SPIRALLY FLUTED COLUMNS IN GREECE

(PLATES 45-53)

INTRODUCTION [1]

ONE of the most neglected creations of the ancient stone-cutter is the spirally fluted column. That will be evident from the examples presented here. Although nearly all are from well-known sites or near-by areas, they have seldom attracted enough attention even to be mentioned in excavation reports. Victor Chapot, enumerating examples in 1907, was unable to mention a single example from Greece,[2] although at least some of those listed below must have been known at that time. It is true that they are more often than not sporadic, or even completely isolated, finds which cannot be connected with specific building complexes. Taken as a whole group, however, they are far from being devoid of interest in themselves. Their mere existence is important for the larger question of the origin, meaning and widespread use of the twisted column in the ancient world; one has only to think of the so-called Asiatic sarcophagi.[3] These larger connections appear to be complicated and must be dealt with eventually on a broader scale;[4] when the question is re-opened, however, it must take into account monuments and evidence of the sort to be discussed below.

[1] It is a pleasure to thank many organizations and persons—too numerous for all to be named individually— for their assistance in the preparation of this study. It was written during a sojourn at the American School of Classical Studies in Athens where I held Fulbright and Guggenheim grants. I am indebted to the Ephors of the districts concerned in the catalogue for permission to study and publish various pieces, to Dr. Ohly of the German Institute and Professor Homer A. Thompson of the Agora Excavations for permission to publish the Kerameikos and Agora examples respectively. Dr. P. Topping of the Gennadeion gave me bibliographical assistance; Professor Orlandos of the University of Athens and Mr. A. H. S. Megaw, Director of Antiquities, Cyprus, read the manuscript and offered many valuable suggestions. The majority of the photographs were taken by Linda Benson, who also gave invaluable assistance in preparing the manuscript, but in addition I wish gratefully to acknowledge the contributions of Miss Alison Frantz (Agora photographs), Miss Virginia Grace (Pl. 45, f), Prof. D. A. Amyx (Pl. 45, e), Dr. G. Rizza (Pl. 49, b-d) and Dr. H. W. Catling (Pl. 51, a).

[2] *La colonne torse et le décor en hélice dans l'art antique*, Paris, 1907. He mentions (pp. 119-120), however, coin representations which point to the existence in Samos and Thrace of temples with this type of column.

[3] Cf. C. R. Morey, *The Sarcophagus of Claudia Antonia Sabina and the Asiatic Sarcophagi: Sardis* V, Pt. I, Princeton, 1924; M. Lawrence, "Additional Asiatic Sarcophagi," *M.A.A.R.*, XX, 1951, pp. 115 ff.; "Season Sarcophagi of Architectural Type," *A.J.A.*, LXII, 1958, pp. 273 ff.

[4] I am dealing with the background of the spiral column in Mycenaean and Early Greek art in another place. K. Schefold has kindly called my attention to a note by C. Picard on conches and columns in *Rev. Arch.*, XIV, 1939, p. 79 (cf. also *Orient, Hellas und Rom*, Bern, 1949, p. 202).

General Chronological Considerations

The first and thorniest problem in dealing with our examples is that of chronology. Many of them are too worn and fragmentary to offer much basis for classification. Chronological departure points are at best few and hard to come by. The present *terminus ante quem* is the destruction of Pompeii as regards actual monuments,[5] but excavations will some day surely push this back considerably;[6] in fact, it may prove that there was never really any interruption in the existence of such columns from prehistoric times. In any case, it is unthinkable that there was ever any interruption in the knowledge that they had existed.

The lower limit is more difficult to define. No indications seem to lead necessarily beyond about the seventh or eighth century of the present era as the date by association of any of our fragments. This is rather surprising as one might expect on the general basis of ecclesiastical conservatism to find the practice of placing this type of column in new churches to continue almost indefinitely. At the very least we know that already existing columns were long visible; the sixth century Silver Ciborium of Santa Sophia in Constantinople continued in use until the thirteenth century[7] and the ciborium of San Apollinare Classe (Pl. 52, f) still exists. However, it cannot be claimed that all the evidence has been collected; the present collection of material, though undoubtedly representative, does not pretend to exhaust the resources even of Greece in this type of monument. The northern provinces, particularly Thrace and Macedonia, and certain islands are not represented, owing to the fact that it has not been possible for me to look there, but other examples (some of which might be of interest to the chronological problem) must be awaiting discovery in these places. Also a full con-

[5] See *A.J.A.*, LX, 1956, p. 387, note 18. The column referred to is actually in Stabiae which was destroyed in the same eruption as Pompeii, A.D. 79. It has been published by L. d'Orsi in *Gli Scavi di Stabia* (*A Cura del Comitato per gli Scavi di Stabia*) Naples, no date, pl. 5.

[6] Cf. Chapot, *op. cit.*, pp. 85 ff. They are represented in the fanciful constructions of Pompeian wall-painting, Fourth Style (cf. K. Schefold, *Pompejanische Malerei*, Basel, 1952, p. 176, pl. 37; H. G. Beyen, *Die Pompejanische Wanddekoration*, Haag, 1938, fig. 44). It is most interesting that plain columns appearing to be garlanded and sometimes flanking a doorway also occur in Roman painting (cf. Beyen, figs. 22, a-b; 58; 60). Cf. also the relief from the Haterii Tomb, best illustration, G. M. A. Hanfmann, *The Season Sarcophagus in Dumbarton Oaks*, II, Cambridge, Mass., 1951, fig. 130. I point out the connection of garlanded and spiral columns in earlier times in the paper referred to above. Apparently garlanded columns occur on a black-figured lekythos by the Amasis Painter described by D. von Bothmer in *Gnomon*, XXIX, 1957, p. 538; photograph and mention of same (not showing columns) in *Bul. Met. Mus.*, XV, 1956, p. 54. A representation which must undoubtedly be considered a spirally fluted column appears on an Apulian krater (*Délos*, XVIII, *Mobilier Délien*, p. 54, fig. 77, 1 from *C.V.A.*, Lecce, 1, IVd r, pl. 8:2, 3, 5). Moreover, the existence of Hellenistic copies of Minoan seals is supplementary evidence that the subjects of Minoan seals (which include spirally fluted columns) were directly known and admired in the classical world.

[7] E. Antoniadou, Ἔκφρασις τῆς Ἁγίας Σοφίας, II, Athens, 1908, p. 42.

sideration of the monumental evidence from the Latin world is wanting but cannot be undertaken here. The following remarks are not therefore intended to be definitive but rather to illuminate as much as possible at the present stage the monuments actually known to be in Greece.

Composite Spirally Fluted Columns

Perhaps the most interesting and certainly the best-documented type of column is a composite of vertical linear fluting on its lower part and spiral fluting on its upper part. The vertical " channels " have slightly arched upper and lower terminations in a manner obviously derived from the Ionic column, but the actual channels, instead of being hollowed out are left convex or flat, giving a distinctly linear surface effect as opposed to the usual effect of alternating volume and space.[8]

The earliest known example of this occurs at Stabiae[9] (Pl. 52, b). I take the column from the fountain house of the Sultan Moustapha Mosque in Rhodes (Pl. 45, e, f) to be the latest specimen of those collected here (I shall discuss its date in some detail below). Somewhere between the Stabiae and the Rhodes columns, undoubtedly closer to the latter, will lie Athens A, B, K (Pl. 45, a-d) and Corinth A. Athens A and K are sufficiently similar in design to suggest contemporaneity and they may even have belonged to the same building complex, for which the near-by basilicas of the Asklepieion or the Olympieion—both belonging roughly to about the mid-fifth century A.D.—might be considered as candidates.[10] In any case it seems quite certain that both columns were used in Christian buildings because of the cuttings and holes for a railing or balustrade such as one finds in early Christian churches[11] (Pl. 53, e). The same feature occurs on the mosque column. Such cuttings and holes probably were made after the column was installed in place and cannot be considered *per se* as a sign of re-use of non-Christian elements. A contemporary column can be as easily mutilated as an old one.

There is, moreover, a certain unpretentious simplicity about all these examples

[8] Cf. e. g., fluting of Pl. 52, d with examples of conventional Ionic: W. B. Dinsmoor, *The Architecture of Ancient Greece*, London, 1950, pl. XLIX; A. W. Lawrence, *Greek Architecture*, 1957, pl. 96, B. The latter author refers to the type of fluting under discussion here as " cannelations, separated by fillets " (cf. p. 224, pl. 112, B). " Cannelated " is described by the *Shorter Oxford English Dictionary* as archaic, meaning " fluted." I use the term " filled fluting " suggested by A. H. S. Megaw.

[9] *Illustrated London News*, Nov. 6, 1954, p. 802, fig. 2 (from which our Pl. 52, b). Reproduced with permission of Professor D'Orsi.

[10] Cf. J. N. Travlos, Ἀρχ. Ἐφ., 1939-1941, p. 64; *idem*, Πρακτικά, 1949, pp. 36 ff.; cf. *J.H.S.*, LXXI, 1951, p. 235. There is, of course, always the possibility of the basilica in the Parthenon itself! Cf. *Ath. Mitt.*, XLIII-XLIV, 1938-1939, pp. 127 ff., esp. 134 ff.

[11] Ἀρχ. Ἐφ., 1939-1941, p. 43, fig. 6 (from which our Pl. 53, e); Sir Bannister Fletcher, *A History of Architecture on the Comparative Method*, London, 1946, p. 258, L.

which sets them off considerably from the more sophisticated articulation of the Stabiae column and brings them into the Early Christian sphere. The quite Baroque contrast between the elegant linear stylization of the vertical fluting and the deep-cut shadow-catching spiral fluting of the Roman example has been eliminated on the surface of Athens A and the elements of design merely engraved. Athens B goes perhaps even farther in this direction and the mosque column adds a certain plump provinciality to it.

Before turning to a closer inspection of the last-mentioned piece, I should like to draw attention to another type of composite column represented in the propylon [12] of the Olympieion in Athens. The one remaining bit of evidence for the reconstruction is a handsome pedestal (Pl. 52, d) supporting a beautifully moulded column base [13] and the lower part of a column displaying exactly the filled fluting which has been discussed above. It is worth noting that such fluting, as a lower element, was combined with ordinary concave fluting [14] as an upper element no doubt more frequently than with spiral fluting. Although the Olympieion columns, in harmony with the porch columns of the Library of Hadrian (Pl. 52, e), no doubt should be restored with the former type, it cannot be maintained that spiral fluting of itself is entirely unsuitable for a propylon, since the propylon of the possibly contemporary Temple of Aphrodite (Pl. 53, d) at Aphrodisias in Caria is characterized by spiral fluting.[15] In any case, the Olympieion fragment provides a local Greek example of filled fluting in Hadrianic times [16] and by its appearance a confirmation of the assumption that the composite (spiral) columns mentioned above as Christian are not re-used classical columns. They are far in conception from the elegant monumentality of the propylon fragment.

[12] For plan cf. *J.H.S.*, VIII, 1887, p. 272; F. Versakis, Ὁ Περίβολος τοῦ Ὀλυμπιείου ἐπὶ Ἁδριανοῦ, Athens, 1910, p. 13, fig. 7, where a matching propylon to the west is postulated; Πρακτικά, 1949, p. 27, fig. 2. The existing pedestal is that farthest to the west. I have noted the following indications for the propylon column. Pres. H. 130 cm., with moulded base 152 cm., Distance between centers of arrisses 7.5 cm., D. *ca.* 70 cm., H. of pedestal 62 cm., 24 flutes. Pentelic marble.

[13] This is literally a duplicate of the pedestal, base and lower column from the Library of Hadrian as shown by Stuart and Revett, *The Antiquities of Athens*, London, 1762, I, Ch. 5, pl. VII (from which our Pl. 52, e). It is an easy assumption that the same architect or architectural firm was involved in both structures. Cf. also Versakis, *op. cit.*, p. 4. Notice that the library columns have Corinthian capitals.

[14] Lawrence, *loc. cit.*; Fletcher, *op. cit.*, p. 225, A, S. Sabina, Rome; obviously re-used columns (cf. also p. 228).

[15] *Antiquities of Ionia published by the Society of Dilettanti*, III, London, 1840, Ch. 2, pl. 23 (from which our Pl. 53, d). For dating cf. Dinsmoor, *op. cit.*, p. 277. For general views of Aphrodisias see Freya Stark, *Ionia: A Quest*, New York, 1954, pp. 209 ff. (reference from A. H. S. Megaw).

[16] The propylon is a purely Hadrianic structure; cf. W. Judeich, *Topographie von Athen*², Munich, 1931, p. 384. Date of consecration of the Zeus Temple is A.D. 131/2; P. Graindor, *Athènes sous Hadrian*, Cairo, 1934, pp. 41, 49. The same author (p. 220) calls the propylon Ionic; cf. note 12 above.

Returning now to the column in Rhodes which seems to be the latest of the series, we must consider its dating more closely. I became convinced on inspecting the fountain house [17] that all its six columns, with their capitals and bases, originated in one building, presumably a Christian church. The capitals and bases, then, should yield some chronological connections. Although the capital (Pl. 45, e) looks and undoubtedly is Early Byzantine,[18] really close architectural parallels are difficult if not impossible to find. I assume that the double hooked U's on each face of the block are to be explained as extremely stylized versions of the acanthus motif of the Corinthian capital in the same sense that this process can be seen to have taken place on certain capitals in Salona.[19] The closest example (Kautzsch no. 26) is not doubled and does not have the hooked terminations. Nevertheless, the fact that it is dated more or less securely in the sixth century after Christ may have some indicative value for the date of our example. A silver bowl (paten),[20] perhaps of the fifth century after Christ, from Riha in Syria, with a representation of the communion of the Apostles, shows two spirally fluted columns in the background with highly stylized double U ornaments (?) which are very much run together. It is, of course, doubtful that much weight should be given to such a schematic representation in interpreting real architectural forms. In the same category as evidence belongs the representation of a capital occurring in a wall-painting in a Macedonian church [21] of the eleventh century (Pl. 53, a). Nevertheless, it may be noted that in both these cases the capitals are represented with spiral columns.

A somewhat similar U motif (never doubled, as far as I know) also occurs fairly frequently, for example in the ikonostasis of Ayios Stratagos in Boularioi, dated according to R. Traquair [22] to the eleventh or twelfth centuries. I should not like to suggest, however, that this is by any means the earliest occurrence of the ornament. The fact that it has volutes relates it to the motif on the Rhodes capital.[23] The

[17] See A. Gabriel, *La cité de Rhodes 1310-1522, architecture civile et réligieuse*, Paris, 1923, fig. 112, e (Sultan Moustapha Djami) and pp. 210 ff. where modern mosques, but not this one specifically, are discussed. The general statement is made that the cupola of the fountain house of all these rests on ancient columns. I do not suppose that there is any hope of associating such columns with any specific ancient (or Byzantine) monument.

[18] For the shape of the block, cf. Πρακτικά, 1914, p. 237, fig. 9, γ in a group dated fifth to seventh centuries.

[19] R. Kautzsch, *Kapitellstudien*, Berlin, 1936, pl. 3, 23-26. See pp. 18 ff. for the date.

[20] W. Neuss, *Die Kunst der Alten Christen*, Augsberg, 1926, p. 110, fig. 138. See also H. Pierce and R. Tylor, *L'art byzantin*, Paris, 1934, II, No. 144. This has some resemblance to the grapevine capital of St. Mark's (A. Orlandos, Ἡ Ξυλόστεγος Παλαιοχριστιανικὴ Βασιλική, Athens, 1952, p. 333, fig. 291).

[21] D. E. Evangelidi, Ἡ Παναγία τῶν Χαλκέων (Ἔκδοση Ἑταιρείας τῶν Φίλων τῆς Βυζαντινῆς Μακεδονίας), Θεσσαλονίκη, 1954, pl. 12 (from which our Pl. 53, a); cf. p. 10.

[22] " The Churches of Western Mani," *B.S.A.*, XV, 1908-1909, pp. 177 ff., esp. 211, pl. 16.

[23] Cf. R. L. Scranton, *Corinth*, XVI, *Mediaeval Architecture*, Princeton, 1957, p. 107, nos. 29-31,

tendency for it to enclose rosettes or other floral motifs [24] may show a lingering recollection of the origin of the motif in the acanthus foliage of the Corinthian capital.

If the capital of the mosque column defies close placement because of its originality, so also does the base. A comparison with the convenient collection of profiles prepared by Orlandos [25] would suggest that it be ranged with those Early Christian examples which have most departed from the classical norm (his fig. 219), or even beyond these in time, depending on what role pure provincialism played in its formation. On the whole, if it is justifiable to date the Rhodes column on the basis of the capital and base associated with it, one can state that it could belong to the fifth or sixth century but that it would be safer to allow for a somewhat wider range upward in time.

A number of monuments furnish evidence that the composite column was popular in the fifth and sixth centuries. The most spectacular of these was the Silver Ciborium of Santa Sophia in Constantinople; [26] in addition there are several minor monuments to be mentioned below. San Apollinare in Classe, which is contemporary with Santa Sophia, also has an impressive ciborium [27] of which, however, at least the canopy must be dated not many years before A.D. 810, on the basis of an inscription. The possibility has to be weighed, nevertheless, that the actual columns may have belonged to an earlier ciborium [28] in San Apollinare or some other church. In these columns the proportion of convex fluting to spiral fluting is unequal, the latter being taller. This agrees with Athens A and probably the mosque column (discounting its truncation) and bears out Orlandos' restoration of the Santa Sophia ciborium columns.[29] If this arrangement seems to be the rule for ciborium columns, there is nevertheless evidence that an equal distribution of upper and lower portions prevailed in other contexts. An ivory diptych of Monza (Pl. 52, a) assigned to the fifth century [30] shows a Muse

35-36, etc.; strictly speaking, not capitals but tops of posts which presumably appeared below the capitals. Scranton calls this ornament an inverted omega. A. Orlandos (Ἡ Ὀμορφη Ἐκκλησία, Athens, 1921, p. 13) more cautiously refers to it as lyre-shaped.

[24] Cf. Ἀρχεῖον, II, 1936, p. 26, fig. 21; Μονὴ Βλαχερνῶν, second half of thirteenth century.

[25] Ξυλόστεγος Βασιλική, pp. 226 ff., figs. 212-221.

[26] See note 7. It is clear, of course, that this type of ciborium existed before the one in Santa Sophia; G. Soteriou, Χριστιανικὴ καὶ Βυζαντινὴ Ἀρχαιολογία, I, Athens, 1942, p. 179, fig. 101.

[27] H. Holtzinger, *Die Baustile*: 3. Band, Heft 1: *Altchristliche und Byzantinische Baukunst*, Leipzig, 1909, p. 75, fig. 77; M. Mazzotti, *La Basilica di Sant'Apollinare in Classe*, Città del Vaticano, 1954, pp. 215 ff., fig. 78. Date of San Apollinare in Classe, A.D. 549 (cf. W. Lowrie, *Art in the Early Church*, New York, 1947, p. 266).

[28] Mazzotti, *op. cit.*, p. 217, mentions a tradition of an " argenteo " ciborium (in connection with Pope John V) in San Apollinare in Classe. He thinks that the present ciborium was actually made for San Eleucadio and transferred to San Apollinare in Classe around A.D. 1000. If my suggestion about the columns is right then this might refer only to the canopy.

[29] Ξυλόστεγος Βασιλική, p. 476, fig. 437; cf. also p. 473, fig. 434 (not identified in the text). For another restoration of the silver ciborium cf. Antoniadou, *op. cit.*, p. 114, fig. 259.

[30] K. Schefold, *Die Bildnisse der antiken Dichter, Redner und Denker*, Basel, 1943, pp. 184-185 with further references; also Pierce and Tylor, *op. cit.*, p. 75, pl. 34 (from which our Pl. 52, a).

playing a lyre which is resting on a projecting low column of this type, hardly higher than a table leg. This is presumably inspired by the familiar ancient motif of a figure leaning on a column.[31] Again, a relief from Baouit (Pl. 52, c) assigned to the sixth century has a very similar column in company with another composite column of more bizarre type.[32] It is perhaps too much to postulate a conscious distinction in proportions between strictly sacral and more decorative applications of the composite column. More likely it was a matter of convenience. A mausoleum [33] at Souma Djazzia in Algeria, built probably in the fourth to sixth centuries of our era,[34] provides a prototype in stone for the equal composite column. Rather fanciful variations of this scheme, not to be taken seriously as imitations of real architecture, occur in manuscript illuminations.[35]

Ordinary Spirally Fluted Columns

There are a few points of reference for the use and dating of ordinary spirally fluted columns. They were used for pulpits, as evidenced by the basilica of Nea Anchialos,[36] between Almiros and Volos, the sculpture of which has been specifically dated to about the mid-fifth century. One might expect them to have been used for ciboria as well, but I know of no actual example of this, and fragments of spiral fluting found in connection with Christian buildings may in some cases be the upper portions of composite columns (as those in Preveza from Nikopolis which I have not been able to control, and perhaps many in the miscellaneous groups of the catalogue appended to this article). They were employed in balusters (*τέμπλα*). Their use in supporting the galleries, perhaps even the lower arcades, of basilicas is suggested by the balustrades of Al Mafjar.[37]

[31] Cf. e.g., Chapot, figs. 127, 150.

[32] Pierce and Tylor, *op. cit.*, pp. 103 ff., pl. 100, b (from which our Pl. 52, c). Notice that the upper portion of the lefthand column displays the so-called Treasury of Atreus pattern. Cf. also pl. 155, ivory, Aix-la-Chapelle. There is a similar example in Thasos, *Ἀρχεῖον*, VII, 1951, p. 25, of pre-Justinian date.

[33] S. Gsell, *Monuments antiques de l'Algérie*, II, Paris, 1901, p. 94 and inscription *C.I.L.*, VIII, 17654.

[34] Chapot, p. 133. There is no reason why the magistrate apparently referred to in the inscription could not have been a Christian.

[35] K. Weitzmann, *Illustrations in Roll and Codex* (*Studies in Manuscript Illumination*, II) Princeton, 1947, fig. 95. For date (ninth to twelfth centuries) cf. p. 73. Also *J. Warb. Inst.*, XVIII, 1955, pls. 2, e, f; 3, d.

[36] *Ἐφ. Ἀρχ.*, 1929, p. 24, fig. 26; reconstruction, p. 87, fig. 107, pl. Δ. Cf. also Sotiriou, *op. cit.*, p. 211 and Orlandos, *Ξυλόστεγος Βασιλική*, p. 551.

[37] *Q.D.A.P.*, XIII, 1947-1948, p. 32; for eighth century date cf. *Q.D.A.P.*, X-XI, 1940, p. 47, n. 1. The column in the gallery of S. Lorenzo fuori le mura (F. W. Deichmann, *Frühchristliche Kirchen in Rom*, Basel, 1948, pl. 65, right) may be a re-used Roman piece. Cf. also S. Agnese f.l.m. (A. Porter, *Medieval Architecture*, New York, 1909, I, p. 58, fig. 38).

In connection with the architectural use of the ordinary columns I wish to discuss a few technical matters. The specimen from Nea Anchialos exhibits a curious feature which I have noticed occasionally elsewhere (Group 2), viz., a kind of pared-away head. A possible explanation for this might be that such a head was intended to be inserted in a socket prepared in the capital. A considerable number of other specimens (Group 3) have a small square or rounded sinking in the worked end which is simply a continuation of the classical usage in connection with drums.[38] All the spirally fluted and composite examples I have examined are, or appear to have belonged to, monolithic columns (except, of course, the archaic poros fragments from the Acropolis of Athens).

Ordinary spirally fluted columns, unless they are found with a capital, are very difficult to date. The only general criterion I am prepared to offer is that most monumental columns were probably connected with Roman theatres, as illustrated by a group I have isolated in Cyprus.[39] I therefore consider Group 7—pieces with a diameter of thirty centimeters or more—to belong to the Roman period. Even this is not an infallible criterion, as is shown by the fact that a column with a diameter of about fifty centimeters was employed to support the apse arch of St. Phokas in Syria,[40] dated A.D. 491/2 (Pl. 53, f). This could, of course, be a re-used Roman column (a point which only a local investigation of the matter could decide), but there can at least be little doubt that its windblown capital is contemporary with the construction of the church.[41] On the whole, however, it seems fair enough to conclude that a sense for the monumental possibilities of spirally fluted columns was strongest in the early imperial period, as is evident in Roman theatre façades,[42] in temple façades, of which an example (Pl. 53, g) confirming the many coin illustrations has been found at Lagon in Pamphylia,[43] and in propyla, such as that of Aphrodisias (Pl. 53, d). In Christian architecture, the type occurs seldom in a façade[44] (the only example I know is Pl. 53, h) but frequently in subordinate structures in the interiors of churches, less frequently as interior structural supports, and then one is inclined to suspect a re-use of ancient columns.

[38] Cf. Dinsmoor, *op. cit.*, pp. 171 ff.

[39] *A.J.A.*, LX, 1956, pp. 385-387.

[40] H. C. Butler, *Early Churches in Syria*, Princeton, 1929, Pt. I, pp. 69, 239, fig. 263 (from which our Pl. 53, f).

[41] Cf. Kautzsch, *op. cit.*, pp. 140-142 for a characterization of the earlier classical type of windblown capital.

[42] Cf. *A.J.A.*, LX, 1956, p. 386.

[43] *Annuario*, III, 1921, pp. 135-141, fig. 69 (from which our Pl. 53, g). Third century (?). For coin illustrations cf. Chapot, figs. 129-149.

[44] A representation of S. Lorenzo shows four spirally fluted columns in a façade of six; A. Lenoir, *Architecture monastique*, I, Paris, 1852 (*Collection de documents inédits sur l'histoire de France, troisième série: archéologie*), p. 116 (from which our Pl. 53, h). Such columns flanking church portals occur occasionally; cf. *ibid.*, II and III, 1856, p. 186, fig. 417, "Porte Romane à Patras."

The foregoing remarks seem especially applicable to our Group 6, possibly also to Group 5. Group 4, however, stands somewhat apart from the others. These columns generally have an elaborately moulded base and taper strongly. They are certainly to be explained as columnar supports for lustral basins, lamps or something similar, as Deonna supposed in the case of the examples found at Delos. The other specimens lack an upper termination but presumably, on the analogy of the Delian complete example, they did not have real capitals. For this reason, I have excluded the attractive colonnette Eleusis A (Pl. 47, e, f) from this catagory. It may be a little later than a capital from Latomou monastery assigned to the end of the fifth century.[45] The acanthus leaves of Eleusis A cling more rigidly to the central cylinder, but I take this to be the result of the fact that capital and column were carved from a single block, a not uncommon practice in subordinate Byzantine structures. It might be well to remark here that the spirally fluted column type seldom escaped being combined with the universally popular Corinthian capital (or some derivative of it).[46] The already untectonic spiral column was thus heightened by combination with a stylized symbol of the plant world into a particularly exotic creation which satisfied a human need for fantasy in a world which was becoming increasingly hieratical in government and religion.

Conclusion

The attempt has been made, on the basis of factors which necessarily remain somewhat tentative, to place in the light of historical consideration the numerous examples collected and described in the appendices. The use of spirally fluted columns and a composite variety related to composite Ionic columns is attested in Greece from Roman imperial times to the sixth century after Christ and possibly later. In the majority of cases association with ecclesiastical architecture or appointments is indicated or can reasonably be resumed. Regional studies like the present provide a basis for investigating iconographical and symbolic aspects of the spirally fluted column.

APPENDIX

A description, and in some cases a brief discussion, of each piece is presented in Section A on the basis of geographical distribution, with find-spots arranged alphabetically. This is followed in Section B by a grouping undertaken on the basis of types or, when this is not possible, by any available characteristics, including size. This is not the sort of categorization which can be called

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[45] Δελτ., 1929, p. 154, fig. 14, p. 178. Cf. also Fletcher, *op. cit.*, p. 231, D, for a similar but unidentified Early Christian capital.

[46] Ionic capitals are represented in the façade of S. Lorenzo (see note 43) and sometimes on grave monuments (in miniature scale); W. Altmann, *Römische Grabältare der Kaiserzeit*, Berlin, 1905, p. 171, fig. 138; p. 214, fig. 173 (from which our Pl. 53, b). The Roman Tuscan capital is combined with spirally fluted columns occasionally, *ibid.*, p. 156, fig. 127 (from which our Pl. 53, c). Another example of Ionic capitals; G. Mansuelli, *Galleria degli Uffizi*, I, Rome, 1958, no. 226.

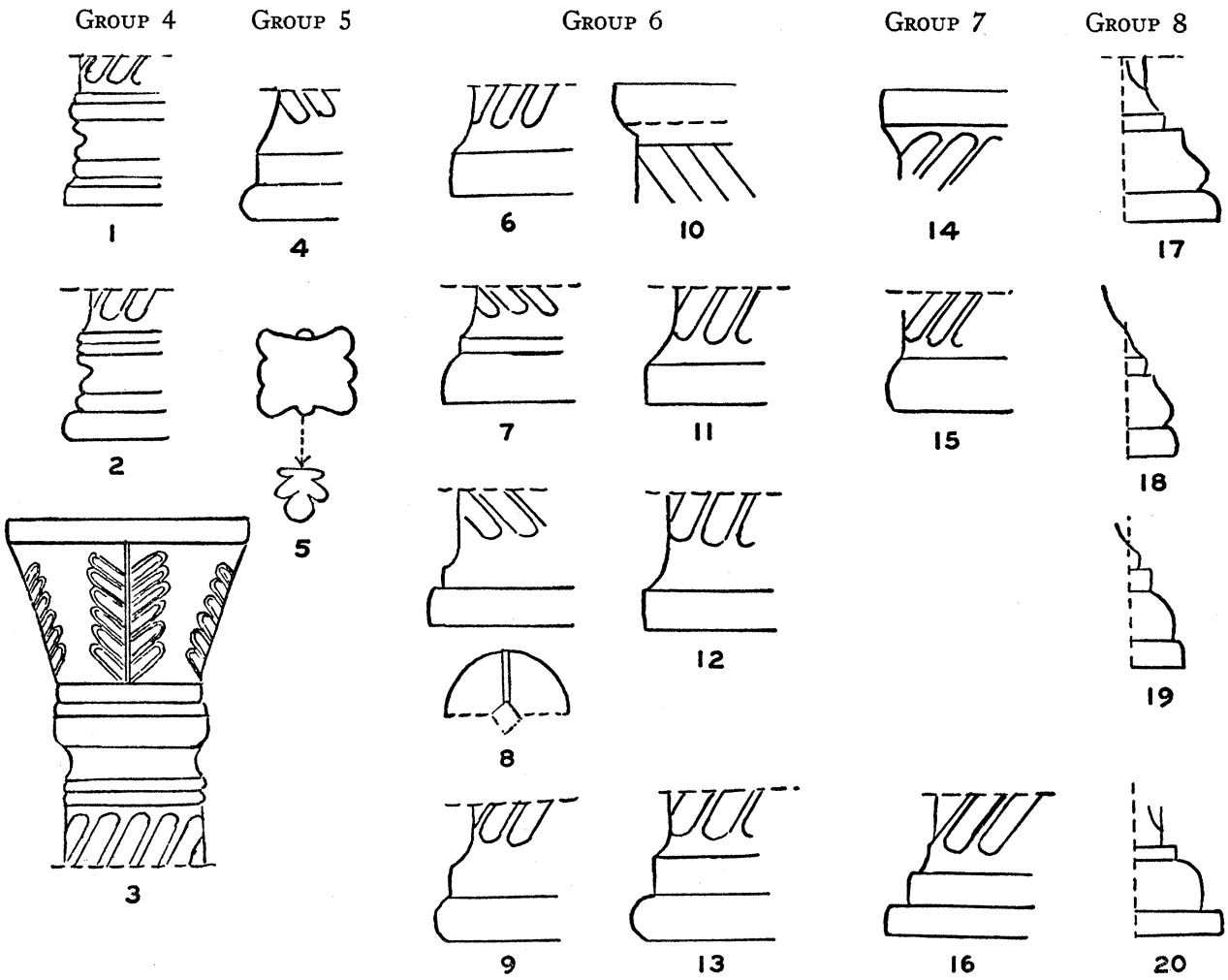

FIG. A (not to scale)

GROUP 4: 1. Eleusis B. 2. Epidauros. 3. Athens J.

GROUP 5: 4. Athens C 2. 5. Eleusis A, Top view and Detail of Palmette.

GROUP 6: 6. Athens H. 7. Athens I. 8. Ayious Deka B. 9. Kos D. 10. Athens M. 11. Kos E. 12. Kos F. 13. Samos.

GROUP 7: 14. Corinth F. 15. Kos C. 16. Naxos.

GROUP 8: 17. Athens G. 18. Piraeus A. 19. Piraeus B. 20. Piraeus C.

ideal; I cannot, however, at the present time offer anything better, for it seems the only basis on which to make a few general observations on possible chronology and use, as can be seen from the text. Some pieces are listed more than once under this system. A supplement on columns in Cyprus is offered in Section C.

Abbreviations used: L.—length; D.—diameter (of actual column, not worked end unless otherwise stated); Dist.—distance between centers of arrisses; Depth—depth of fluting measured from arrisses; H.—height of worked end measured to fluting; Rht.—righthand twists; Lht.—Lefthand twists. All measurements given in centimeters unless otherwise noted.

Section A: Catalogue of Monuments

Athens A 1-2 (Acropolis). Outside museum on north revetment. Two fragments, one seemingly broken at both ends (see below) with spiral fluting only (Pl. 45, c), the other certainly broken at both ends, with spiral and vertical fluting separated by a band of lightly incised continuous horizontal chevrons 5 cm. wide (Pl. 45, d). The two fragments, which have a diameter of 26.5 cm. throughout and are of the same marble, are obviously from the same monument, if not column. It was not feasible to test for joins. The marble is very light, almost white, but with gray streaks and weathers to a dark gray; in general, reminiscent of the coarser variety of Parian.

A 1: L. 88, Dist. 4.5, Depth *ca.* 0.3. One end may possibly represent a badly mutilated worked end but D. still normal. Rht. 10.

A 2: L. 73, Dist. 8.5 (filled fluting). Small hole 3.5 (D.), 4 cm. deep, bored in spiral fluting. Rht. 10.

One or both of these must be the column referred to by Belger, *Arch. Anz.*, 1895, cols. 15-16.

Athens B (Acropolis). Outside walls, on left side of path leading up to new entrance. Entire lower portion (filled fluting) preserved plus a small portion of spiral fluting (Pl. 45, b). Coarse white micaceous marble weathering to dark gray. Small hole bored in spiral fluting. Very flat arrisses in spiral fluting apparently influenced by extremely linear treatment of vertical fluting.

L. 108 (vertical fluting alone, 73), D. 30, Dist. 4.5 (spiral), 9 (vertical), H. 6, Lht. 12 (?), 10(?) vertical flutes (both estimated because piece could not be moved).

Athens C 1-2 (Acropolis). On terrace inside new entrance. Two fragments of dark gray limestone of which one preserves a worked end (Fig. A, 4; Pl. 47, a). It is quite possible that both belonged to the same monument.

C 1: L. 28, D. 16, Dist. 2.5, Depth *ca.* 0.3, Lht. 16.

C 2: L. 42, D. 14.5, Dist. 2, Depth *ca.* 0.3, H. 8, Rht. 16.

Athens D (Agora A 2718). Part(?) of column buried upright in ground on first terrace below Church of the Holy Apostles. 58 cm. exposed. Extremely battered and weathered. Rather coarse-grained light gray stone with dark gray mottling and much mica. An approximate diameter obtainable in only one spot because of extensive damage to one side, 21.4. Dist. 3.5. Arrisses extremely eroded. Number of flutes could only be estimated at 10 or 12 (Lht).

Athens E (Agora A 2707). Fragment in very bad condition, fluting nearly obliterated; traces of a worked end approximately 6 cm. high which seems to have been chipped away (Pl. 46, b). Light to dark gray flaky stone with some mica, in consistency between marble and limestone.

L. 37, D. 15 (may have tapered slightly), Dist. 2.5, Lht. 16.

Athens F 1-4 (Agora A 2708 a-b; A 2709 a-b). Fragments from various collections of

architectural fragments in the Agora. F 1-2 (A 2708 a-b) are badly eroded fragments of a very coarse granular marble, crumbly and with conspicuous quartz, weathering to a slightly yellowish gray. Very possibly from the same monument.

F 1 (Pl. 47, b): L. 20, D. 10.5 and 12 resp., Dist. 2.5, Depth (est.) 0.3, Lht. 7.

F 2 (Pl. 47, c): L. 27, D. 15 and 16 resp., Dist. *ca.* 3, Depth (est.) 0.2, Lht. 12.

F 3-4 are slightly better preserved, though jaggedly broken, fragments of dark gray micaceous stone in consistency between limestone and marble, and exhibiting large lumps of carbonized material. Probably from the same monument.

F 3 (Pl. 47, d): L. 36, D. 16.5 and 18 resp., Dist. *ca.* 3, Depth *ca.* 0.2, Lht. 18.

F 4 (Pl. 48, a): L. 26.8, D. 22, Depth *ca.* 0.2, Lht. 20.

In general, cf. *Annuario*, IV-V, 1921-1922, p. 35, fig. 2, in which an unidentified fragment of spirally fluted column from Ayia Pyriotissa is visible.

ATHENS G (Agora A 2710). Lower part of well-head with vertical wavy fluting and moulded base (Fig. A, 17; Pl. 51, f). Dead-white, fine-grained micaceous marble.

L. 21.5, Pres. circumference of base 26, Dist. 3.5, H. 9.8, Width of wall (to arrisses) 4.5.

ATHENS H (Kerameikos). Outside apotheke at corner of Kerameikos. Fragment preserving one worked end (Fig. A, 6; Pl. 48, b). Very coarse-grained gray to blue-gray marble weathering to a rather light gray-blue; in fair condition.

L. 88, D. 26.5 (apparently no taper), Dist. 3, Depth 0.5, H. 9, Lht. 20.

ATHENS I (Kerameikos). Location as foregoing. Fragment with one worked end (Fig. A, 7; Pl. 48, b). Blue-gray stone of rather poor, coarse quality, in consistency between limestone and marble, weathering to a bituminous appearance. Badly eroded on one side.

L. 58, D. 22.5 (apparently no taper), Dist. 2.5, Depth 0.3, H. 6, Rht. 20.

ATHENS J (Ναὸς Μεταμορφώσεως, Plaka, at foot of Acropolis). In a kind of alcove built onto the righthand side of the church, in which there are also other small Byzantine architectural fragments, one sees a small part of a tapering column with a moulded base (Fig. A, 3) buried upright in an earthen floor. The column appears to be of Pentelic marble and is subject to the depredations of continual moisture. On top of the base rests a capital of the same marble 27 cm. in height and flaring from a circular base to a 30 cm. square face at top. A simply stylized leaf pattern adorns the block. The question of the relation of capital to column and of both to the church is obscure to me (cf. Ἀρχ. Ἐφ., 1913, pp. 137-143 for a discussion of the history of the church, which is assigned to the thirteenth or fourteenth century). The capital must surely be dated centuries before the construction of the church (cf. its similarity to a capital from the Asklepieion, Ἀρχ. Ἐφ., 1915, p. 39, fig. 10) and may possibly have been used with the column on which it now rests. Professor Orlandos suggests a date in the eighth or ninth century for the capital, and in this case it is surely later than the column.

L. (above ground) 40, D. 19, Dist. 4.2, Depth 0.5, H. 18, Lht. 12.

ATHENS K (Odeion of Herodes Atticus). Lying just inside east portal are two fragments which join to comprise a complete column (Pl. 45, a). There is a certain amount of damage to both pieces around the fracture. Gray, rather coarse-grained marble which weathers dark. There is a simple worked termination at both ends. The base has a sinking 4.5 cm. square. On one side of the filled fluting there is a prominent well-cut sinking (82.5 cm. in length, 6.5 cm. in width, 2 cm. in depth), presumably to receive an orthostate. A band of horizontal incised chevrons (4 cm. wide) separates spiral and vertical fluting (cf. Athens A 2).

L. 224.5, L. (of spiral section) 146, D. 30 and 32 resp. giving a slight upward taper, Dist. 4, Depth 0.5, Rht. 16.

ATHENS L (Stoa of Hadrian). Fragment of flint-gray limestone in bad condition (Pl. 46, a). One end chipped away to less than diameter of column. This end is flat and has a roughly circular sinking 7 cm. in diameter and 5.5 cm. deep. Opposite end broken. Arrisses quite wide and blunt (not entirely due to weathering).

L. 55, D. 28.5 (no taper), Dist. 4.3, Depth 0.6, Rht. 20.

ATHENS M 1-2 (Theatre of Dionysos). Lying just behind the raised stage of the latest period are two fragments obviously belonging to the same column but not joining (Fig. A, 10; Pl. 48, d). Dark blue-gray fine-grained limestone now badly weathered. M 1 has a worked end from which there is a distinct flare to the largest part of M 2.

M 1: L. 71, D. 25, Dist. 3, Depth 0.2, H. 8.5, Rht. 22.

M 2: L. 67.5, D. 25 and 27.5, otherwise like M 1.

AYIOUS DEKA, CRETE A 1-2 (Main street).[47] Two fragments of gray(?) marble now completely whitewashed and used as pillars of a small porch (Pl. 49, b-d). Dr. Rizza was of the opinion that they belonged to the same column. I am puzzled by the supplementary fragments used to raise the spiral columns to the desired height. One of these has apparently vertical fluting, similar to, but not identical with, filled fluting (see Pl. 49, d). The other looks like, but may not be, a crude square capital (or cement base?).

L. of both given as 115, D. *ca.* 27 with a very slight taper in each column, Lht. 20.

AYIOUS DEKA, CRETE B (Museum). Fragment with worked end, split laterally, half remaining (Fig. A, 8; Pl. 49, a). Rather fine-grained, yellowish marble with blue-gray veins (local?) There is a 5 cm. square sinking in the worked end with a channel *ca.* 0.5 cm. deep diagonally to perimeter (cf. Corinth D 2).

L. 21, D. *ca.* 20, Dist. 3, Depth 0.7, flat, well-cut arrisses 0.4 wide, H. 5.5, Rht. 20 (est.).

CHIOS. Column probably from the colonnade of the Basilica of St. Isidore; A. C. Orlandos, *Monuments byzantins de Chios*, II (planches), Athens, 1930, pl. 2 c. Two columns are illustrated: one with concave fluting above, filled fluting below; the other has spiral fluting which becomes almost vertical in the lower portion and is left unfluted in the upper portion. If these belong to the sixteenth or seventeenth century period of the basilica, as seems indicated by the plan on pl. 1, then they must have been re-used or have remained from an earlier period.

CORINTH A (R. L. Scranton, *Corinth*, XVI, *Mediaeval Architecture*, Princeton, 1957, p. 108, pl. 24, 43, AM 425). Fragment of Pentelic marble. "Treated at bottom with fluting resembling an Ionic shaft, above this with spiral fluting. Excellent work." As the author seems to imply, this is obviously Early Christian rather than mediaeval.

L. 104, D. at bottom 31, at top 26.

CORINTH B (Julian Basilica). In a pile of architectural fragments. Small piece of rather dark gray limestone with much mica. Very jagged breaks which have resulted in the virtual destruction of the piece. It can be stated with certainty that there were more than 17 twists.

L. 45, D. (est.) 28, Dist. 3.5, Depth 0.8.

CORINTH C (between Babbius monument and West Shops). Large fragment with simply worked end (Pl. 51, d). Coarse-grained white

[47] I am greatly indebted to Dr. G. Rizza for his kindness in furnishing me with photographs and measurements of these columns. Dr. Platon tells me there is also a spirally fluted column in Rethymno.

marble weathering to a light blue-gray and the appearance of limestone. A large sliver is broken free from the side of the column but still rests on it.

L. 107, D. 30, Dist. 4.3, Depth 0.4, Lht. 15.

CORINTH D 1-5 (Peirene Fountain). Various fragments obviously deriving from one monument (Pl. 51, b, c). All are of the same material, a white, somewhat coarse-grained marble with gray mottle, and same cut: Dist. 3.5, Depth 1, 24 twists, some righthand, some lefthand.

D 1: L. 150, D. 34 (possibly tapering), Rht.

D 2: L. 80, D. 30 and 32 resp. Remains of a sinking about 7 cm. square with a small channel 2.5 cm. wide, 1 cm. deep running off at right angles to side of square. Lht. Cf. Ayious Deka B.

D 3: L. 45, D. 33 and 34 resp., Rht.

D 4 (Pl. 51, b): L. 65, D. 33, H. 6. Simply worked end; very much battered. Lht.

D 5: L. 20. Sliver of same type as D 4.

CORINTH E (Lechaion Road, near city gate). Small badly damaged fragment of grayish coarse-grained marble. The worked end, pared down and badly destroyed, has remains of sinking at least 8 cm. square.

L. 22, D. 32, Depth 0.5, 24 twists.

CORINTH F (near Fountain of Glauke). Fragment with simply worked cut end (Fig. A, 14; Pl. 50, c). Coarse gray marble with considerable mica. Part of worked end missing. This has a roughly circular sinking 7 cm. in diameter. There is another sinking 6 cm. square, 5 cm. deep on the column itself.

L. 176, D. 38 (with possible taper), Dist. 4, Depth 0.9. Arrisses broad and flat. Lht.

CORINTH G (Acrocorinth). Large fragment standing upright on wall inside third gate of fortress. No details available. For possible provenance see buildings described in *Corinth*, III, i, pp. 21 ff.

DELOS A (W. Deonna, *Délos*, XVIII, *Le Mobilier Délien*, Paris, 1938, p. 55, pl. XXV, 174). "White marble." No exact provenance given. Curious, apparently complete, column with spiral flutes in a very nearly vertical position, rising from a large tuft of acanthus. The low height (65 cm.) makes the purpose of the object uncertain but it must be a stand of some sort unless hollowed out (which is neither stated nor implied in the text). The fluting is terminated against a plain moulding at the top.

DELOS B (*Délos*, XVIII, p. 56, fig. 80). Fragment of white marble(?) representing the lower part of a column like pl. XXV, 176 of same publication. L. 57. Found in the ruins of a house between the Hypostyle Hall and the sea. The very schematic drawing makes it appear that the column is hollow.

DELOS C (*Délos*, XVIII, p. 56, pl. XXV, 176). "White marble." Complete colonnette from north of the Agora of the Competaliastes. L. 64. Elaborately moulded termination at each end. Placed on a high square plinth. The sketch (*op. cit.*, p. 55, fig. 79) is poor and misleading; the flutes are cut, not moulded. The piece appears to be eroded.

DELPHI A-B. Among numerous architectural fragments on the first terrace parallel to the motor road between the museum and the sanctuary are two fragments of dark blue-gray, rather fine-grained limestone with some mica. Very probably from the same monument. I am grateful to Monsieur P. Courbin for procuring me the following information: "Elles ont été trouvées pendant la 'grande fouille' (1890-1904!) 'avec' beaucoup d'autres vestiges de date chrétienne. Elles ne figurent pas dans les croquis du carnet de fouilles."

A: L. 74, D. 22 (with slight taper), Dist. 3, Depth 0.3, Lht. 17. Very jagged break at each end.

B (Pl. 48, c): L. 98, D. *ca.* 22. Dist. and Depth as A. One end pared down to less than diameter of column. Same end has a sinking 2.5 cm. square, *ca.* 3 cm. deep. Lht.

ELEUSIS A (outside Museum). Fragment of a small column with simply stylized Corinthian capital carved from the same block (Fig. A, 5; Pl. 47, e, f). The marble is dark gray, fairly coarse-grained and does not appear to have weathered much although there is a certain hard, golden-colored incrustation over much of the surface, which is otherwise light-colored.

L. 35 (including capital which is 18.5), Width of capital block 15.5, D. 13, Dist. 2.5, Depth 0.25, Lht. 16.

ELEUSIS B (outside Museum). In a heap of architectural fragments at the side of the museum is a fragment of column with an elaborate moulded base (Fig. A, 1; Pl. 46, c). Dark gray coarse-grained marble similar to that of Eleusis A but not weathered nor encrusted. Professor Orlandos tells me that this was almost certainly part of a baluster.

L. 39, D. 17.3, Dist. 2.8, Depth 0.6, H. 10, H. (of plinth) 4, plinth *ca.* 22 square, Lht. 12.

Barely visible in the photograph behind this column is a sliver of another much larger fragment with fluting only slightly deviate from the vertical, something like Delos A.

EPIDAUROS (in front of Museum, near caretaker's house). Fragment with an elaborate worked end (Fig. A, 2; Pl. 46, d). Material is white coarse-grained marble, probably Naxian, with some gray imperfections, badly weathered on one side. The worked end consists of two narrow rings set on a concave, then a convex, element; below this, a plinth.

L. 66, D. 17.6 and 21.6 resp., Dist. 2.9, Depth 0.6, H. 8.3 (not including plinth), plinth 23 square, Lht. 12.

GORTYN, CRETE (opposite Ayios Titos). On river bank opposite Ayios Titos (on other side of river) is a large column (fragment?) buried upright in the ground (Pl. 50, e). Near by is another similarly placed column (exposed end *ca.* 117 cm. in height) with completely eroded surface (Pl. 50, d). Both stand only several hundred meters distant from the cavea of the theatre, a circumstance which, taken together with their large size, lends credence to the natural assumption that they originated there (on theatre, cf. *A.J.A.*, VI, 1902, pp. 105-112; *Arch. Anz.*, 1937, cols. 178 ff.). The material of the spirally fluted column is a dark gray, coarse-grained limestone(?) with white spots. The exposed end has been chipped away to less than the diameter of the column and has a sinking 4 cm. square and deep. The arrisses are wide (0.8 cm.) and carefully cut, though now badly chipped.

L. 116, D. 43 and 45 resp., Dist. 4.5, Depth 1, Rht. 24.

Kos A (Casa Romana). In front of house enclosure. Large column fragment of dark gray, close-grained stone, basalt or something similar to basalt (Pl. 50, b). Cf. Kos C. Both ends appear to be roughly cut and one has a circular sinking 5 cm. in diameter and 7 cm. deep.

L. 153, D. 42 and 44 resp., Dist. 4, Depth 0.5, Lht. 24.

Kos B (Casa Romana). Fragment of column broken at both ends which have been evened up with cement (Pl. 47, g). Dark gray close-grained stone like Kos A. Only known provenance: courtyard of Catholic church formerly opposite Akteon Hotel.

L. 90, D. 18.5 and 20 resp., Dist. 3, Depth 0.4, Lht. 18.

Kos C (Kastro). On spit of land before Kastro at harbor entrance. I am indebted to Mr. Nikolaides for the information that this piece and others in the same location were probably collected from various places after the 1933 earthquake and that they had been built into buildings. Drum with simply worked end (Fig. A, 15; Pl. 50, a). Cut of unworked end quite rough. Material and cut same as that of Kos A. Considerable traces of a whitish incrustation which looks like stucco.

L. 125, D. 44, Dist. 4.3, Depth 0.5, H. 7, Lht. 24.

Kos D (Kastro, as C). Fragment of column with simply worked end (Fig. A, 9; Pl. 50, a). Stone similar to Kos A. Piece badly cracked and chipped.

L. 68, D. 24.5, Dist. 3, Depth 0.3, Lht. 20.

Kos E (Kastro, as C). Fragment of column with simply worked end (Fig. A, 11; Pl. 50, a). Small sinking at center of both ends roughly 4 cm. square. Stone similar to Kos A but lighter and more like marble in consistency. Numerous traces of incrustation.

L. 90, D. 27.5, Dist. 3, Depth 0.5, H. 8, Lht. 22.

Kos F (Kastro, as C). Fragment of column with simply worked end (Fig. A, 12; Pl. 48, f). Broken jaggedly and much encrusted (not stucco). Workmanship in general quite inexact, giving an asymmetrical appearance to the column, although the individual flutings are cut cleanly and sharply. Coarse-grained white marble (Naxian?).

L. 59, D. 25, Dist. 4, Depth 0.4, H. 11, Lht. 16.

Lindos (Acropolis). In Commandant's Quarters, upstairs. Fragment of dark blue-gray marble, undoubtedly hewn on the Acropolis itself, roughly broken at both ends (Pl. 48, e). Arrisses cut squarely. I should not postulate any direct connection with the adjoining Ayios Ioannis tou Kastrou of the thirteenth century (Ἀρχεῖον, VI, 1948, pp. 80-83, figs. 64-65), unless it was re-used there, but possibly with a predecessor.

L. 68.5, D. 19.7 and 21.5 resp., Dist. 3.5, Depth 1.2, Rht.

There is also a tiny fragment of a much smaller spirally fluted column in the Commandant's Quarters.

Mavromati-Ithome (Museum). On doorstep outside museum, a fairly well preserved fragment with an elaborate worked end on a plinth (Pl. 46, e). Light gray marble showing rust-colored stains.

L. 68.5, D. 12.7 and 19.7 (notice pronounced taper), Rht. 13.

Naxos (Museum). Fragment with worked end from church in ruins of temple 'Sto Palati' (Fig. A, 16). Very dark stone, blue-gray in hue, which weathers to a volcanic-looking, completely honeycombed surface. Badly weathered.

L. 76, D. 33, Dist. 3.2.

Also in the museum are two fragments of a small column of a type suitable for stand or ciborium. Naxian marble. D. 10.2.

Nea Anchialos A-B (Basilica). (G. Sotiriou, Αἱ Χριστιανικαὶ Θῆβαι τῆς Θεσσαλίας, Ἐφ. Ἀρχ., 1929, pp. 1-158). Soteriou, p. 24, fig. 26 shows a large fragment of fluted column with pared-down end. Apparently resting on it is a fragment of capital. Another column fragment of the same kind is mentioned on p. 95 (no. 4). A reconstruction of the pulpit to which this belonged is presented in fig. 107 (p. 87) and plate Δ.

Nikopolis (Mosque). (Πρακτικά, 1914, p. 237, fig. 9, a). Rough sketch of a spirally fluted column with a moulded termination and above this a six(?)-sided capital. No dimensions nor other details are given. All the architectural pieces of fig. 9 are designated as Byzantine. Πρακτικά, 1915, p. 61, fig. 1, apse of the Christian basilica with a fairly large fragment of spirally fluted column (unfortunately in shadow) lying in a mass of debris. Perhaps 60-70 cm. in length.

Patmos (Church inside Monastery of Ayios Ioannis Theologos). Casually illustrated in *Clara Rhodos*, VI-VII, 3, pp. 707-801, figs. 4, 5.

Patras (Odeion). Between modern street and Odeion (near wall of same) in underbrush. Two perfectly joining fragments in poor condition on one side and at worked end (Pl. 46, f). Coarse-grained white marble weathered to gray.

L. 101, D. 16 and 19 resp., Dist. 4, Depth 1, Rht. 12.

Cf. also A. Lenoir, *Architecture monastique*, II and III, p. 186, no. 417.

PIRAEUS A-C (Theatre). Numerous small fragments among the architectural debris with nearly vertical wavy fluting. Among these I noted three separate types of moulded base. Presumably the other fragments without bases belong to one of these types. Since in all cases the columns seem to have been hollowed out, they must be well-heads.

A: Close-grained light gray limestone (Fig. A, 18). L. 33, Pres. D. 53 (est. total D. 56), Dist. 4, Depth 0.6, Width of wall 5.5.

B: Close-grained light gray limestone with schist(?) (Fig. A, 19). Pres. D. 62 (est. total D. 70), H. 8, Width of wall 5.2.

C: Close-grained dead-white marble with mica (Fig. A, 20; Pl. 51, e). L. 55, Pres. D. 29, Dist. 4.5, Depth 0.5, H. 10, Width of wall 7.5.

RHODES A (Fountain house of Sultan Moustapha Mosque). The fountain house is an octagonal structure supported by eight Byzantine columns with separate capitals, all broken off about 3 cm. below the "abacus" ring (Pl. 45, e, f). Likewise bases are all separate, having been broken off just above moulding. The plinths were all originally tetragonal. It appears from material, cut, proportions and general effect that all members of the present peristyle (capitals, columns and bases, now rejoined artificially with cement) were originally created for one architectural complex. The only explanation which occurs to me for such a procedure is that the builders of the fountain house needed to reduce the height of the columns to suit their own specifications.

One of the eight columns is of the composite type with the two types of fluting separated by an undecorated ring. There is a roundish hole several centimeters wide at the upper end of the vertical fluting with a lump of iron in it. The marble (like that of all the other columns, capitals and bases) is rather coarse-grained with much mica and irregular pockets of dark gray osseous-looking material. Flakes and weathers to dark gray.

L. (without capital and base) 145.5, upper fluting 8.5, lower fluting (with ring) 60.5, D. 29.6 and 32 resp. (notice upward taper), Dist. (spiral fluting) 4, Depth 0.8, Dist. (filled fluting) 6.4, Capital 18.2 (height), Base 40.7, Rht. 16.

RHODES B (Museum). Fragment of a baluster; *Ἀρχεῖον*, VI, 1948, p. 18, fig. 13. Evidently serving as a division between two plaques of the orthostate, to one of which it is attached, is a small spirally fluted column with simplified Corinthian capital.

RHODES C (Ialysos). Fragment of a sarcophagus of the Asia Minor type; *Ἀρχεῖον*, VI, 1948, pp. 51-53, figs. 44-46. Spirally fluted columns with capitals very similar in appearance to Eleusis A.

SAMOS (Pythagoreion). Fragment built into garden wall of house on main street leading west out of Pythagoreion (Tigani) towards the Heraion; near edge of town. Worked end turned up and visible, lower end plastered into wall (Fig. A, 13; Pl. 48, g). Mottled dark gray close-grained limestone containing veins of coarse-grained white marble; said to come from Kouphia Spelia near Tigani.

L. 68, D.(est.) 28, Dist. 3, Depth 0.3, H. 10, Lht. 24.

Section B: Summary by Types

1. Composite columns. It need hardly be pointed out that, in addition to the examples listed under this category, various other fragments of spirally fluted columns listed under other categories could be the upper portions of composite columns:

Athens A 1-2, B, K
Corinth A
Rhodes A
Cf. also Ayious Deka A 1-2

2. Columns with pared ends:

Athens E, L
Corinth E
Gortyn
Nea Anchialos A

3. Columns with a small sinking in the worked end (or cut end):

Athens K, L
Ayious Deka B
Corinth D 2, E, F
Gortyn
Kos A, E

4. Small columns of type suitable for stands, lampholders, etc. (Fig. A, 1-3):

Athens J (?)
Delos B, C
Eleusis B
Epidauros
Mavromati-Ithome
Patras
Cf. also notes on Lindos and Naxos

5. Miscellaneous columns of small size,[48] under 20 cm. in diameter. This group is obviously related to the foregoing with which its pieces may in some cases be interchangeable (Fig. A, 4-5):

Athens C 1-2, E, F 1-3
Eleusis A
Kos B

6. Miscellaneous columns of medium size, between 20 and 29 cm. in diameter (Fig. A, 6-13):

Athens D, F 4, H, I, L, M 1-2
Ayious Deka A 1-2, B
Corinth B
Delphi A-B
Kos D-F
Lindos
Samos

7. Miscellaneous columns of large size, 30 cm. or more in diameter (Fig. A, 14-16):

Corinth C, D 1-5, E, F
Gortyn
Kos A, C
Naxos

8. Objects with vertical wavy fluting (Fig. A, 17-20). These are noted here as being related to the theme of spirally fluted columns. They are almost certainly well-heads with the exception of Delos A. I have also noted a large hollowed-out drum (of vertical fluting) on the Athens Acropolis between the Erechtheion and the Parthenon (East side) which must certainly have been a well-head.

Athens G
Delos A
Piraeus A-C
Cf. also note on Eleusis B

[48] It should be noted that no dimensions are available for Corinth G, Nea Anchialos and Nikopolis.

ANALYSIS OF SPIRALLY FLUTED COLUMNS AT KOURION

(measurements in meters)

i COLUMN	ii MATERIAL	iii PRES. LENGTH	iv DIAMETERS (a)	(b)	(c)	(d)	v NO. OF CHANNELS	vi ARRISS WIDTH	vii CHANNEL Width	viii CHANNEL Depth	ix PITCH L.	x PITCH F.	xi TWIST
A. Demeter	?Basalt, dk. gray	2.00		0.59			22	0.015	0.044	0.018	2.40(?)	4.06	R
B. "	" " "	2.32		0.58			22	0.012	0.042	0.019	2.024	3.86	R
C. Basilica	Marble, gray	0.93	0.31	0.26		0.26	20	0.008	0.025	0.005	0.97	3.73	L
D. Theater	" "	1.86	0.45	0.43		0.37	24	0.008	0.034	0.015			R
E. Curium House	" "	1.64		0.40			24	0.009	0.033	0.012			R
F. Turk. House	" "	1.57	0.446			0.39	24	0.007	0.030	0.010			R
G. Ay. Erm.	" "	0.40			0.39		24	0.009	0.028	0.010			L

Section C: Additional Columns in Cyprus

There are two complete columns lying outside the church of Kyra (Nicosia District), alleged to have come from the ruined church of Ayios Stephanos (Cyprus Survey Serial No. 207) in Kyra village. I wish to thank Dr. H. W. Catling of the Cyprus Survey for information and photographs (Pl. 51, a) of these columns as well as for permission to publish them.

A: L. 233.8, D. 26.7 and 30.5, H. 6.3, Lht. 16.

B: L. 241.5, otherwise as A.

Base: 42 cm. square at bottom, 35.6 cm. in diameter at top, 12.7 cm. in height.

These columns, being complete and of good workmanship, illustrate very well category 6 of Section B and were no doubt used in an interior colonnade of the church from which they came. There is in this case, however, no reason to suspect that they are re-used ancient columns; they must be contemporary with the church.

Mr. J. S. Last of Episkopi, Cyprus has kindly furnished me with an enlarged table of data concerning spirally fluted columns from Kourion, set up in a form which has possibilities for use in a corpus of such columns. It seems desirable to publish this here in order to facilitate comparison with the categories established for columns in Greece. I am responsible for an error which occurred in the transcription of a heading in his original table (*A.J.A.*, LX, 1956, p. 386), which is, of course, superseded by the present table.

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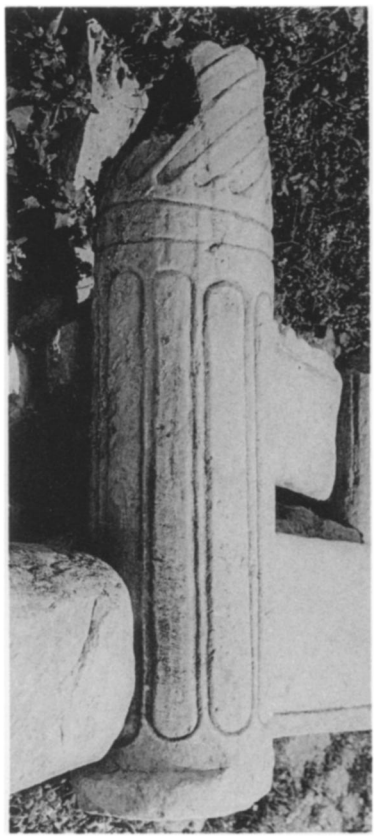
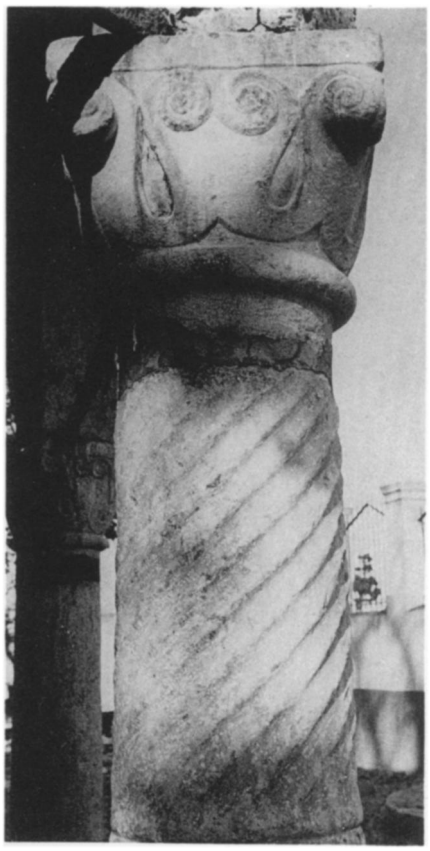
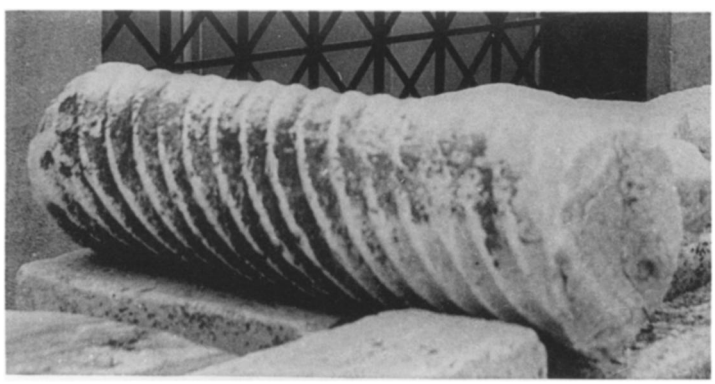
a. Athens K



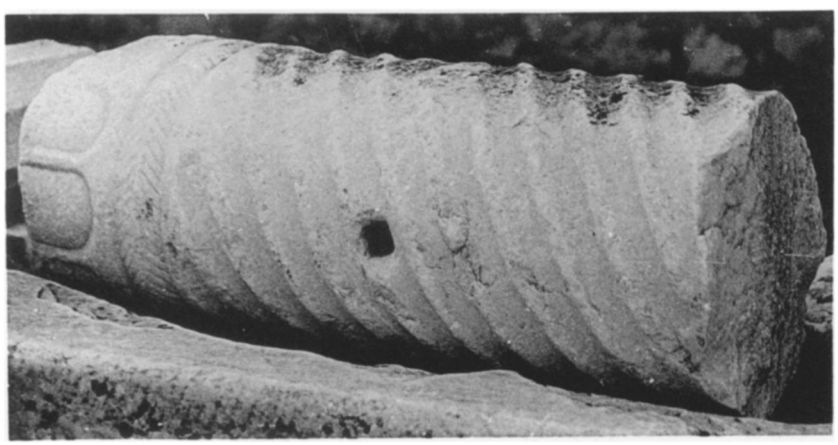
b. Athens B



e. Rhodes A



c. Athens A 1



d. Athens A 2

f. Rhodes A

PLATE 46

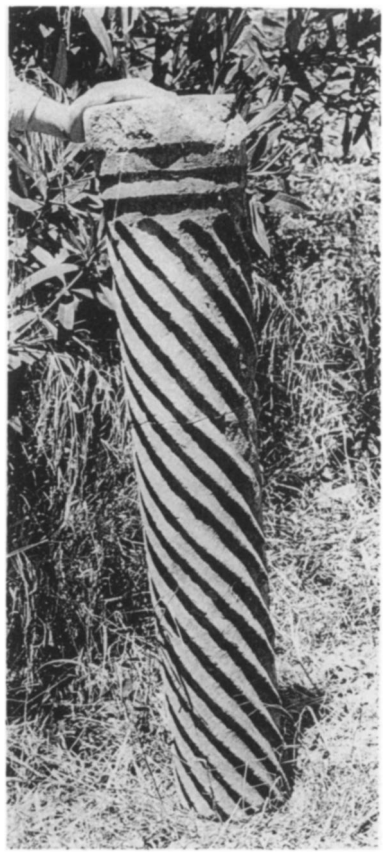
a. Athens L

b. Athens E

c. Eleusis B

d. Epidauros

e. Mavromati-Ithome

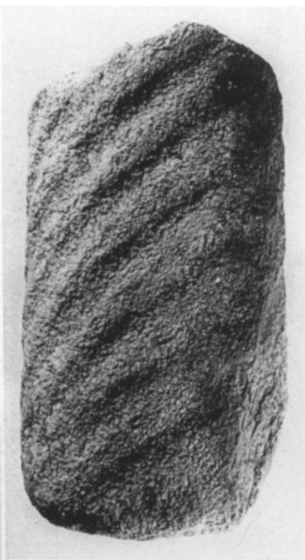


f. Patras

J. L. Benson: Spirally Fluted Columns in Greece

a. Athens C 1-2

b. Athens F 1

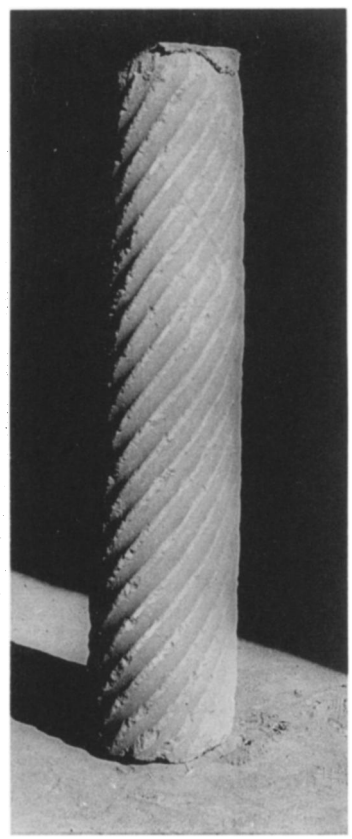


c. Athens F 2

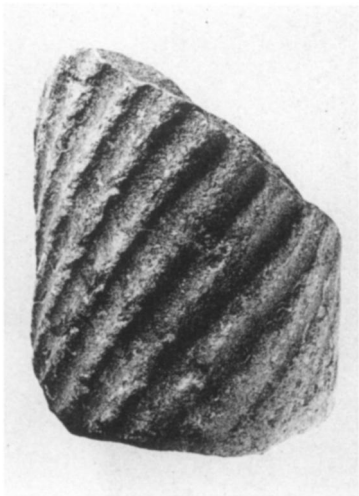
d. Athens F 3

e. Eleusis A

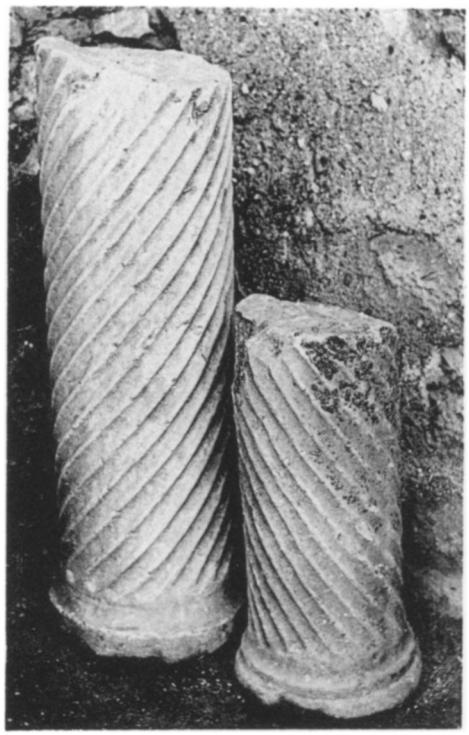
f. Eleusis A



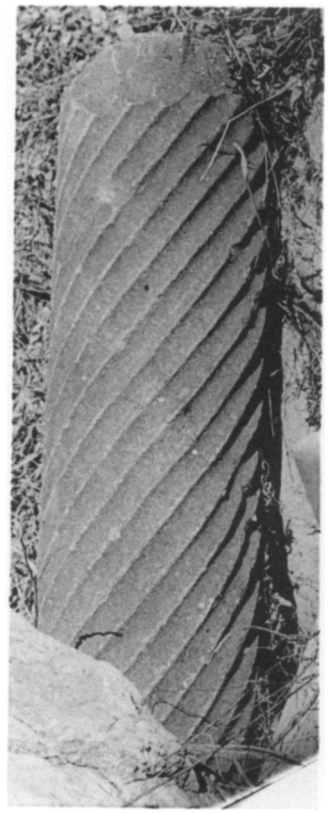
g. Kos B



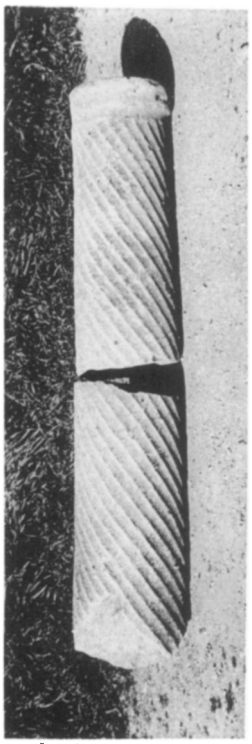
a. Athens F 4



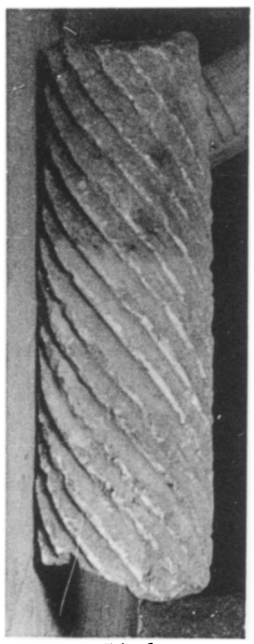
b. Athens H, I



c. Delphi B

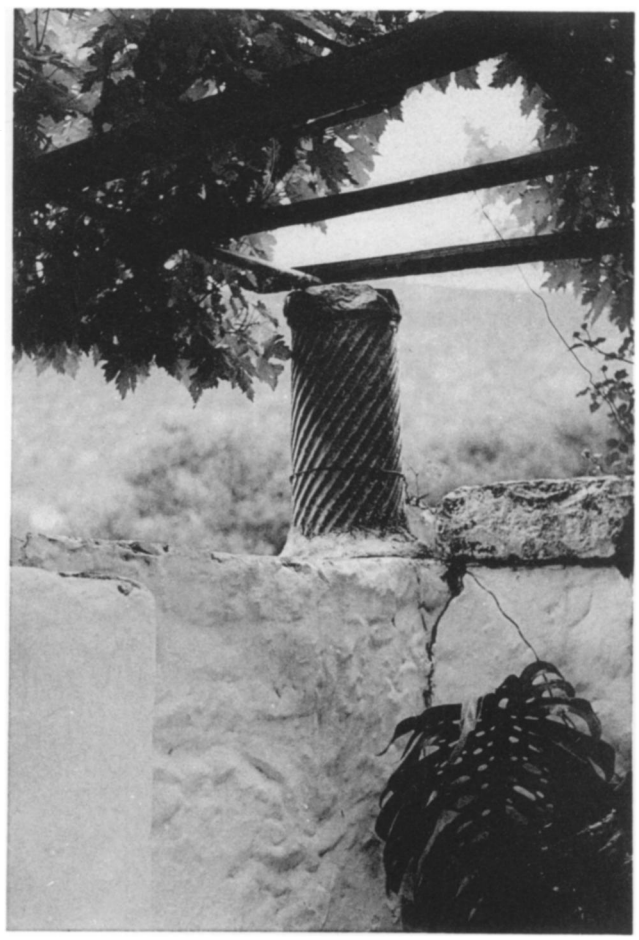


d. Athens M 1-2



e. Lindos

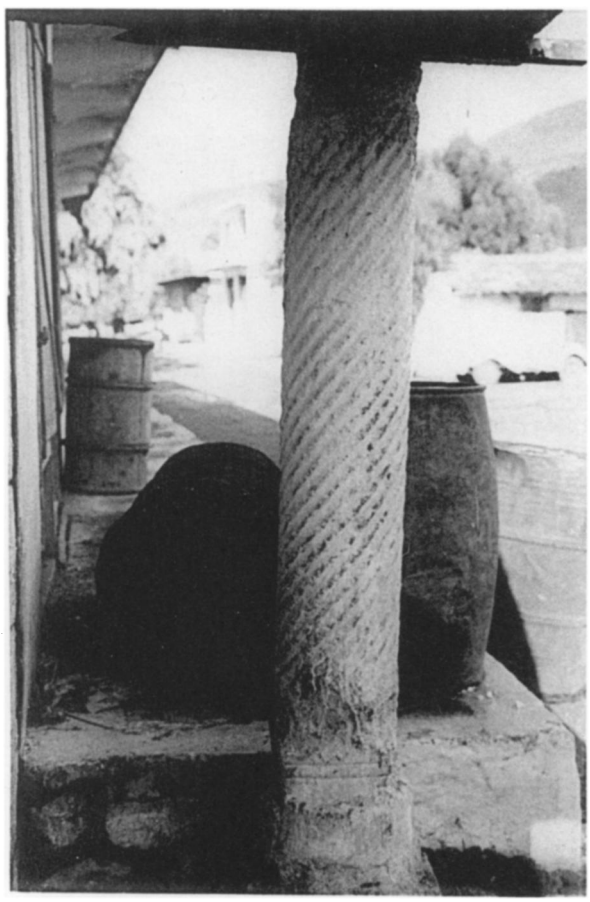
f. Kos F



g. Samos

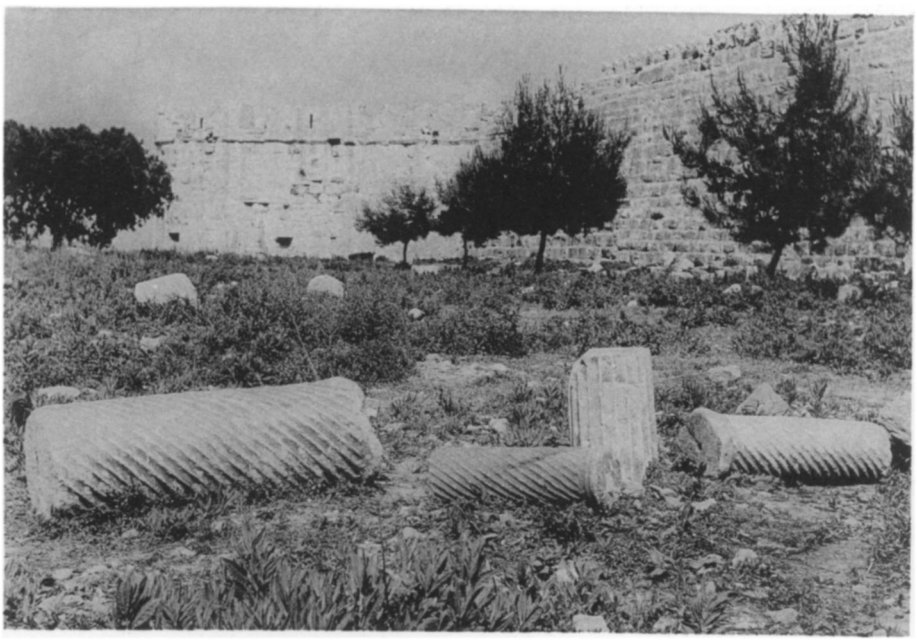
a. Ayious Deka B

b. Ayious Deka A 1-2



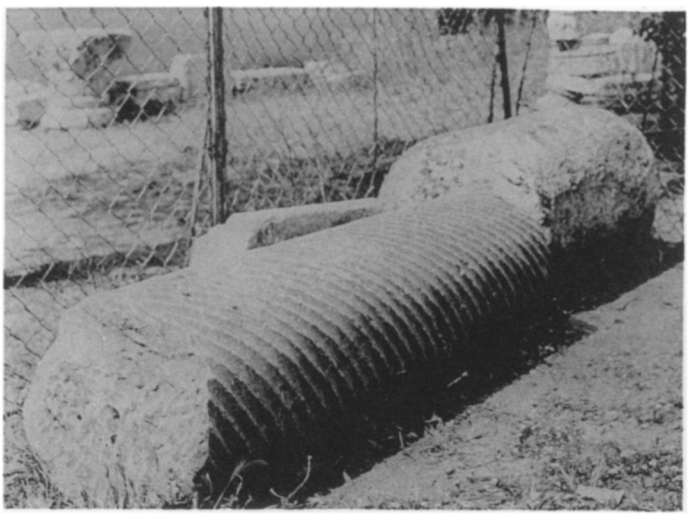
c. Ayious Deka A 2

d. Ayious Deka A 1-2



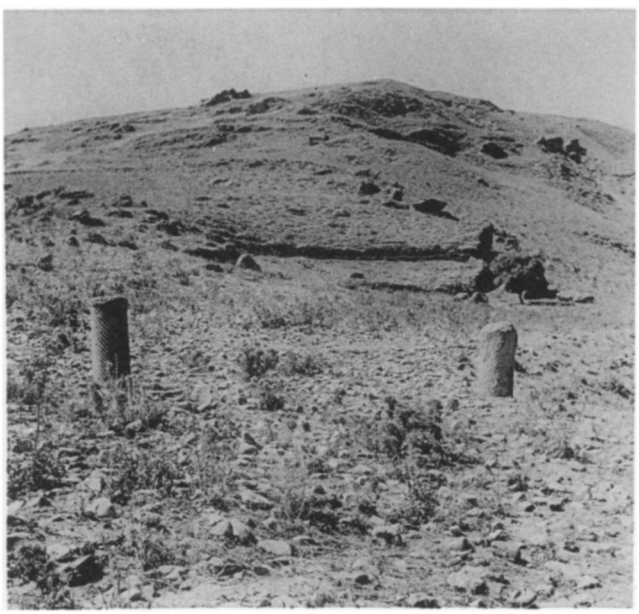
a. Kos C, D, E

c. Corinth F

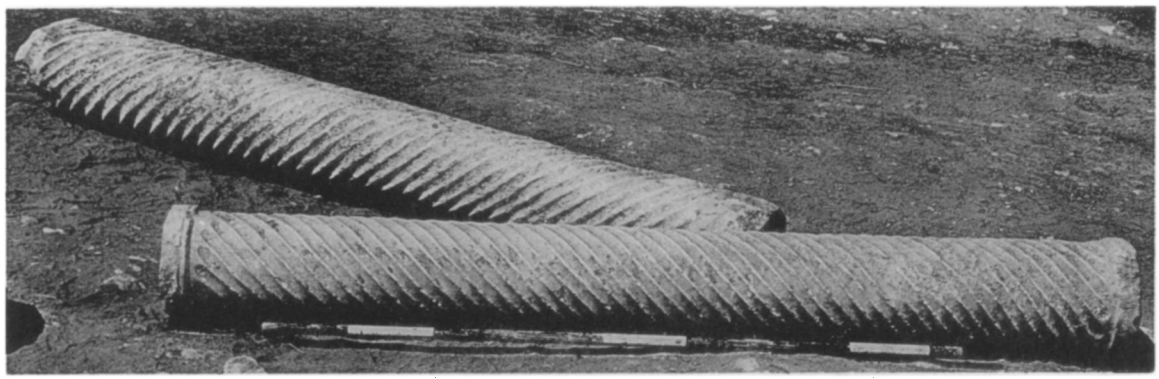


b. Kos A

e. Gortyn

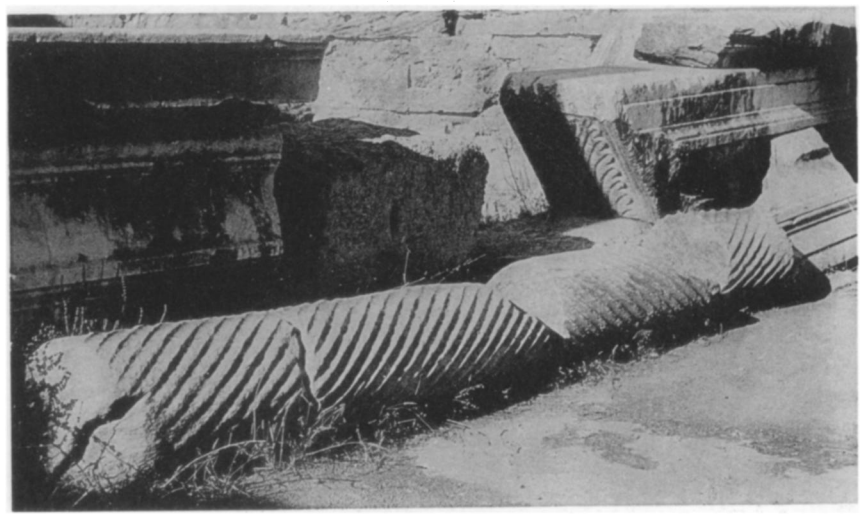


d. Gortyn



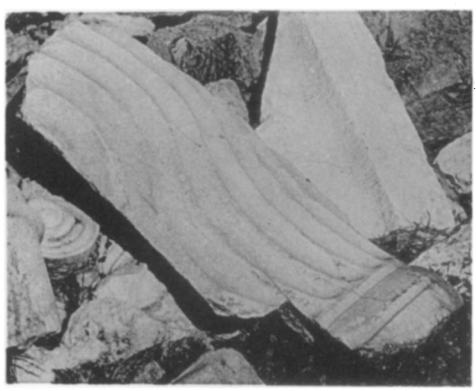
a. Kyra, Cyprus

b. Corinth D 4

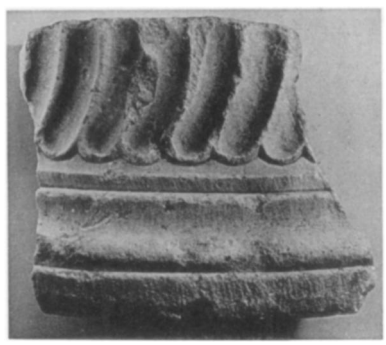


c. Corinth D 1-3

d. Corinth C

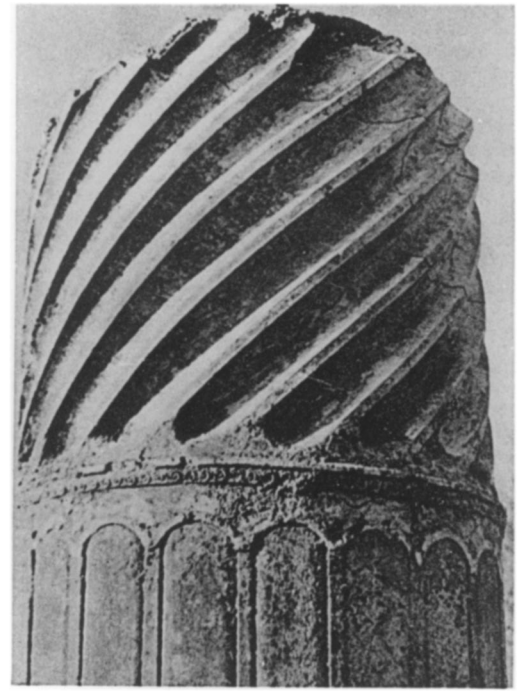


e. Piraeus C

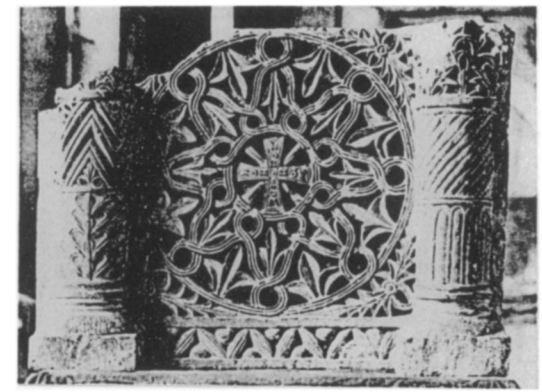


f. Athens G

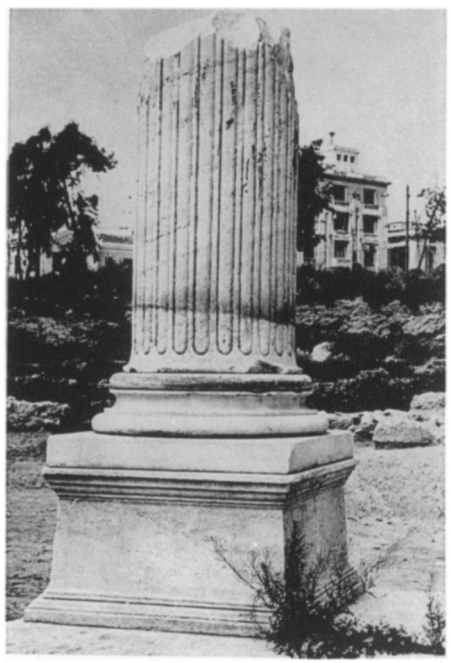
a. Ivory Diptych of Monza



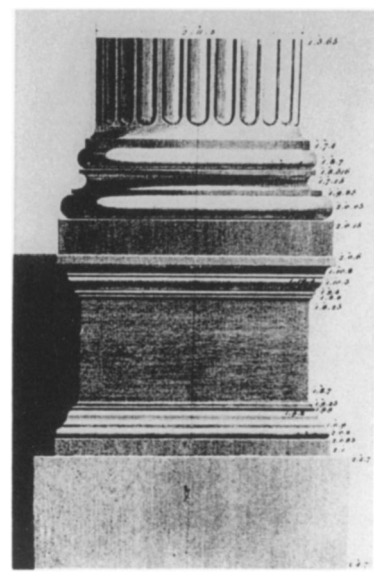
b. Column at Stabiae



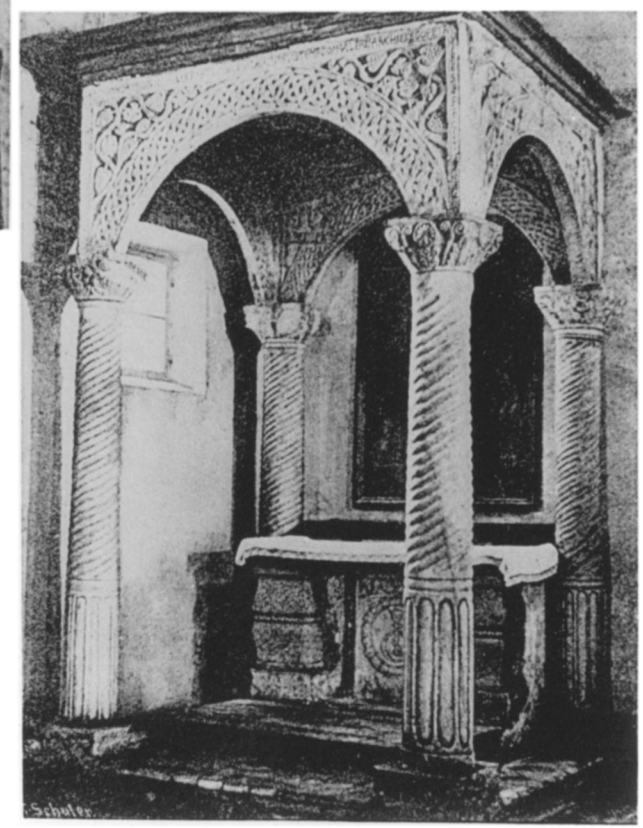
c. Relief from Baouit



d. Column of Propylon, Olympieion, Athens



e. Column of Library of Hadrian, Athens

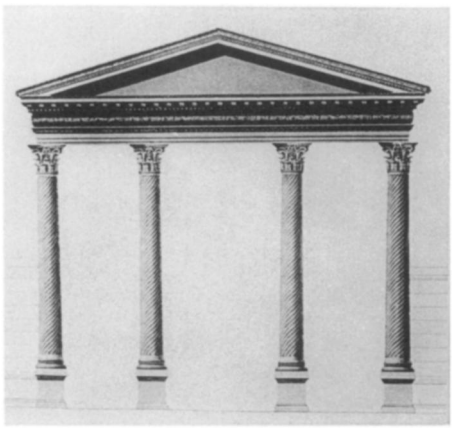


f. Ciborium in Sant' Apollinare in Classe, Ravenna

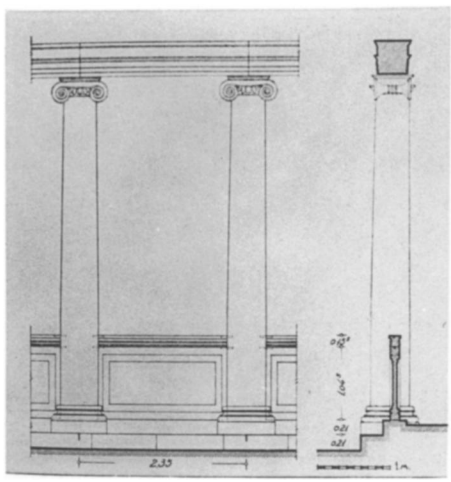
a. Wall Painting, Macedonia

b. Façade of Roman Cippus

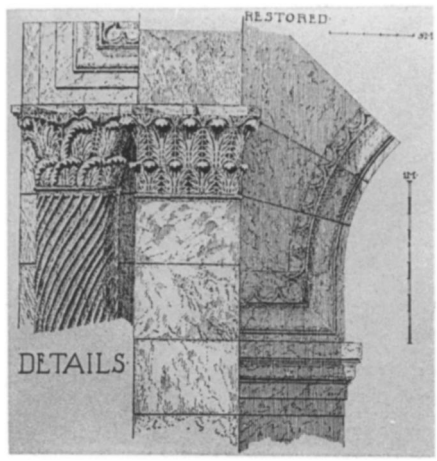
c. Façade of Roman Cippus



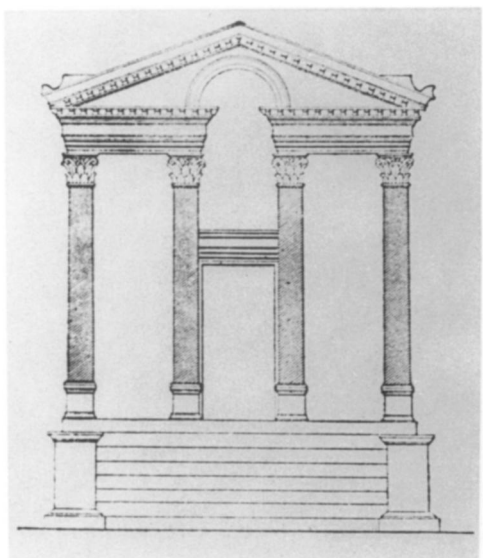
d. Propylon of Aphrodite Temple, Aphrodisias, Caria



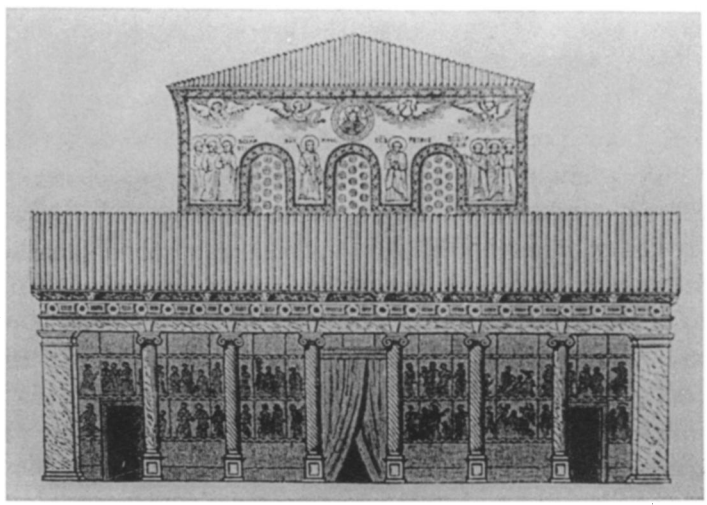
e. Early Christian Balustrade



f. Apse Arch of St. Phokas



g. Temple at Lagon, Pamphylia



h. Façade of San Lorenzo fuori le mura, Rome