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GULEZYAN MANUSCRIPTS: POSSIBLE REMNANTS OF ANCIENT COPTIC MUSICAL NOTATION? *

Marian Robertson

The Gulezyan manuscripts consist of six vellum leaves varying in size from 12 1/4 inches to 15 inches in height, and from 13 1/4 inches to 15 3/4 inches in width. As part of the Gulezyan family papers and other treasured heirlooms going back many generations, they were brought to America in 1896 by Hadj Sarkis Gulezyan and his brother, H. Aram Gulezyan.¹ Wrapped in paper yellowed with age and forming an odd-shaped package, they later aroused the curiosity of H. Aram's son, the younger H. Aram Gulezyan, who determined to discover "what they were and what they meant."² For at least fourteen years,³ he assiduously submitted them to dozens of the most highly respected Egyptologists, Copticists, Arabists, and musicologists of mid-twentieth century America, Europe, and Egypt, a veritable "Who's Who" collection of scholars. After careful study, these experts offered diverse interpretations of their contents, and various datings, ranging from the fourth to seventh centuries.⁴ No one doubted their authenticity or importance. Finally, in 1952, these leaves left the family and were sold by Parke-Bernet Galleries.⁵ Because the sale was made through an agent to an unidentified buyer, Mr. Gulezyan has never yet been able to determine their present whereabouts.⁶

Description: Across the top of leaves one through four there are human figures carefully depicted in profile, coiffed in black, dressed in rose-colored robes, kneeling, and holding something in outstretched hands.⁷ It has been suggested that they may represent choristers, chanting monks, or a procession of priests.⁸ Leaves one, four, and five bear inscriptions in Coptic, Copto-Greek, and Demotic; and it is these inscriptions--especially those on leaves one and five--which suggested to many of the experts enlisted by Mr. Gulezyan that music may somehow be involved.⁹ However, it is the circles of various colors and sizes covering these leaves that constitute their most distinctive and prevalent feature. Each circle is painted in one of twelve different colors, which include those of the spectrum, plus black, gray, and three shades of brown.¹⁰ Ranging in diameter from one inch to 3/16 of an

* This article is based on materials sent to the author by H. Aram Gulezyan: reports, colored pictures, replicas, and copies of letters from the scholars who personally examined his manuscripts some fifty years ago.

inch,¹¹ meticulously drawn, and arranged in horizontal rows across the pages, they seem to form some kind of well-ordered communication.¹²

Because leaf one specifically refers to music, this discussion will focus on it, with a brief mention of leaf five.

Leaf One (see illustration 1): Appearing at top center like a title are the words Symphōnia Pneumatikos written in Coptic script (ⲥⲩⲙⲫⲱⲛⲓⲁ ⲡⲛⲉⲩⲙⲁⲁⲓⲕⲟⲥ). One notes that the "t" of Greek Pneumatikos is transcribed as a "d", and that this adjective does not take the usual ending required by Greek grammar.¹³ Since Pneumatikos is of course derived from Pneuma, meaning "wind, breath, breath of life, spirit,"¹⁴ one may propose as a likely translation "Spiritual Symphony," with the caveat, however, that "Symphony" in no way refers to our modern term, either in formal structure or instrumentation. For although Greek Symphōnia basically means "agreeing together in sound," musically it may imply a concord of only two sounds, no more.¹⁵

Just below and to the left of this phrase are the words Hagios Hymnodos (ⲁⲓⲟⲥ ⲩⲙⲱⲟⲥ) written in Greek script complete with breathing marks and accents.¹⁶ Hagios means "holy, sacred," and Hymnōdos refers to "singing of hymns or odes." Greek Hymnōdos is technically an adjective, but since this term regularly appears in Coptic liturgical texts as a noun signifying "church singer, chanter," it is logical to suggest as a translation for this phrase "Holy, or Sacred Hymn-singer."¹⁷

Next on this same leaf, we find four Coptic words strategically placed in relation to the circles. At the head of the first horizontal row of circles, directly above the first circle, we see the term Hets (ⲛⲉⲧⲥ), which may be translated as "Beginning."¹⁸ Then at lower right, beneath the last horizontal row of circles, we find (e)Pjōk (ⲡⲓⲱⲕ), meaning "the End," or "Completion."¹⁹ At the far left, above two vertical rows of circles, is the term Shosht (ⲥⲱⲥⲧ), which may be translated as "Key."²⁰ Lastly, beneath these same circles, we see the term Sente (ⲥⲉⲛⲧⲉ), which may be translated as "Foundation," or, perhaps in this context, "Pattern."²¹

Since the twelve colors used throughout all six leaves appear in these two columns of circles, and since this vertical arrangement of them is distinctive from the rest, it would be plausible to assume that they do represent a sort of "Key" to be used in interpreting all the other colored circles in these leaves.

Leaf Five (see illustration 2): On leaf five there are other inscriptions and circles for which some scholars have found further allusions to music. At the top, just left of center, is the term Sēou (ⲥⲱⲟⲩ), which has the basic meaning of "time," but in the sense of "Season," i.e., with reference to passage of time, or a unit of time, rather than a point in time.²² Sēou has therefore been related to the

idea of rhythm, which does depend on relative duration of sound within given units of time.²³ Following Seou, and stretching across the top of the leaf towards right, there is a series of circles progressively diminishing in diameter. The first circle which is the largest, contains four smaller ones, each equal to the other in size. Unlike the rest of the circles, these are not colored.²⁴ There are also two signs at top left, which are likely Demotic.²⁵

Interpretation: After studying these manuscripts, some musicologists suggested that they represented an ancient, perhaps isolated form of musical notation. Obviously influenced by the terms Symphōnia and Hymnōdos, they went on to interpret Shosht not only as "Key," but also as "Mode," or "Scale."²⁶ The deliberate arrangement of the circles into two columns of seven and five reminded them of the diatonic (seven-tone) scale, with five notes added to round out the chromatic (twelve-tone) scale. Moreover, they remembered that ancient music theorists had tried to calculate a definite relationship between colors and sounds,²⁷ and they knew that the ancient Egyptians did indeed have instruments capable of reproducing the twelve tones of a chromatic scale.²⁸ Therefore, it was not farfetched for them to propose that these twelve colors might depict "a literal implementation of chromatic, (i.e., "colored") music, and that the manuscripts represented tunes corresponding to the chromatic scale or at least containing many chromatic elements."²⁹

Taking these ideas one step further, Mme. Sina Lichtmann and her colleagues at the Roerich Museum in New York devised a code from the columns of leaf one and the row of circles atop leaf five, and proceeded to assign each circle a pitch according to its color and a note value according to its size.³⁰ They then transcribed the circles into our Western system of notation, and determined that the leaves contained two separate hymns.³¹

However, not all scholars felt that these six leaves represented music, but averred rather that they depicted astronomical phenomena such as the motions and locations of the stars and planets. Dr. Eric Verner, in particular--while agreeing that the documents had a theoretical connection to music--proposed that leaf one's "Key" of seven plus five circles symbolized the twelve signs of the zodiac, and that these leaves were "a graphic representation of Ptolemy's 'Harmonia Mundi' [Music of the Spheres]", i.e., the theory that each sphere occupied by the heavenly bodies encircling the earth produced a sound.³² Dr. Verner also saw in these manuscripts "an attempt to co-ordinate Ptolemaic cosmological-musical ideas with Egyptian-Christian conceptions of the Gnostic period."³³

Dr. Verner's suggestion concerning astronomical phenomena was subsequently reinforced (but with some modifications) by the discovery of another vellum leaf quite apart from Mr. Gulezyan's original six (see

illustration 3).³⁴ This document displays one column of seven plus five circles similar in size and color to those of the "Key" just described. Opposite each circle we see, transliterated into Coptic script, the Arabic names of seven zodiac constellations and five planets, those recognized and listed in the order established by the Ptolemaic system. Also, along the right-hand side, we see two columns of cryptic signs.³⁵

Mr. Gulezyan has confirmed that the circles of this leaf display the same order of colors seen in the two columns (the "Key") of leaf one.³⁶ Given these parallels, it does seem logical to suggest that the circles of both leaf one and this later leaf could symbolize the same constellations and planets.

Do such astronomical references then negate the possibility of musical notation for the six Gulezyan manuscripts? Not necessarily. A close scrutiny of these leaves shows that the circles depict something beyond the constellations and planets whose names they may bear, for they are grouped together in ways that are astronomically impossible according to the Ptolemaic or any other system.³⁷ Nor could the terms Hets ("Beginning") and (e)Piŭk ("End"), placed as they are at the head and tail-end of the circles of leaf one, apply to the endless revolutions of these constellations and planets.

Comments: First of all, let us recall that Symphōnia and Hymnōdos do indeed refer to music. Next, let it be noted that the eminent European musicologist, Denise Jordan-Hemmerdinger, has found Copto-Greek papi in the Bibliothèque Nationale that contain dots scattered throughout the texts, dots which she believes to be a system of musical notation, and which may be related to the circles in the Gulezyan manuscripts.³⁸ Further, let us recall that as the ancient theorists sought relationships between sound, color, and the celestial bodies, they also equated the seven Ptolemaic spheres to the strings of the Lyra (λύρα), a term equally applied to the ancient lyre and lute, the latter more specifically called the Kithara.³⁹ Let it also be noted that the ancients organized their musical scales or modes (tonoi) to accord with the structure and tuning of the Kithara.⁴⁰

With the foregoing in mind, let us add the following:

1. The ancients defined a hymn (Hymnos) as a song of praise that was "properly sung to the accompaniment of the Kithara."⁴¹

2. The Kithara usually had seven strings, sometimes five, and sometimes as many as twelve.⁴² However, we have yet to determine how these strings were named and if they were color-coded for pitch.⁴³

3. The Coptic version of Psalm 150, likely among the oldest of Coptic songs, specifically names the Kithara as one of the instruments to be used in praising the Lord, which indicates, at the very least, that the Kithara was known to the Copts.⁴⁴

4. A Kithara dating from the seventh or eighth century was found at Dayr Apa Jeremiah near Saqqara, which indicates that this instrument could have existed concurrently with the Gulezyan manuscripts.⁴⁵

Therefore, in conclusion, one may ask: Could these leaves perhaps represent notation for an instrumental accompaniment to "Hymn-singing"-- which may or may not have been Christian--, with the vocalists singing the texts and melodies by rote and by ear, as was (and is) so often the case?⁴⁶

In order to solve the mystery of the Gulezyan manuscripts, Dr. Werner proposed "a long and profound study of the colors, seasons, celestial bodies, and musical modes."⁴⁷ We concur, and would also suggest herewith "a long and profound study" of that ancient stringed instrument, the Kithara. Such endeavor may well give us the "Key" yet needed to unlock the secrets of these beautiful and unique documents.

NOTES:

1. These brothers, architects and builders in Asia Minor and Egypt, fled the Near East with their families to escape the Armenian massacres of 1896. "Archaeologists Enthused by Musical Discovery," The Musician, p. 1 (henceforth referred to as Musician). Copy, with neither volume number nor date, sent to the author by Mr. Gulezyan, July 17, 1990.

2. Idem.

3. Aram Gulezyan, letter to this author, August 27, 1990.

4. A chemical analysis made by Dr. Arthur E. Hill, which showed the colors to be mineral pigments and not dyes, suggested a date as early as the fourth century, a date also offered by the pioneering Coptist, George Sobhy Bey (Musician, p. 2). Upon examining the Coptic transcriptions, Dr. Georg Steindorff suggested a tentative dating of the fifth or sixth century (printed brochure prepared by Dr. Ludlow Bull of the New York Metropolitan Museum et al., and sent to this author by Mr. Gulezyan, July 17, 1990, p. 6 (henceforth referred to as Brochure)). This date was also proposed by Dr. Eric Werner following his interpretation of the contents (Eric Werner, letter to Mr. Gulezyan, May 11, 1949 (henceforth referred to as "May 11")). Dr. Ludlow Bull and his colleagues dated these leaves from the fifth to seventh century (Brochure, p. 3).

5. This date of sale is mentioned on a printed page numbered "32," sent to the author by Mr. Gulezyan, July 17, 1990 (henceforth referred to as "Page 32").

6. Aram Gulezyan, letter to this author dated August 8, 1990 (henceforth referred to as "Letter, August 8").

7. These descriptions are based on color photos sent to this author by Mr. Gulezyan, August 9, 1990 (henceforth referred to as "Photos, August 9"); and on white-on-black diagrams sent to this author by Mr. Gulezyan, July 17, 1990 (henceforth referred to as "Diagrams, July 17"); and on printed

data sent by Mr. Gulexian to this author, September 14, 1990, p. 2 (henceforth referred to as "Data, September 14").

8. "Data, September 14," p. 2, and Musician, p. 4.

Some have conjectured that these figures were placed so as to indicate the top of the page, especially on leaves two and three, which have nothing else to show direction (Brochure, p. 9).

9. Leaves two, three, and six are filled with circles but contain no inscriptions.

10. The colors are: pink, red, orange, yellow, green, navy blue, light blue, tan, reddish-brown, dark brown, black, and gray. "Photos, Aug. 9," and Musician, p. 1.

11. These dimensions are noted in Brochure, p. 3.

12. These descriptions are taken from "Photos, August 9," and "Diagrams, July 17."

13. The proper Greek declension would of course have been Pneumatikē (in agreement with the noun Symphōnia). The use of Pneumatikos does follow the practice of taking the masculine singular form when a Greek noun or adjective appears as a loan word in Coptic.

14. Pneumatikos is opposed to Sōmatikos, "for or of the body." (throughout this article, Greek definitions are taken from H.G. Liddell and R. Scott, A Greek-English Lexicon [New York: Harper & Brothers, 1849]; henceforth referred to as G-EL).

15. These sounds were restricted to the intervals of a fourth, fifth, or the octave. Symphōnia was sometimes considered akin to Harmonia, which is basically "a fitting, a joining together," and is to be distinguished from Hōmophōnia, which in music indicated the sameness of pitch, i.e., a unison.

16. It is to be noted that the accent over the ultima of Hymnōdos is a grave rather than the customary acute, and the iota subscript is missing from the omega. All the experts who saw the original leaf confirmed this grave accent as well as the rather obscure delta in Hymnōdos.

17. The correct Greek term for "Hymn-singer" is Hymnētēs: the noun "Hymn-singing," i.e., "the singing of a hymn," is provided by Hymnodia. Hymnodos is transcribed in Coptic as ⲫⲓⲙⲛⲟⲁⲟⲥ, and translated into Arabic as al-Murattil; for example, see al-Abṣulmudiyyah al-Kiyahkiyyah (Cairo: The Patriarchate, 1982), p. 368.

18. Derived from ⲭⲉ (χḗ), this particular form is identified by Verner Vycichl as SB (V. Vycichl, Dictionnaire Étymologique de la Langue Copte [Leuven, 1983] p. 285b; henceforth referred to as DELG). W. E. Crum adds that it is often found in the verbal form ⲭⲉⲧⲉⲥ (ⲭⲉⲧⲉⲥ), meaning "to begin, to make a beginning" (W.E. Crum, A Coptic Dictionary [Oxford, 1939, reprinted in 1962] pp. 640b-642; henceforth referred to as ACD). For an example, see Acts 10:37 (ⲫⲓⲟⲩⲙ ⲉⲛⲧⲉ ⲧⲓⲃⲓⲁⲧⲏⲕⲉ ⲉⲛⲃⲉⲣⲓ) [Cairo: The Patriarchate, 1934]; henceforth referred to as JDB).

19. Both Crum and Vycichl identify this form, which is preceded by the Coptic definite article "p" (π), as S (Crum, ACD, p. 716a4b; Vycichl, DELC, p. 325a). For an example, see JDB, Matt. 26:58, and John 19:28 and 30.

20. Both Crum and Vycichl identify this form as SB. Basically meaning "a hindrance, impediment," it may be extended to mean "to fasten with a key, act as a key, shut" (Crum, ACD, p. 608b; Vycichl, DELC, p. 276a).

21. Both Crum and Vycichl identify this form as S (Crum, ACD, p. 345B; Vycichl, DELC, p. 191b). See JDB, I Cor. 3:10, 11, and 12, where the Bohairic Senti (caw) appears.

22. Crum identifies this form as A, whereas Vycichl identifies it as B (Crum, ACD, p. 367b; Vycichl, DELC, p. 200a). Crum also relates the meaning of this word to both Greek Khronos, i.e. "a while, period, season," and Kairos, which may connote "the right measure, proportion." Sobhy translated it as "time or length" (Musician, p. 2).

23. This relation to rhythm was developed notably by Mme. Sina Lichtmann and her colleagues at the Roerich Museum (Brochure, p. 9).

24. "Diagrams, July 17," and Brochure, p. 9.

25. Dr. Hugh Nibley has identified these signs as: Dd medw (Jed medu), "Recite as follows," and mm, a sign close to the ancient hieroglyph meaning "pause, remain, hold." He further states that Jed medu is often found at the beginning of a text (Hugh Nibley, Interview with the author, August 21, 1990).

26. Musician, p. 3.

27. This idea was propounded by Aristotle although it likely did not originate with him.

28. Dr. Hans Hickmann reconstructed Egyptian harps and wind instruments of the Late Dynastic Period that could reproduce twelve different tones (See M. Robertson et al, "Music," Coptic Encyclopedia [New York, 1991] vol. 6, pp. 1738-1741; henceforth referred to as "Music").

29. Prof. Jacques Handschin, as quoted in Brochure, p. 11.

The basic meaning of Khroma is, of course, "color." In Greek music, Khroma indicated a modification of the simplest, i.e., diatonic genus (a scale made up of whole and half-steps); Khromata indicated even further modifications of the three genera: diatonic, chromatic, and enharmonic. The Greek chromatic genus differed from our modern chromatic scale of half-steps. For details, see Gustave Reese, Music in the Middle Ages with an Introduction on the Music of Ancient Times (New York, 1940), pp. 23-24; henceforth referred to as MMA).

30. For details of their methodology see Brochure, pp. 8-9, and Musician, pp. 1-3.

31. Leaves one through four contain the first hymn, and leaves five and six contain the second.

32. Werner, "May 11," p. 1.

Dr. Werner refers of course to the celebrated Alexandrian mathematician, astronomer and geographer, Klaudios Ptolemy (second century A.D.). It is well known that many ancient Greek theorists--basing their thinking on Egyptian, and perhaps Babylonian traditions--closely associated music with mathematics and astronomy. Philo of Alexandria (born ca. A.D. 20), for example, beheld the heavens as the archetype of all musical instruments, whose purpose was to "provide the accompaniments for hymns of praise, with the seven planets [spheres] being comparable to the strings of the lyre" (Werner, as quoted in Brochure, p. 11). According to Prof. Wallace Rimington of Queens College, the ancients considered that each note in the diatonic scale represented one of the seven planets [spheres] ("Data, September 14").

33. Werner, Idem., p. 2

On the basis of this interpretation of the contents, Dr. Werner proposed to date the Gulezyan manuscripts from the fifth or sixth century A.D. (Werner, "May 11," p. 2).

34. This leaf was discovered in the Cairo Museum. Letter to the author from Mr. Gulezyan, September 13, 1992.

35. This description comes from material found in "Data, September 14," and from a printed page bearing a photograph of this leaf labeled "Number 127," sent to the author by Mr. Gulezyan, July 17, 1990 (henceforth referred to as "Number 127"); and from a letter to Mr. Gulezyan from Pahor Labib dated March 27, 1956.

The names of the planets and signs of the zodiac were identified and deciphered by Yassā 'Abd al-Masīḥ from photos sent to Pahor Labib by Mr. Gulezyan, June 19, 1953. For details, see Appendix.

It is perhaps well to note that the Ptolemaic order of the spheres, radiating outward from the earth, consisted of but five planets: Mercury, Venus, Mars, Jupiter, and Saturn; the Moon, placed between the earth and Mercury, and the Sun, placed between Venus and Mars, made up the other two spheres.

36. This confirmation comes from colored photographs of "Number 127" sent to the author by Mr. Gulezyan, September 13, 1992.

37. For example, circles representing constellations are placed "in conjunction" with one another, or are put side by side in an order that does not occur in the heavens.

38. Denise Jordan-Hennerdinger, "Nouveaux fragments musicaux sur papyrus," Studies in Eastern Chant, vol 4 (1979), pp. 81f.

39. For equating the Ptolemaic spheres to the strings of the Lyra, see note 32. Perhaps it should be noted that the Kithara is the ancestor of today's guitar.

40. See Reese, MMA, pp. 24-44; and Muḥammad. . . Abū Naṣr al-Fārābī, Kitāb al-Mūsīqī al-Kabīr, passim (French translation by R. d'Eranger, La Musique Arabe, vols. 1,11 (Paris, 1930-35)).

The theoretical organization of the Tonoi and the practical tuning of the Kithara were likely interdependent, one upon the other.

41. Reese, MMA, p. 16; and Liddell and Scott, G-EL, p. 761.

42. Reese, MMA, pp. 12-13, and pp. 24-25.

43. It does seem logical to assume that the Kithara strings could have been differentiated by color as are those of the harp (both ancient and modern).

44. For the antiquity of this melody, see M. Robertson et al, "Music," pp. 1725-1726. For the text see M. Robertson, "Transcription of Psalm 150," in The Music of Egypt, A Resource File for International Education, prepared by J.W. Parker (Salt Lake City, Utah: Utah State Office of Education, undated), Unit III, p. 2.

45. There are examples of this instrument at the Coptic Museum in Old Cairo and at the Metropolitan Museum of Art in New York. For further details, see M. Robertson et al, "Music," pp. 1738-1741.

46. In a communication with Mr. Gulezyan, Dr. Curt Sachs admitted this possibility, but did not offer "an assured affirmative". (Gulezyan, "Letter, September 14").

47. Werner, "May 11," p. 2.

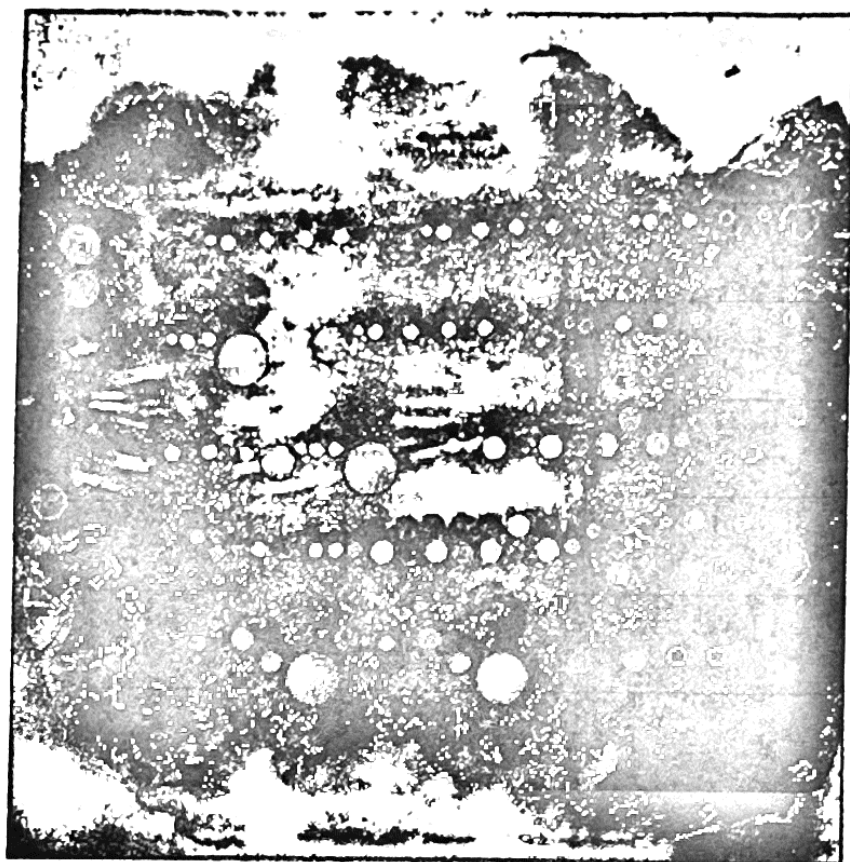


Illustration #1. Gulezian Leaf One, showing human figures, inscriptions, and circles, with the "Key" at the left.

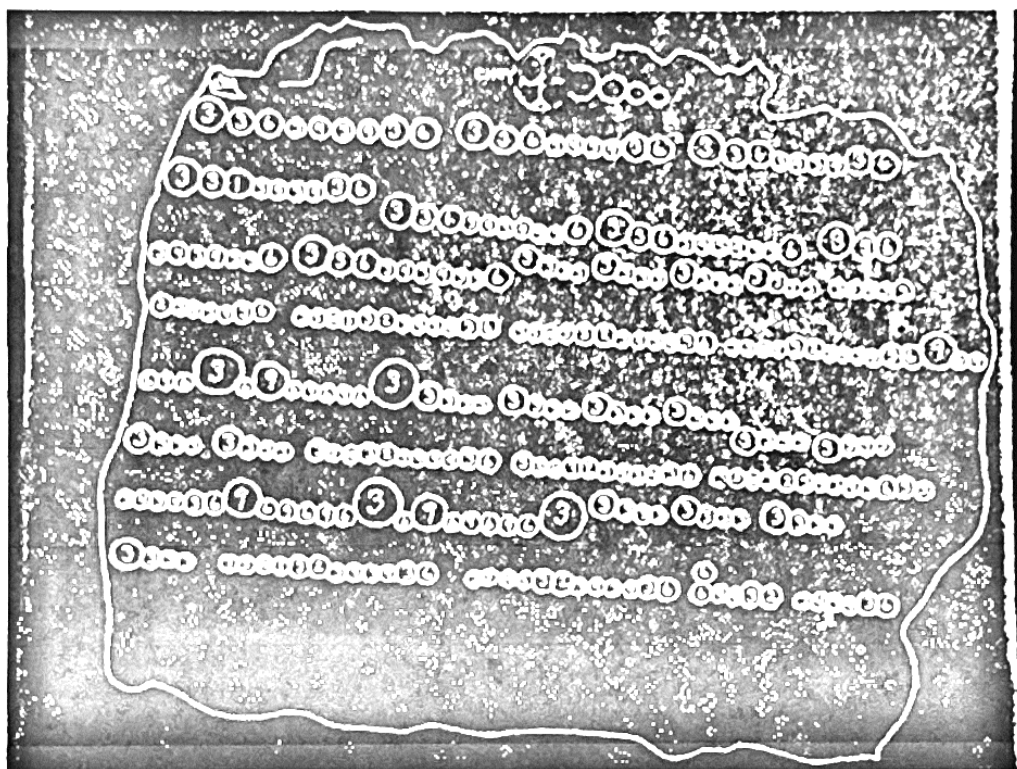


Illustration #2. Gulezian Leaf Five, showing inscription Sēon, followed by row of circles progressively diminishing in diameter.

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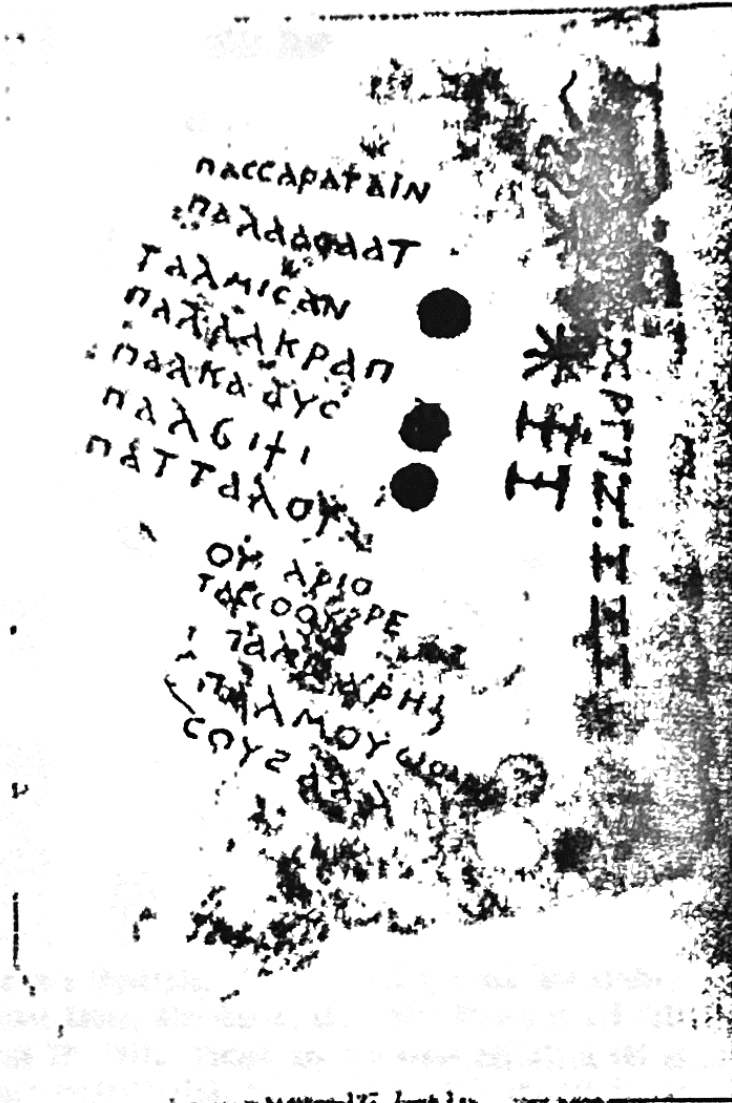


Illustration 13. "Number 127" showing circles similar to the "Key" of Gulezyan Leaf One, accompanied by Arabic names written in Coptic, and cryptic signs at the far right.

Published as in the
 Cairo Museum, number 127.

**APPENDIX: Identification of Zodiac Constellations and Planets of
Leaf "No. 127."**

	<u>Arabic Name</u>	<u>Coptic Name</u>
Cancer:	al-Saraṭān	passaratain ¹
Leo:	al-Asad	palaasaat
Libra:	al-Mīzān	talmisan ²
Scorpio:	al-'Aqrab	palaakrap
Sagittarius:	al-Qa'us	palkaaus
Capricorn:	al-Jadī	palciti
Aquarius:	al-Dalū	pattalon
Mercury:	al-'Uṭārīd	outharith
Venus:	al-Zuhara	tassoouhre
Mars:	al-Mirrikh	palmarēh
Jupiter:	al-Mushtarī	palmouskhari
Saturn:	al-Zuḥal	souhaal

¹These names were identified and deciphered by Yassā 'Abd al-Nasīb from photos sent to Pahor Labib, Director of the Coptic Museum in Old Cairo, by Mr. Gulexian, June 19, 1953. Except for the names outharith and souhaal (Mercury and Saturn respectively), the Coptic definite article "p" (ⲡ) or "t" (ⲧ) precedes the Arabic definite article "al-" plus the noun.

In light of these Arabic names, this leaf must be dated after the Arab conquest of Egypt (641/642 A.D.). No one knows if the original six leaves date from this same period or earlier.

²Note that the constellation Virgo is omitted from this list.