



The Instruments: (clockwise from the upper left) psithyrā , barrel drum, lyra, krotala cymbals, double idioglottic reed pipes, kithara, hourglass drum, harp, small syrinx monokalamos, large syrinx monokalamos, Egyptian trumpet, long-necked lute, three-holed vertical flute, aulos teleios, double reed pipes, two-holed whistle, sistrum, asymmetrical lyre, kymbala, bagpipe, trichordon, sistrum.

Music of the Ancient Sumerians, Egyptians & Greeks ensemble De Organographia new expanded edition



pandourion

Music of the Ancient Sumerians, Egyptians and Greeks

ensemble De Organographia

Gayle Stuwe Neuman: strings, voice, percussion

Philip Neuman: winds, strings, percussion, voice

Archeological discoveries in the Middle East over the last several decades have brought to light new musical documents that have greatly increased our understanding of ancient music. Texts that describe Babylonian musical notation have been uncovered at Ur and Ashur, and compositions written in this system have been found at Ugarit and Nippur. These discoveries have helped to define a clearer picture of the Sumero-Babylonian musical art, and, while information on the subject of Egyptian musical notation remains obscure by comparison, several verbal descriptions of instrumental performance and several extant musical documents have been identified. Fortunately, Greek compositions and music theory texts survive in relatively greater numbers and continue to be identified; recently transcribed musical documents in Greek notation found at Oxyrhynchus in Egypt are heard here for the first time. (The bulk of the extant Greek repertoire can be heard on De Organographia's "Music of the Ancient Greeks" PRCD1001.)

The repertoire on this recording, preserved mainly on clay tablets and papyri, dates from the 20th century B.C. to the third century A.D. It includes the musical instructions for the hymn "Lipit-Ištar, King of Justice" which is regarded as the world's oldest surviving example of musical notation. The selections range in varying states of preservation from the nearly perfect Hurrian Hymn 6 to tiny fragments of melody and text.

The instruments used here are either original (i.e., the pair of krotala cymbals) or copies of ancient instruments, built mainly by the performers, patterned after surviving museum originals and iconographical representations. The instruments are listed below with their descriptions.

Asymmetrical Lyre: nine-string box lyre patterned after a representation on an ivory panel from Megiddo, c. 1300 B.C., a type used throughout Egypt and Mesopotamia.

Aulos: reed pipe, with cylindrical bore and double reed, most often depicted as a pair of pipes played by a single musician. Contrary to a popularly held belief, the Greek aulos had a type of double reed, as described by Theophrastus (not single). One pipe played alone was sometimes called monaulos. Aristoxenus gives five sizes: parthenioi (maiden type), paidikoi (boy type), kitharisterioi (kithara-playing type), teleioi (complete), and hyperteleioi (extra complete), corresponding roughly to soprano, alto, tenor, baritone, and bass. Unfortunately, the word "aulos" is often mistranslated as "flute".

Bagpipe: bagpipe with 2 cylindrical bore pipes, known from 1st c. B.C. if not earlier.

Barrel drum: two-headed drum in barrel form.

Bell: terracotta and bronze bells after extant specimens.

Clappers: a pair of carved wooden blades struck against one another.

Conch: conch shell blown like a trumpet through an opening made in the top.

Double reed pipes: a thin pair of unattached aulos-like metal pipes sounded by double reeds after specimens found at Ur.

Double idioglottic reed pipes: a pair of attached reed pipes sounded by idioglottic single reeds (like the drone reeds of some bagpipes). A copy of an ancient Egyptian specimen similar to the modern *zummara*.

Echeia: bowls of earthenware or some other material made in a variety of sizes in order to produce an assortment of pitches when struck.

Frame Drum: a shallow drum with a skin head.

Goblet drum: a drum with a body of baked clay in goblet form with a skin head on the wide end.

Harp: angle harp after an Egyptian original now in the Louvre.

Hourglass drum: wooden shell in hourglass form with skin heads on both ends.

Kithara: ornate wooden lyre of professional Greek musicians. It was built from several shaped and hollowed out pieces of wood, with a deeply carved sound box and intricately carved arms. The arms support the crossbar to which the gut strings are attached.

Krotala: plain wooden clappers or clappers with small cymbals attached. The krotala cymbals used here are period specimens found at Alexandria, dating from c. 1st century B.C.

Kroupeza: a shoe with a clapper or *krotala* attached.

Kymbala: Greek cymbals with a bell-like sound.

Long-necked lute: three-string lute after an extant original found in the tomb of Harmosi at Thebes. Similar to the Greek pandoura and modern Turkish *saz*.

Lyra: Greek lyre, originally made from a tortoise shell and animal horns. Sometimes the shell was imitated in wood.

Menat: Egyptian string of faience beads attached to a handle.

Pandoura: long-necked Greek lute with three to five plucked strings.

Psithyrā: rattle shaped like a ladder made of metal with wooden rungs which were surrounded by coils of wire or metal rings.

Sistrum: rattle in hoop or stirrup form with a handle, pierced by loose metal rods.

Syrinx monokalamos: vertical flute resembling a single tube from a syrinx (panpipes) pierced with fingerholes.

Three-holed vertical flute: end-blown flute after an extant specimen, similar to the modern Egyptian *nay*.

Timbrel: frame drum with jingles or small cymbals.

Trichordon: small lute or pandoura with three strings.

Trumpet: short trumpet of copper, bronze, silver and/or gold; here patterned after the silver trumpet from the tomb of Tutankhamun.

Two-holed whistle: baked clay whistle with two fingerholes after an original found at Birs Nimrud, formerly in the Museum of the Royal Asiatic Society.

On certain selections the listener will hear instruments playing the notes of the melody simultaneously with other pitches, creating a simple form of harmony. Even though this repertoire is rightly considered monophonic, some surprising information regarding harmonization has come to light. Babylonian notation, conceived for the lyre, expresses a series of two-note intervals, each followed by a numeral indicating the number of times it is to be repeated. M. L. West proposed that the *second* pitch of each interval indicates the notes of the vocal melody (1). However, since some of the intervals used in succession have the same second pitch but different first pitches, the first pitch must indicate something. West has suggested that they consist “of accessory notes, perhaps especially notes used in launching the melody notes” (2).

As for Greek music, there is evidence from the 5th century B.C. on that instrumentalists would sometimes diverge from the vocal melody or play other notes in addition to it. This practice of diverging from the melody was described in detail by Plato in reference to teaching the kithara and lyra: “the kithara teacher and his student, for the reason of making the notes clear, must play the notes on the lyra in a manner that produces unison pitches with the notes of the song. Concerning the playing of different pitches and ornamentations of the lyra, when the tune of the strings differs from the composer’s melody, or when groups of small intervals are played with wide ones, or quick notes with slow notes, or high notes against low ones, in consonant intervals or octaves, and the way they introduce all manner of rhythmic embellishment to the notes of the lyra, these things should not be taught to students who must learn in three years all that is necessary in music.”(3) Apparently he thought it was important for students to learn the basics of rhythm, melody, mode, tuning, etc. before delving into more complex forms of accompaniment in imitation of professional musicians.

Pseudo-Plutarch in his description of the *Spondeiazon tropos* (4) lists three additional pitches that were played in accompaniment to certain notes of the six scale degrees of the melody. The application of these notes results in the following intervals: perfect fifth, major third, major sixth, minor third, and major second.

In spite of their age, a few of the musical works recorded here have survived in nearly perfect condition, namely selections 11, 21, 22, and 23. However, as one might expect with works of great antiquity, most of the extant pieces have missing passages. Most of the fragmentary pieces recorded here have been left in their original state (nos. 12-20, 24 and 25), while the others have been “repaired” with thematically similar melody to fill the voids. There is, of course, no perfect solution to a puzzle with pieces irretrievably lost. However, bridging the lacunae in the Oxyrhynchus fragments with plausible material is made feasible by using conventions found in the extant music, the set of rules for composing melody by Aristides Quintilianus, and the practice of making the melody agree with the tonal accents of the text. (For further information, see the notes for the cd “Music of the Ancient Greeks” PRCD1001.) If the listener wishes to distinguish the original from the added material, it would be helpful to consult a collection of modern transcriptions, notably: M.L. West, Ancient Greek Music (Oxford, 1992) and “Texts with Musical Notation” The Oxyrhynchus Papyri LXV (London, 1998).

We would like to thank Dr. M. L. West for bringing various resources to our attention, Christiane Ziegler and Catherine Bridonneau at the Louvre for providing us with information for the construction of the Egyptian harp, and Stephen Escher at the Music Library of Stanford University for his assistance.

Philip Neuman

Donald R. Singer: recording engineer, terracotta bell

Philip Neuman: additional melody, graphic design, cover photo

Cover photo: the 15th century B.C. gate at Megiddo, the ancient city site where the representation of the asymmetrical lyre was found.

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Greek Music from Egypt (from the Oxyrhynchus papyri)

1. Musical excerpts, Anonymous (2nd c. A.D.) POxy. 4461, column ii, lines 1-9. *trichordon, syrinx monokalamos, tympanon, psithyrā, kroupeza, krotala (small cymbals)*
2. Lament, Anon. (2nd or 3rd c. A.D.) POxy. 4465. *aulos paidikos, kithara, lyra*
3. Fragment 1, Anonymous (2nd c. A.D.) POxy. 4462. *trichordon, kithara, aulos parthenios, syrinx monokalamos, kroupeza, kymbala*
4. Pagan, Anonymous (3rd or 4th c. A.D.) POxy. 4466. *syrinx monokalamos, pandoura, lyra, kroupeza, krotala (small cymbals)*
5. Trochaic fragment, Anon. (3rd c. A.D.) POxy. 3162. *aulos teleios (double pipes)*
6. Four settings of a line from “Epitrepontes” by Menander, Anonymous (3rd c. A.D.) POxy. 3705. Four different examples of music for the same line of text are given. Translation: “Of what area? What memor-”. *voices, kithara, lyra, krotala (small cymbals)*
7. Excerpts mentioning Eros and Aphrodite, Anon. (2nd or 3rd c. A.D.) POxy. 4463. Fragments of three distinct compositions. *pandoura, bronze bell, psithyrā, tympanon; aulos hyperteleios, kithara; syrinx monokalamos, barrel drum, kroupeza*
8. Musical excerpt, Anonymous (3rd c. A.D.) POxy. 4467. *trichordon, pandoura, two kitharas*
9. Hypolydian excerpt, Anonymous (2nd or 3rd c. AD) POxy. 4464, lines 3-8. The plectrum is pressed on the string to obtain an accidental on the kithara. *kithara, echeia*
10. Fragment 3, Anonymous (3rd c. A.D.) POxy. 3161 verso fr. 3. *bagpipe, tympanon, timbrel, kroupeza, krotala (small cymbals), hand-clapping, finger-snapping*

Sumero-Babylonian Music

11. A zaluzi to the gods (Hurrian Hymn 6), Anonymous, copied by Ammurabi (c. 1225 B.C.) R.S. 15.30 + 49, 17.387. This nearly intact piece is preserved with the remains of 30 other

hymns in the Hurrian language on a series of baked clay tablets found at Ugarit. Modern transcription of the Babylonian musical notation on these tablets is made possible through the discovery of several period musical texts that explain the terms used in the tuning of the lyre through seven diatonic modes. Several modern authors have offered interpretations of these terms, but disagree on certain key points. We have followed M. L. West's melodic interpretation (5). The Babylonian system does not include notation for rhythm. Text underlay is problematic since the text and music are written separately. There is almost a 2:1 ratio between the number of syllables and the number of notes, so, if the melody is repeated, the match of syllables to notes is fairly good with a few minor adjustments; on the tablet between the text and music there is a double dividing line with signs indicating a repeat of some kind. Present understanding of the Hurrian language is limited, thus making a complete translation impossible; it seems to be a hymn to the goddess Nikkal, wife of the moon god, with a few translatable phrases including "you love them in your heart" and "born of you". *voice, long-necked lute, asymmetrical lyre, bronze bell*

12. Hurrian Hymns 19 and 23, Anonymous (c. 1225 B.C.) R.S. 19.149 and 18.282. Two fragmentary hymns with parts of four and six lines of notation respectively. Here the first pitch of each notated interval is played along with the melody note at the beginning of each series of repetitions (see above.) *asymmetrical lyre, long-necked lute, goblet drum, terracotta bell, clappers*

13. Hurrian Hymns 13 and 12, Urḫiya/Anon., copied by Ipšali (c. 1225 B.C.) R.S. 19.164d and 19.147. Hymn fragments with parts of two and four lines of notation respectively. *double reed pipes, goblet drum*

14. Hurrian Hymn 2, Anonymous (c. 1225 B.C.) Fragmentary hymn with parts of twelve lines of notation. *asymmetrical lyre, terracotta bell*

15. Hurrian Hymn 8, by Urḫiya (c. 1225 B.C.) R.S. 19.84. Fragmentary hymn to a goddess with parts of seven lines of musical notation. *three-holed vertical flute, asymmetrical lyre, two sistra, goblet drum*

16. Hurrian Hymn 5, by Puḫiya(na) (c. 1225 B.C.) R.S. 14.18. Fragmentary hymn with parts of five lines of notation. *asymmetrical lyre, goblet drum, terracotta bell.*

17. Hurrian Hymns 4, 21 and 22, Anonymous (c. 1225 B.C.) R.S. 14.15, 19.154 and 19.164c. *long-necked lute, harp, hourglass drum, clappers, bronze bell, sistrum*

18. Hurrian Hymns 7 and 10, Anonymous (c. 1225 B.C.) R.S. 19.155 and 19.148. Hymn 10 refers to the goddess Hebat. *asymmetrical lyre, hourglass drum*

19. Hurrian Hymns 16 and 30, Anonymous (c. 1225 B.C.) R.S. 19.164a and 19.164b. *conch, harp, two-holed whistle*

20. Musical Instructions for "Lipit-Ištar, King of Justice", Anonymous (c. 1950 B.C.) N. 3354. Preserved on a clay tablet from Nippur are the instructions for the musical accompaniment to the hymn "Lipit-Ištar, King of Justice, Wisdom, and Learning", the text of which survives in several sources. This hymn is thought to date from the time of Lipit-Ištar's reign, making it the world's oldest surviving example of musical notation. Given are the starting note, two intervals that may indicate predominate notes of sections, and the mode (6). *asymmetrical lyre*

Egyptian Music

21. Trumpet call, Anonymous, after the description given by Plutarch in *Moralia* (1st c. A.D.) Plutarch describes the manner in which the Egyptian trumpet was played: "But for them (the people of Busiris) even to hear a trumpet is a sin, because they think it sounds like the bray of an ass" and "The people of Busiris and Lycopolis do not use trumpets at all, because they make a sound like an ass; and altogether they regard the ass as an unclean animal". This instrument is capable of producing two effective pitches (approximately f# and c) as well as a less stable fundamental (b flat). Since there is no mouthpiece in the modern sense, higher harmonics are extremely difficult to produce. Assuming that no more than two harmonics were sounded in normal use, Plutarch's remarks give us a basis for this call, taking the order of pitches and rhythm from the natural bray of the ass. *Egyptian trumpet*

22. Isis sistrum rhythm, Anonymous, after the description given by Lucius Apuleius in *Metamorphoses* (2nd c. A.D.) Apuleius described the rhythm performed on the sistrum at the apparition of the goddess Isis as a "triple shake of the arm". Hans Hickmann (7) interpreted

this rhythm as three equal notes followed by a rest in order to separate each group of three. The participation of trumpeters is also described. *sistrum, 3 Egyptian trumpets*

23. Theban banquet scene, Anonymous, from a tomb painting found at Thebes (c. 14th c. B.C.) The painting depicts a scene of four rows of seated guests preparing to attend a banquet with guests on the left of each row displaying chironomy signs and instrumentalists on the right. The signs, indicated by the various inclinations of the guests' arms, apparently documents the rise and fall of the melody being played by the musicians (9). Rhythm and mode are conjectural; the scale used here is taken from an extant three-holed Egyptian vertical flute in playable condition. *long-necked lute, three-holed vertical flute, harp, hourglass drum, clappers, sistrum*

24. Harp piece [A], Anonymous (7th or 6th c. B.C.) Brooklyn Museum 58.34. This example of what is apparently musical notation survives on an Egyptian statuette now in the Brooklyn Museum (8). It consists of two figures, a harpist and what may be a musical director or chironomist (whose right arm is unfortunately missing): a tablet in front of the second figure displays a series of horizontal lines with short vertical strokes in a variety of positions relative to the lines. This would seem to be a graphic representation of the various inclinations of the arm of the chironomist indicating the rise and fall of the melody being played by the harpist (9). We have interpreted here the horizontal line as representing the lowest pitch of the melody; the height of a given stroke above the line indicates its relative intervallic distance above the lowest note. The smallest meaningful differences should indicate scale steps, since the melodic movement in the bulk of the ancient repertoire is predominantly stepwise. Rhythm and mode are unknown; the scale used here is taken from an extant three-holed Egyptian vertical flute in playable condition. *harp*

25. Harp piece [B], Anonymous (7th or 6th c. B.C.) The same piece as above (with somewhat altered tuning in agreement with the reed pipes), performed on a variety of common Egyptian instruments. *3 barrel drums, frame drum, clappers, double idioglottic reed pipes, harp, three-holed vertical flute, sistrum, menat, kymbala*

1. M.L. West, "The Babylonian Musical Notation and the Hurrian Melodic Texts" *Music and Letters* 75 (1993-4).
2. as in no. 1, p. 176.
3. Laws 812d-e.
4. De Musica 1137b-d.
5. as in no. 1, pp. 175-7.
6. See Anne Draffkorn Kilmer, "Nippur at the Centennial" Philadelphia, 1992, pp. 101-12.
7. See Hans Hickmann, "Rythme, mètre et mesure..." *Acta Musicologica* 32, 1960, pp. 11-22.
8. See Hans Hickmann, *Acta Musicologica* 33, 1961, pp. 15-19.
9. See Hans Hickmann, "Musicologie pharaonique" *Collection d'études musicologiques* 34, 1956, p.109f.

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Ensemble De Organographia, formed in 1978, is a period instrument ensemble dedicated to performing and recording lesser known works from several different eras. Other cds by Ensemble De Organographia include:

"Music of the Ancient Greeks" (PRCD1001), which contains most of the ancient Greek repertoire on copies of period instruments and voices.

"French Music of the 14th Century: Machaut & the Following Generation" (PRCD1007) Secular music of the Ars Nova and Ars Subtilior periods on voices and instruments.

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