, and turns around the yoke along with the bulge itself.²⁹ It is not unlike the sticks or pegs that begin to appear on lyras depicted in Late Classical and Early Hellenistic vase-paintings. Roberts used a similar tuning apparatus on her reconstructions of a lyra, barbitos and concert kithara.³⁰ Pegs do not appear in artistic representations of Greek lyres of any type until quite late,³¹ and she has been duly criticized for her use of them in reconstructing Classical instruments. Late evidence suggests that tuning pegs were eventually inserted into holes drilled in the crossbar, but this was past the end of the Classical

²⁷ Plumley describes the process in detail (1966, pp. 18-19); see also Anderson 1994, p. 175 fig. 21a; Omondi 1984, p. 265 fig. 5.

²⁸ Anderson 1994, p. 174.

²⁹ This is illustrated by Anderson (1994, p. 175 fig. 21b).

³⁰ Roberts 1980, figs. 26-27, 29-30, 32-33.

³¹ Bélis 1985, p. 217.

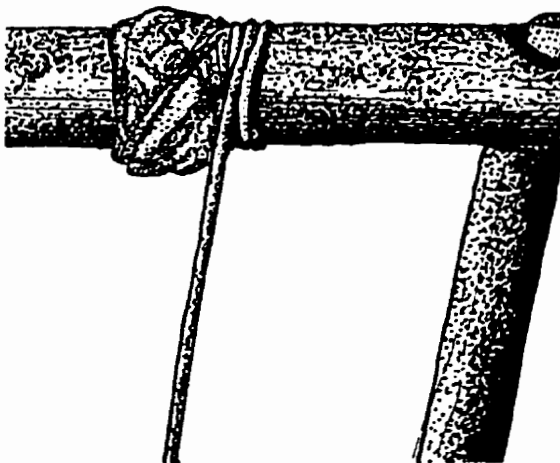


Fig. 24. Detail of Sudanese
kissar tuning bulge: modern
equivalent of Greek κόλλω.
[Lawergren 1984, p. 163 fig. 20.]

Period.³² Roman lyres were commonly furnished with pegs of this kind.³³

(e) Strings:

In the *Homeric Hymn*, Hermes completes his lyra by stretching across its frame seven harmonious strings of sheepgut: "ἑπτὰ δὲ συμφώνους ὄτων ἐτανύσσατο χορδὰς".³⁴ Homer often modifies χορδή with the adjective εὐστρέφης (well-twisted),³⁵ which indicates that strings were likely composite: the verb στρέφω is also used to describe the twisting together of the composite strands of a rope. Since lyre-strings were all of the same length (probably between 30 and 50 cm, to judge by the vase-paintings), and since a minimal variability in string tension would have been desirable (one slack string can make a strum quite rhythmically uneven), it is likely that differences in pitch were largely rendered by varying the thickness of each string. Because each string was composed of several individual lengths of gut twisted together, variable string thickness was obtained by varying the number of strands. A series of strings, usually seven in

³² A votive bronze lyra at the University of Heidelberg shows pegs set into the yoke (Heidelberg 76/2; Bélis 1985, p. 218 fig. 16); the Scholiast on Lucian *Juppiter Tragoedus* 10-15 and *Adversus Indoctum* 5.10 glosses the term πασσαλίσκοι (pegs) with κόλλοπαες, suggesting that by the second century A.D. pegs were the standard tuning mechanism, but were still often called by the name for the older tuning bulge (Bélis 1985, p. 219 n. 42).

³³ Bélis 1985, p. 217.

³⁴ *Homeric Hymn to Hermes*, l. 51. They were often called νευραί (tendons) as well as χορδαί.

³⁵ Anderson 1994, p. 174.

the Archaic and Early Classical Periods, eight by the end of the fifth century, could thus be tuned to produce a range of an octave or slightly more without significant differences in tension from one string to the next.³⁶

(f) Bridge:

Hesychius relates that the bridge was a curved, four-sided piece of wood which supported the strings of the kithara and helped to produce the note: "μαγάς· σανὶς τετράγωνος ὑπόκυφος δεχομένη τῆς κιθάρας τὰς νευρὰς καὶ ἀποτελοῦσα τὸν φθόγγον".³⁷ Since none of the surviving lyra fragments include the remains of a bridge, Hesychius' description is likely the clearest picture one can hope for; most vase-paintings show only a thick black line, or occasionally a vaguely rectangular outline.³⁸ Often it is simply omitted altogether, or not enough of the front face of the instrument is depicted

³⁶ Modern acoustic science has codified the principle on which ancient Greek lyre-makers made their strings, giving the formula:

$$F = \frac{n}{2L} \times \sqrt{\frac{T}{\mu}}$$

where F is the fundamental frequency of a string, n is an integer (if n=1, the fundamental frequency will be heard; if n=2 the first octave will be heard), L is the speaking length of the string in metres, T is the string's tension in newtons, and μ is the string's linear density in kg/m.

³⁷ Michaelides 1978, p. 196.

³⁸ e.g. Boston 13.202, New York 07.286.78, Athens 1260, Oxford 311 (Maas/Snyder 1989, p. 112 figs. 29-30, p. 109 fig. 22, p. 104 fig. 10).

to include it.³⁹ Philip Neuman, who has made a working reconstruction of a Roman lyra, describes the bridge of his instrument as "a prism shaped piece of western maple".⁴⁰

(g) Tailpiece:

The apparatus by which the strings were secured to the bottom end of the soundbox was called the χορδοτόνον (string-brace).⁴¹ In its function it serves essentially the same purpose as the tailpiece of modern stringed instruments. Its representation in Greek art is seldom clear, and so it is especially fortunate that part of a lyra tailpiece has been preserved (see fig. 25).⁴² It appears to have consisted of a short length of round metal, bent at its ends so that they curved round the bottom of the soundbox and entered the back of the shell through pre-drilled holes. The relatively complete Locri Epizephyrrii carapace (fig. 22) even shows two wider-than-usual perforations in its base, which would appear to have accommodated a tailpiece of this type.⁴³ The strings

³⁹ e.g. Syracuse 36330, Vienna IV 143, Athens Agora P 43, Florence 128 (Maas/Snyder 1989, p. 105 fig. 11, p. 109 fig. 21, p. 111 figs. 26-27).

⁴⁰ Private communication, December 1996. Mr. Neuman's ensemble, *De Organographia*, has recently released a compact disc recording entitled Music of the Ancient Greeks (Pandourion Records, U.S.A., PRCD 1001, 1995), on which they present carefully and artfully rendered performances of 24 of the least lacunose examples of Greek musical notation.

⁴¹ Aristotle *De Audibilibus* 803a41, Nicomachus *Harmonicum Enchiridium* 6, Pollux 4.62; it also appears as χορδοτόνιον (Artemon 12).

⁴² The fragment was found along with the Arta carapace, and its interpretation has been discussed by Phaklaris (1982, p. 223).

⁴³ Phaklaris 1982, p. 225; see also his reconstructions, figs. 8b and 10b.

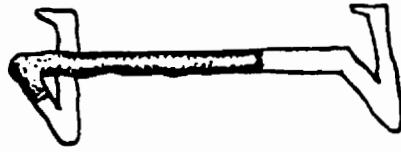


Fig. 25. Tailpiece from the Arta lyre: shaded portion is original. [Phaklaris 1982, p. 223 fig. 5.]

were likely knotted to it,⁴⁴ an assumption which is supported by modern examples from Ethiopia.⁴⁵

⁴⁴ Michaelides 1978, p. 60.

⁴⁵ Lawergren 1984, p. 168 fig. 27.

BIBLIOGRAPHY

- Allen, Thomas W., ed. Homeri Opera, vol. V. 1912; Oxford: Oxford University Press, 1969.
- Anderson, Warren D. Music and Musicians in Ancient Greece. Ithaca: Cornell University Press, 1994.
- Barker, Andrew, ed. Greek Musical Writings I: The Musician and his Art. Cambridge Readings in the Literature of Music. Cambridge: Cambridge University Press, 1984.
- Barker, Andrew, ed. Greek Musical Writings II: Harmonic and Acoustic Theory. Cambridge Readings in the Literature of Music. Cambridge: Cambridge University Press, 1989.
- Baud-Bovy, Samuel. "L'Accord de la lyre antique et la musique populaire de la Grèce moderne". Revue de musicologie 53(1967):3-20.
- Behn, Friedrich. Musikleben im Altertum und Frühen Mittelalter. Stuttgart: Hiersemann, 1954.
- Bélis, Annie. "À propos de la construction de la lyre". Bulletin de correspondance hellénique 109(1985):201-220.
- Chailley, Jacques. "Nicomaque, Aristote et Terpandre devant la transformation de l'heptacorde grec en octocorde". Yuval 1(1968):132-154.
- Chailley, Jacques. La musique grecque antique. Paris: Société d'édition «Les belles lettres», 1979.
- Chantraine, Pierre. Dictionnaire étymologique de la langue grecque. Paris: Klincksieck, 1974.

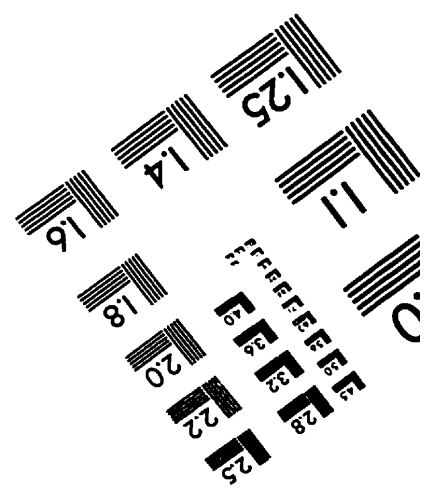
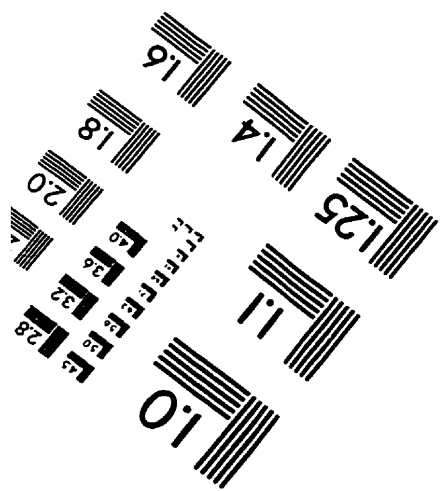
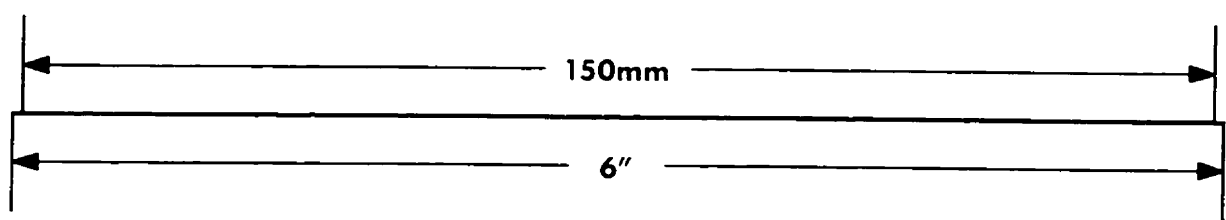
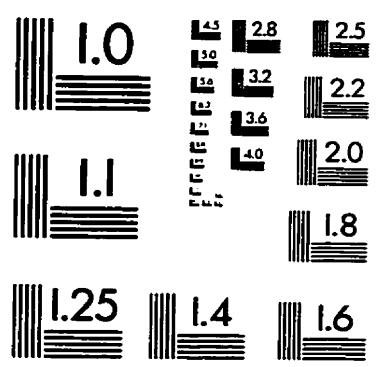
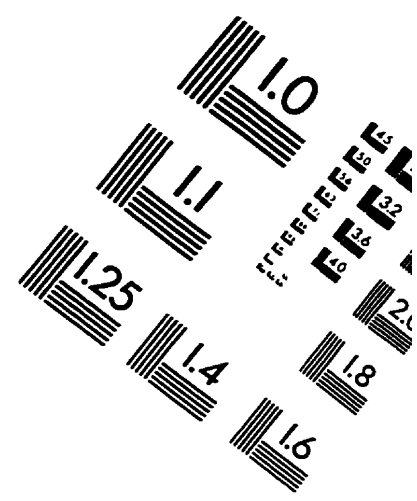
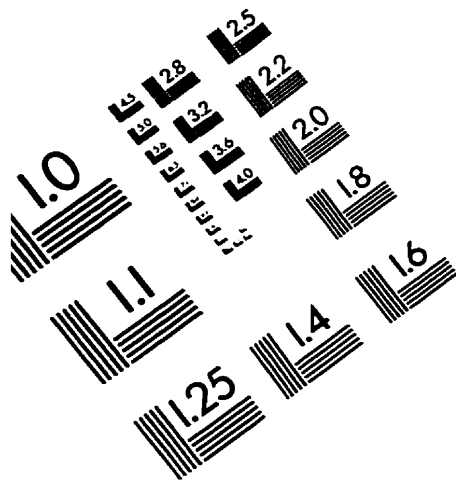
- Comotti, Giovanni. Music in Greek and Roman Culture.
Translated by Rosaria V. Munson. Baltimore: Johns
Hopkins University Press, 1989.
- Courbin, Paul. "Les lyres d'Argos". Bulletin de
correspondance hellénique Suppl. 6(1980):93-114.
- Denyer, Frank. "The Lyre in the Northern Kerio Valley".
Paper no. 137. Nairobi: Institute of African Studies,
University of Nairobi, 1980.
- Duchesne-Guillemin, Marcelle. "Music in Ancient Mesopotamia
and Egypt". World Archaeology 12(1981):287-297.
- Duchesne-Guillemin, Marcelle. "L'Animal sur la cithare:
Nouvelle lumière sur l'origine sumérienne de la cithare
grecque". Acta Iranica 9(1984):129-141.
- Düring, Ingemar. "Studies in Musical Terminology in 5th
Century Literature". Eranos 43(1945):176-197.
- Ginsberg-Klar, Maria E. "The Archaeology of Musical
Instruments in Germany During the Roman Period". World
Archaeology 12(1981):313-320.
- Grzimek, Bernhard. Grzimek's Animal Life Encyclopedia,
vol.6: Reptiles. New York: Van Nostrand Reinhold,
1975.
- Guillemin, Marcelle, and Duchesne, Jacques. "Sur l'origine
asiatique de la cithare grecque". L'Antiquité classique
4(1935):117-124.
- International Union for the Conservation of Nature and
Natural Resources. The IUCN Amphibia-Reptilia Red Data
Book, Part I: Testudines, Crocodylia, Rhynchocephalia.
Compiled by Brian Groombridge. Gland, Switzerland:
IUCN, 1982.
- Jannot, Jean René. "La lyre et la cithare: les instruments
à cordes de la musique étrusque". L'Antiquité Classique
48(1979):469-507.
- Lanzara, Paola, and Pizzetti, Mariella. Guide to Trees.
Edited by Arnoldo Mondadori. Translated by Hugh Young.
New York: Simon and Schuster, 1977.
- Lawergren, Bo. "The Cylinder Kithara in Etruria, Greece, and
Anatolia". Imago Musicae 1(1984):147-174.

- Lawergren, Bo. "A Lyre Common to Etruria, Greece, and Anatolia: The Cylinder Kithara". Acta Musicologica 57(1985):25-33.
- Lawergren, Bo. "Lyres in the West (Italy, Greece) and East (Egypt, the Near East), ca. 2000 to 400 B.C". Opuscula Romana 19(1993):55-76.
- Levi, Peter. Atlas of the Greek World. Oxford: Equinox Books, 1991.
- Levin, Flora R., trans. and commentary. The Manual of Harmonics of Nicomachus the Pythagorean. Grand Rapids: Phanes Press, 1994.
- Lippman, Edward A. Musical Thought in Ancient Greece. New York: Columbia University Press, 1964.
- Lobel, Edgar, and Page, Denys, eds. Poetarum Lesbiorum Fragmenta. Oxford: Oxford University Press, 1968.
- Maas, Martha. "On the Shape of the Ancient Greek Lyre". Galpin Society Journal 27(1974):113-117.
- Maas, Martha. "Back Views of the Ancient Greek Kithara". Journal of Hellenic Studies 95(1975):175.
- Maas, Martha. "The Phorminx in Classical Greece". Journal of the American Musical Instrument Society 2(1976):34-55.
- Maas, Martha, and Snyder, Jane McIntosh. Stringed Instruments of Ancient Greece. New Haven: Yale University Press, 1989.
- Maas, Martha. "Timotheus at Sparta: the nature of the crime". In Festschrift für Claude Palisca. Stuyvesant, N.Y.: Pendragon Press, 1991, pp. 37-52.
- Maas, Martha. "Polychordia and the Fourth-Century Greek Lyre". Journal of Musicology 10(1992):74-88.
- Macran, Henry S., ed., trans. and commentary. ΑΡΙΣΤΟΞΕΝΟΥ ΑΡΜΟΝΙΚΑ ΣΤΟΙΧΕΙΑ: The "Harmonics" of Aristoxenus. Oxford: Oxford University Press, 1902.
- Michaelides, Solon. The Music of Ancient Greece: An Encyclopaedia. London: Faber and Faber, 1978.
- Morgan, Lyvia. The Miniature Wall Paintings of Thera: A Study in Aegean Culture and Iconography. Cambridge: Cambridge University Press, 1988.

- Neubecker, Annemarie Jeannette. Altgriechische Musik: Eine Einführung. Darmstadt: Wissenschaftliche Buchgesellschaft, 1977.
- Nilsson, Martin P. The Minoan-Mycenean Religion and its Survival in Greek Religion. Lund: C. W. K. Gleerup, 1927.
- Omondi, Washington A. "The Lyre, 'Thum', in Luo Society: A Historical Sketch". Nilotic Studies 1(1982):127-144.
- Omondi, Washington A. "The Lyre in Luo Society: An Observation". African Musicology 1(1983):41-44.
- Omondi, Washington A. "Tuning of the Thum, the Luo Lyre: A Systematic Analysis". Selected Reports in Ethnomusicology 5(1984):263-281.
- Page, Denys L., ed. Poetae Melici Graeci. Oxford: Oxford University Press, 1962.
- Paquette, Daniel. L'Instrument de musique dans la céramique de la Grèce antique. Paris: Boccard, 1984.
- Phaklaris, P. "ΧΕΛΥΣ". Ἀρχαιολογικὸν Δελτίον 32(1982):218-233.
- Plumley, Gwendolen A. El Tanbur. Cambridge: Town and Gown Press, 1966.
- Pöhlmann, Egert. "Zwei Elgin-Leiern im British Museum?" In Musik in Antike und Neuzeit, pp. 319-331. Edited by Michael von Albrecht and Werner Schubert. Frankfurt am Main: Peter Lang, 1987.
- Renfrew, Colin. The Archaeology of Cult: The Sanctuary at Phylakopi. London: Thames and Hudson, 1985.
- Roberts, Helen H. Ancient Greek Stringed Instruments 700-200 B.C. University of Reading (PhD. diss.), 1974.
- Roberts, Helen H. "The Technique of Playing Ancient Greek Instruments of the Lyre Type". British Museum Yearbook 4(1980):43-76.
- Roberts, Helen. "Reconstructing the Greek Tortoise-Shell Lyre". World Archaeology 12(1981):303-312.
- Sachs, Curt. The History of Musical Instruments. New York: W. W. Norton and Company, 1940.

- Sachs, Curt. The Rise of Music in the Ancient World: East and West. New York: W. W. Norton and Company, 1943.
- Shelmerdine, Susan C. The Homeric Hymns. Newburyport, Massachusetts: Focus Books, 1995.
- Solomon, Jon. "Apollo and the Lyre". In Apollo: Origins and Influences, pp. 34-46. Edited by Jon Solomon. Tucson: University of Arizona Press, 1994.
- Vorreiter, Leopold. "The Swan-Neck Lyres of Minoan-Mycenean Culture". Galpin Society Journal 28(1975):93-97.
- West, M. L., ed. Iambi et Elegi Graeci: Ante Alexandrum Cantati, vol. I. Oxford: Oxford University Press, 1971.
- West, M. L. "Music in Archaic Greece". Actes vii^e Congr. FIEC 1(1981):213-220.
- West, M. L. Ancient Greek Music. Oxford: Oxford University Press, 1992.
- Winnington-Ingram, Reginald P. "The Pentatonic Tuning of the Greek Lyre: A Theory Examined". Classical Quarterly 6(1956):169-186.
- Winnington-Ingram, Reginald P. "Ancient Greek Music 1932-1957". Lustrum 3(1958):5-57.

IMAGE EVALUATION TEST TARGET (QA-3)



APPLIED IMAGE, Inc
1653 East Main Street
Rochester, NY 14609 USA
Phone: 716/482-0300
Fax: 716/288-5989

© 1993, Applied Image, Inc., All Rights Reserved