On the Chronology of the Common Pottery of Northern Roman Judaea/Palestine

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A. Introduction

Among the many approaches to the study of ancient ceramics, the investigation of the chronological ranges and sequences of the different pottery forms employing evidence from excavated assemblages has been dominant in general (see, e.g., Orton et al. 1993: 182-196), and in publications of common pottery of Hellenistic, Roman and Byzantine Palestine in particular. Such excavated evidence is essential for dating vessel forms, and has been used extensively for that purpose by this writer. A contextual research perspective to pottery analysis known as *ceramic ecology*, however, that seeks to place ceramic data into an ecological, temporal and sociocultural frame of reference (Matson 1965; Arnold 1985; Rice 1987: 314-317; Kolb 1989, 2001), considering, *inter alia*, pottery sources, distribution, and function, as well as individual excavated assemblages, can provide a more informed, balanced, and accurate view of the chronology of a particular ceramic ware and its individual vessel forms. This approach, employed by us in *Common Pottery in Roman Galilee: A Study of Local Trade* (Adan-Bayewitz 1993; henceforth *CPRG*) and in a series of other publications (Adan-Bayewitz 1985, 1986, 1989, 1991, 1997, in press; Adan-Bayewitz and Perlman 1985, 1990; Adan-Bayewitz and Wieder 1992; Wieder and Adan-Bayewitz 1999, 2002), is used also in this study.

This paper will deal mainly with the prevailing group of household utilitarian wares at sites in northern Roman Judaea/Palestine, made primarily at Kefar Hananya in the Galilee (Fig. 1) and at several different locations in the Golan (*CPRG*).

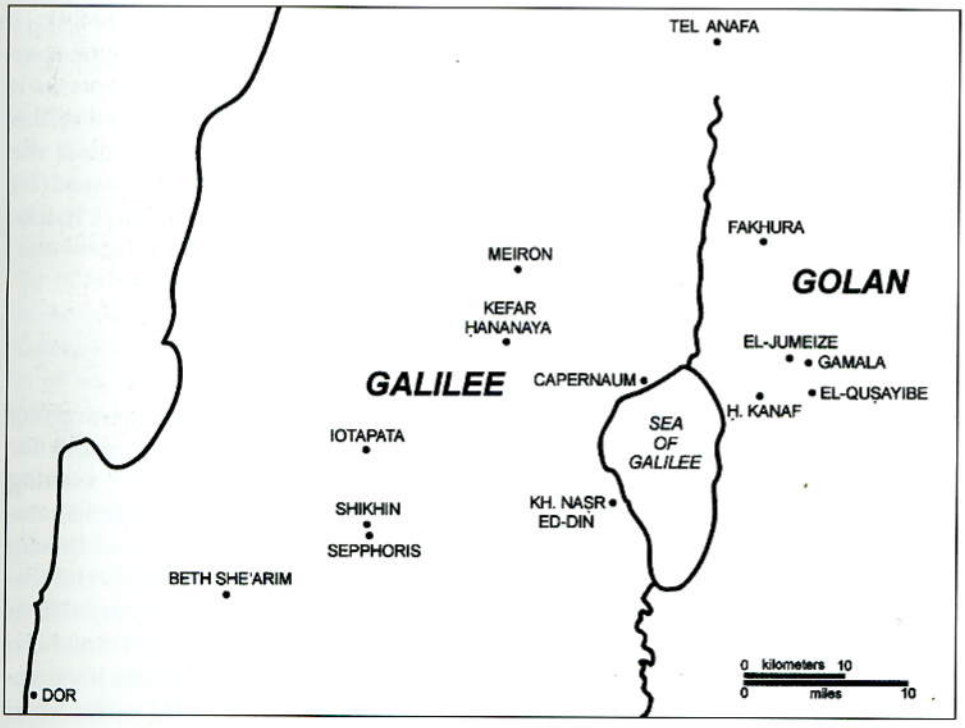

Fig. 1 *Map of the Galilee and Golan showing the main sites discussed in the paper.*

Since publication in 1993 of *CPRG*, the common culinary wares of the Galilee and Golan have become better known, and the implications of their production provenance, distribution and chronology have been much discussed.[1] The goal of this paper is to update the chronological presentation in *CPRG* (83-150, 155-164, 172-179) employing all available evidence: production provenance, statistical analysis, archaeological assemblages that have become available since *CPRG* was submitted for publication,[2] and evidence from our excavations at Kefar Hananya (Adan-Bayewitz 1991, 1997).

Following a brief, introductory survey of early studies on Galilean pottery (Section B), our work on the study of the pottery made at Kefar Hananya and in the Golan will be discussed, with an emphasis on chronology (Section C). The evidence for the site-specific production provenance of Kefar Hananya ware is presented in Section D. The data from a high-resolution archaeological surface survey of the Central Golan (henceforth, for simplicity: the Golan) focusing on the Hellenistic, Roman and Byzantine periods (Ben-David 1999) will then be introduced, followed by statistical analysis of the Golan survey data set employing Correspondence Analysis (Section E). As will be seen, this data set and its statistical analysis provide valuable independent evidence on the chronology of the common utilitarian pottery of northern Judaea/Palestine. Finally, the principal evidence from recent chronologically well-defined excavated assemblages and survey collections will be presented and discussed, along with the available evidence from the Kefar Hananya excavations (Section F).

B. Early work

In 1974, Loffreda published *Cafarnao II: La Ceramica*, a book-length monograph on the pottery from the residential areas at Capernaum excavated until that date. The three main chapters of the book present a typological classification of the pottery, stratified assemblages from insulae I (the "insula sacra") through V, and a discussion on the date of each of the pottery types based on the evidence of the first two chapters. This book, building on earlier work by Loffreda (1969, 1970a, 1970b), provided a systematic, carefully studied typological classification of the pottery of Roman Galilee and the chronological sequences of the main vessel types, that could be reexamined and compared with data from other sites and with evidence obtained employing other methods of analysis (*CPRG* and see below). Later publications by Loffreda of stratified assemblages from subsequent excavations of residential areas at Capernaum (Loffreda 1982a, 1982b, 1983, 1984; Corbo and Loffreda 1985) and at Magdala (Loffreda 1976), contributed further to the typological and chronological study of the Galilean pottery of this period. Although there have been major advances in the past two decades in the investigation of the common pottery of northern Roman Judaea/Palestine, Loffreda's abovementioned publications, frequently cited in *CPRG* (and see also below), remain indispensable for the chronological and typological study of the Galilean common pottery of this period.

Galilean pottery of Roman date has also been studied independently by other archaeologists, based on the evidence from their own excavations, resulting in significant contributions. Primary among these was the final report on the excavations of residential buildings at Meiron (Meyers et al. 1981); other published assemblages were from excavations at Khirbet Shema', the Zeid Farm at Beth She'arim, Jalame, Horvat Hazon, Horvat 'Ammudim, Hammath Tiberias and other sites (Meyers et al. 1976; Avigad 1955; Johnson 1973;[3] Bahat 1974; Adan-Bayewitz 1982; Dothan 1983). The use in *CPRG* of the published evidence from the abovementioned sites, along with unpublished pottery principally from Gamala and Meiron, will be further discussed below (Sections C and F.4).

A study by Diez Fernandez (1983) on the common pottery of the Galilee in the Roman period is the most detailed typological presentation of this pottery published to date, including some of the less common forms of this period and region (on Diez Fernandez's book, see *CPRG* 147-149, n. 93).

C. Pottery of Kefar Hananya and Golan production

This paper will focus on the predominant group of household utilitarian wares, used primarily for cooking – including bowls, "casseroles," cooking pots, and jugs of various types – occurring in excavated assemblages and survey contexts of Roman and Early Byzantine date (latter part of the 1st century BCE – earlier part of the 5th century CE) at sites in the Galilee and Central and Southern Golan. This utilitarian pottery, all of which was apparently suitable for use as cooking ware, when

found at sites in the Galilee has been shown to have been produced primarily at the Galilean settlement of Kefar Hananya (see also below, and n. 10). Pottery virtually identical in *form* to the Kefar Hananya vessel types (i.e., characterized by form and fabric) but of locally-made Golan production accounts for the majority of the ceramics of Roman date recovered at sites in the Central and Southern Golan. Pottery made at Kefar Hananya accounts for about 10% to 20% of the vessels of these forms at the sites in these areas of the Golan (*CPRG*; on the pottery of Golan production, see 164-200, 247-249).

Research since 1981 by myself and co-workers – I. Perlman (deceased), F. Asaro, M. Wieder, H.V. Michel and R.D. Giauque – has revealed considerable information on these common utilitarian wares of Roman Galilee and Golan (*CPRG*; Adan-Bayewitz 1985, 1986, 1989, 1991, 1997, in press; Adan-Bayewitz and Perlman 1985; Adan-Bayewitz and Wieder 1992; Wieder and Adan-Bayewitz 1999). Our contributions to the study of these wares include:

– ***Determination of the main site-specific production provenances of the most common pottery types of Roman Galilee.*** The evidence for the provenance of the Kefar Hananya ware will be presented below.[4]

– ***Studies of the geographical and quantitative distribution*** of the Kefar Hananya vessels (and of other vessel types) at sites in the Galilee and Golan, based on counts of excavated pottery collections (*CPRG* esp. 201-223).

– ***Typological and chronological classification of the Kefar Hananya ware.*** Having shown that most of the common cooking ware of the Galilee was produced at the site of Kefar Hananya (*CPRG*, and see also below), the typological classification of the Kefar Hananya ware and the chronological definition of the individual vessel forms took on added importance. The chronology of the Kefar Hananya Forms is of course of central importance for dating the large majority of Galilean excavated contexts and surveyed sites of Roman date. But the initiation of pottery production at Kefar Hananya, its development, decline and cessation can also shed light on historical developments and settlement processes in northern Judaea/Palestine in the Roman and Early Byzantine period. The dates of the Kefar Hananya Forms, moreover, can also provide information on ceramic ecology and the development of pottery production at Kefar Hananya itself (*CPRG* 201-249).

For these reasons, extensive efforts were made, employing all available evidence, for defining the chronological limits of production at Kefar Hananya and the date ranges of each vessel Form (*CPRG*). Measures taken to prevent a grossly distorted interpretation of the evidence for the chronological range of any Kefar Hananya Form included:

Each of the published contexts in which any of these Forms were found at excavated Galilean settlement sites was examined. Each such context was studied in order to insure its chronological homogeneity. Statified loci above and particularly below the selected context were also examined, whenever possible, in order to insure that the excavated sequence was ordered and there were no disturbances.

An attempt was made to distinguish objectively between evidence of production and primary use,[5] on the one hand, and residual occurrence/redeposition (of early artifacts in a relatively late context) and intrusive pieces (late artifacts in an early context), on the other:

Whenever possible, the loci selected to define the extremes of the chronological range of a vessel Form, and particularly the tail end of the period, contained more than one fragment of the vessel; or more than one context, each containing a single example, was used. As a rule, the occurrence of a vessel Form was considered to be residual when it was found in a single assemblage of later date than that attested by the other deposition contexts, particularly when there was a significant gap between the date of that assemblage and the date range otherwise attested for the vessel.

The relative *quantity* (and state of preservation) of a vessel type in stratified assemblages can provide important information on the period of its use, and all such published quantitative evidence (e.g., the publications on the pottery from the Capernaum excavations, which frequently include counts of the vessel forms found in an assemblage) was carefully considered. In many instances, and particularly with regard to the crucial questions of the earliest and latest periods of pottery production at Kefar Hananya and its cessation, well-dated published and unpublished stratified assemblages were counted and the quantitiative data were presented and used. The most significant excavated collections utilized for this purpose were from residential areas unearthed at

Gamala, with a *terminus ante quem* of 67 CE, and Meiron (*CPRG* 83-87, 148-150, 201-249, and see also below).

The *CPRG* typological and chronological presentation of the Kefar Hananya and related wares takes into account all assemblages published prior to 1988, and many unpublished assemblages studied by me. Suggested chronological ranges of individual vessel Forms and of production at Kefar Hananya were based on well-dated assemblages from excavations of residential structures at Capernaum, Meiron, Magdala, and Gamala, and on evidence from other sites (Kh. Shema', Jalame, et-Tabgha, H. Hazon, the Zeid farm at Beth She'arim, H. 'Ammudim, and Hammath Tiberias) (*CPRG* 83-150, 156-164, 172-179).

– ***Identification of several of the vessel types*** produced at Kefar Hananya with specific vessels mentioned in Rabbinic texts of Roman date. One key component in each of the proposed vessel identifications (along with form, material, function, source, and geographical distribution), was the independent chronological information (itself requiring study) provided by the literary references. With regard to the vessels relevant to this paper, those identified as products of Kefar Hananya – Form 1 and specifically Form 1B, identified as *kavkav*; Form 3B, identified as *lifsa* = *ilpas*; and Form 5 and specifically Form 5B, identified as *krozin* – the texts could be dated to about the mid 2nd century (or earlier), the third quarter of the 3rd century, and about the first half of the 4th century, respectively (Adan-Bayewitz 1986, 1989, *CPRG* 32-37, 224-227).

Our approach to the *chronological investigation* of pottery, in *CPRG* and the present study, is well expressed by Orton (Orton et al. 1993: 196): "Pottery dates should be based on an appreciation and understanding of variations between assemblages, rather than the eccentricities of individual vessels, and any factor which is likely to cause such variation must be considered and if necessary eliminated before a date can be formulated. There should be continuous feedback between our understanding of trade-patterns, sources, site formation processes, function and chronology. The last cannot in any sense be placed in a separate box; it is only one of the factors controlling the variation within and between sites and cannot be considered without the others."

D. Kefar Hananya pottery: the evidence for site-specific production provenance

Although it is a goal that is seldom achieved, determining the site-specific production provenance of a ceramic ware, together with the study of its geographical and quantitative distribution, are of essential importance for defining the chronological range of the ware and its constituent individual vessel forms.[6] There are two reasons for this. First, the date range of a ceramic ware is necessarily dependent upon its production history. If the production site of a ceramic ware ceased making pottery, that ware could no longer have been distributed. Ethnographic evidence suggests that the discrepancy between the latest date of production, and the latest use, of common, thin-walled, frequently used utilitarian pottery would not have extended over very many years, although there were undoubtedly exceptions. Studies of primitive pottery-using societies have shown, for example, that the (median) ages in years of small- to medium-size cooking pots in four communities[7] were 0.9, 2.6, 4.2-4.6, and 9.0 (Arnold 1985: 151-155; Rice 1987: 296-299).[8] The distribution process of the pottery, even in a case of market redistribution, would not, presumably, have significantly increased the life of most vessels. Although the effects of site formation processes and excavation (Schiffer 1987) often distort the simple chronological pattern of production-distribution-use-primary discard (and for that reason chronologically well-defined assemblages should be used for determining the date range of a ware or vessel type; see below), it is clear that the true chronology of a ceramic ware or vessel type depends on its production history.

The second reason why determining site-specific production provenance and distribution are important for chronology is that once these are known, the evidence from any site within the demonstrated geographical area of distribution of the ceramic ware can be used for defining its beginning and end dates of production and the date ranges of its constituent vessel types (*CPRG* and below, Section F). In contrast, care needs to be exercised when attempting to use for defining the date range of a pottery type of known provenance and distribution examples found at sites located at a distance from its distribution area (see, for example, *CPRG* 115-116, n. 39).

Most of the common cooking pottery used in the Galilee in the Roman period, and a small proportion of the culinary wares of the central and southern Golan, were made at Kefar Hananya

(*CPRG*). The site-specific production provenance at Kefar Hananya of this pottery has been demonstrated on several distinct classes of evidence:

– ***Literary sources:*** Only two Galilean settlements, Kefar Hananya and Shikhin, are noted in the extensive Rabbinic literature of Roman date as centers of pottery production (cf. *CPRG* 23-41, 227). Each of these settlements is mentioned several times in connection with pottery making. This information is significant – although it is quite possibly fragmentary: it is not possible to infer from this, for example, that pottery was not also made at other settlements not mentioned in these sources in connection with pottery – because the Galilee in the Roman period was the setting for a large part of the Rabbinic literature of the Land of Israel. Specific vessels (identified on our studies) are mentioned in these sources as products of these two production centers (Adan-Bayewitz 1986, 1989, 1990, *CPRG* 23-41, 224-227, 252).[9]

– ***Evidence from chemical and micromorphological analysis:*** *Chemical analysis*, employing high-precision measurement techniques (instrumental neutron activation and high-precision X-ray fluorescence analyses; Perlman and Asaro 1969, 1971; Adan-Bayewitz et al. 1999), of about 250 examples of the cooking vessel types most prevalent in Roman Galilee from 22 excavation sites in the Galilee and Golan showed: a) that they share a common chemical composition, and b) no evidence of distribution in the Galilee of these vessel types from a source of different composition (Adan-Bayewitz and Perlman 1985; *CPRG* 60-82).[10] This analyzed corpus also includes evidence from recent analyses, not included in *CPRG*, of pottery collections from additional sites, such as Tel Dor.[11] The analyzed group includes six main functional pottery forms (cooking bowls, wide-mouth cooking pots ["casseroles"], cooking pots with restricted rim, jugs with a wide body and shoulder handles, and jugs), among them all of the common types of cooking ware found in the Galilee in the Roman period (*CPRG* 83-154).[12]

The specific site of production of this ceramic compositional group has been located at Kefar Hananya based on the chemical analysis of three kinds of source material, all of which matched the above pottery group in chemical composition (*CPRG* 60-82):

Vessel types found at Kefar Hananya in larger quantity than at any other site.

Soil samples from the Hananya Valley, adjacent to the site of Kefar Hananya.

Waste from pottery production recovered in archaeological excavations at Kefar Hananya.

Comparative *micromorphological analysis* of the abovementioned vessel types and of soil materials has shown that this pottery was made from Terra Rosa soils rich in the kaolinite clay mineral. Areas in the Galilee characterized by soils rich in kaolinitic clay are relatively few, and are restricted to small local zones. One of these zones occurs in the Hananya Valley, adjacent to Kefar Hananya. These Terra Rosa soils developed from two parent materials: the insoluble residue derived from chemical weathering of hard limestone from the Lower Cretaceous period, and a large component of aeolian dust. Due to the properties of kaolinitic clay – low drying shrinkage and stability during firing, with the ability to be heated relatively fast without damage to the vessel (Rye 1981: 29-30; Rice 1987: 44-47), together with the large component of silt-size quartz grains of aeolian origin – this soil material was particularly well suited for the production of cooking ware, without the addition of temper (Adan-Bayewitz and Wieder 1992; Wieder and Adan-Bayewitz 1999, 2002).[13]

It is noteworthy in this context that the pottery vessels of Kefar Hananya and Shikhin are distinguished in a Rabbinic source for their durability under conditions of thermal stress. Rabbi Yose ben Halafta, a resident of Sepphoris active around the mid 2nd century, attests in a legal text that the durability under such conditions of the pottery of these two settlements is comparable to that of metal vessels (*Bavli Shabbat* 120b; *CPRG* 38-41).[14]

– ***Evidence from archaeological excavations:*** The third class of evidence for the site-specific production provenance of the most common Galilean cooking ware of the Roman period came from three seasons of excavations conducted by the writer, in the wake of the initial analytical study described above, at the site of Kefar Hananya. The following finds are relevant to the present discussion:

A large, well-built pottery kiln of 4th century CE date, with a stone-paved approach and an outer structure (possibly a fuel store) supported by ashlar pillars. These components were all built in a trench (3-3.5 m wide) cut into the slope.

A dump of discarded pottery, apparently ruined in production, in the recess above the destroyed pottery kiln. The dump contained an estimated

9,500 to 13,000 whole vessel equivalents (based on a count and measurement of the vessel fragments from a one-cubic-meter sample of the dump).[15] About 98% of these fragments belonged to two cooking vessel subtypes (Form 1E and a late version of Form 4C; see below), but virtually no examples showed signs of use (Adan-Bayewitz 1991, 1997).

Waste from production of Kefar Hananya Forms dating to the Early, Middle, and Late Roman-Early Byzantine periods. The wasters include examples of unfired fragments, partially vitrified pieces, warped examples, vessels fused to one another, and pottery cracked during firing.

Examples of all of the vessel subtypes that had been attributed, in the analytical study, to Kefar Hananya production. Several of these subtypes were found at the site in larger numbers than at any other excavated site in the Galilee.

In addition to the conventional excavations conducted at three locations at the site, 68 squares of 2x2m, 20 cm in depth, were excavated in all areas of the site of Kefar Hananya, with the goal of investigating diachronically settlement distribution and ceramic production. (This method of site investigation is similar in some ways to "shovel testing," or "test pit sampling;"[16] the former term, or "shovel test," will be employed below for describing our work at Kefar Hananya.) Ceramic waste from pottery production was found in 11 squares (not including our main excavation area) located in different areas on the lower part of the slope of the site. In addition to the definitive evidence of pottery production in the Early, Middle, and Late Roman-Early Byzantine periods found in our main area of excavations, the evidence from the shovel test showed that pottery was produced at more than one location on the lower slope of Kefar Hananya during the Middle and Late Roman-Early Byzantine periods, and probably also in the Early Roman period (*CPRG* 55, 78; Shenkman 1999 and Table B6).[17]

Evidence for production during the same period at more than one location at Kefar Hananya is also consistent with information provided in a literary text. The abovementioned Rabbi Yose ben Halafta rules, in another legal passage, that since pottery, or balls of clay prepared for throwing pottery vessels, was always available at Kefar Hananya and Shikhin ("even though this one [i.e., potter] has none, the other one will have [some]"), a price could be set for the purchase of pottery at these two production centers all year round (*Tosefta Bava Mezia* 6.3 [ed. Lieberman, p. 93], cf. *Mishna Bava Mezia* 5.7; *CPRG* 23-26, 235-236).[18]

The provenance assignment of these vessel types to Kefar Hananya is further supported by the homogeneous typology of the pottery forms: vessels of these functional forms found at sites relatively distant from Kefar Hananya are identical in their form and fabric, and by their geographic and quantitiative distribution. This distribution has been studied, and a considerable number of excavated corpora counted. It was found that the relative quantity of Kefar Hananya pottery recovered at an excavation site is generally inversely related to the distance of the site from Kefar Hananya (*CPRG* 201-223).[19]

The potters of Kefar Hananya were the principal suppliers of cooking ware to the Lower and Upper Galilee, to both villages and cities, from the Early Roman through the Early Byzantine period.[20] We have shown, for example, that about 75% of the cooking pottery of Sepphoris (about 26 km from Kefar Hananya) in the Roman period came from Kefar Hananya (Adan-Bayewitz and Perlman 1990). These vessels also occur in relatively large numbers at pagan sites, such as Tel Anafa,[21] but their principal market was the Jewish settlements of the Galilee (*CPRG* 201-223). The proportions of Kefar Hananya pottery found at sites in the Central Golan are relatively small (10-20% of the cooking ware) compared to those found at Galilean sites located at a similar distance from Kefar Hananya. We have suggested that these differences in distribution between the two regions may be attributed to the comparatively difficult accessibility of the Golan, and, consequently, the increased cost of transport. The bulk of the cooking ware of the Central Golan settlements during the Roman period was made locally (*CPRG* 165-181, 211-219, 247-249; see also below).

The definitive evidence on the site-specific provenance and distribution throughout the Galilee and into the Golan of Kefar Hananya pottery is provided, of course, by the analytical data. The information from archaeological excavations and literary sources is consistent with the evidence from the analytical data, and also contributes additional perspectives on socio-economic, ecological, technological and cultural processes relating to pottery making at Kefar Hananya, and on the historical developments that may have affected the production and distribution of Kefar Hananya ware (see *CPRG* esp. 201-253, and Adan-Bayewitz, in press).

Having established that most of the common cooking vessels used in the Galilee and a small proportion of those of the Golan were made at Kefar Hananya, it is now possible to utilize the available evidence on pottery production at Kefar Hananya itself to help clarify the production history of these wares. Prior to that discussion, however, we will first turn to a different kind of evidence, from the Golan, on the chronology of the vessel forms discussed in this paper.

E. The Golan survey data

1. Introduction and chronological seriation

Valuable independent evidence on the chronology of the common utilitarian pottery of northern Judaea/Palestine was obtained from a surface survey conducted by C. Ben-David in the Central Golan (Ben-David 1999).[22] Important methodological features of this survey were the unusually large number of fragments datable to the Hellenistic through Byzantine periods systematically collected from the 45 surveyed settlement sites, and the high proportion of conclusively identified vessel fragments. Except for two sites, from which 50 and 55 rim fragments were collected, the collections of diagnostic sherds (only rim sherds were counted) from these periods ranged in size from 75 to 464, with 36 collections including more than 100 counted sherds. The mean percentage of identified vessels, listed for each site, was 91%; fragments not conclusively identified were not included in the subsequent analysis (ibid.).

Comparison of the pottery collections from the 45 settlement sites, including a total of 6864 identifiable rim fragments that could be generally assigned to the Roman and Byzantine periods (late 1st century BCE - mid 7th century CE), showed that they differed markedly in their typological makeup. As mentioned above, it has been demonstrated that most of the Golan cooking pottery of Roman date was made locally, while only a relatively small proportion (10-20%) came from Kefar Hananya.[23] The common cooking vessels of Roman date produced at Kefar Hananya and those made in the Golan are virtually identical in form, however (*CPRG* 165-166, 172-179). Under ordinary circumstances, without knowledge of local pottery production provenance, archaeologists would routinely assign the Golan pottery forms to the same date ranges as those demonstrated for the same forms in the geographically contiguous Galilee (see, e.g., Porat and Killebrew 2000: 129). It was decided, however, that a more rigorous analytical appoach would be adopted for the Golan pottery, and the date ranges of the common Golan cooking ware would be determined independently from those of the Galilee, based on evidence from the Golan itself (see also *CPRG* 166). In contrast to the Galilee, however, very little pottery from the Golan had been published and stratified sequences of pottery from controlled excavations were not available.[24] It was necessary, therefore, to analyze the corpus of pottery from the Golan survey itself in order to determine the dates of the Golan vessel forms (Ben-David 1999: 148-149).

Two chronological anchors were available to aid in dating the corpus of Golan survey pottery. The first was the pottery corpus from the site of Gamala, which ceased to exist as a settlement in the year 67 CE (Syon 1992-1993; 1995: 22; Gutman 1994), providing an unequivocal *terminus ante quem* date for the Early Roman forms found at that site. Although the complete pottery corpus from the Gamala excavations had not been systematically published,[25] the entire collection from four seasons of excavation of one extensive residential area had been studied by Adan-Bayewitz, who published quantitiative data on the cooking wares as well as measured drawings of excavated pottery analyzed from the site (Adan-Bayewitz 1985; *CPRG* esp. 165-181).

The second chronological anchor was provided by the "Late Roman Red Ware" (LRRW), common at sites of Byzantine date in the Central Golan. These LRRW forms, produced in North Africa, Asia Minor and apparently Cyprus, had been classified and dated by J.W. Hayes in a major study and supplement, and later papers (Hayes 1972, 1980, 1998, 2001), based on well-dated finds from Mediterranean sites.[26] These wares appear at sites in the Golan beginning with the 4th century, becoming common from the latter part of that century (Ben-David 1999: 148-149). These two anchors enabled chronological seriation (ordering), with firmly dated reference points, of the pottery forms from the Golan survey independently of the chronological sequence demonstrated for the virtually identical vessel forms in the Galilee.

Presented in Ben-David's study were five "Period Sites," whose collections ranged in typological composition from a repertoire identical to that of

Gamala for one Period Site, to two site collections, themselves differing in typological composition, showing no overlap whatsoever with the Gamala repertoire but including many examples of LRRW,[27] with the final two collections displaying intermediate degrees of overlap with these three Period Sites. By comparing the collections from the other 41 surveyed sites with the repertoires of the five Period Sites, it was possible to seriate the pottery forms of the Golan within the Roman period, independently of the dates of the same forms in the Galilee (ibid., 148-171).

A comparison of the resulting chronological seriation obtained for the Golan vessel forms with the sequence of the Kefar Hananya Forms recovered from well-dated excavated contexts at Galilean sites (presented in *CPRG*)[28] showed no significant discrepancies for the corresponding forms in the two geographical areas (Ben-David 1999: 148-169). Based subsequently on the dates of the pottery collections recovered at each of the Golan sites, it was demonstrated that the settlement history in the Central Golan was characterized by the cessation of old settlements, and the founding of new ones, in the course of the Early Roman through Late Byzantine periods, with a relatively high incidence of change in the Middle and Late Roman periods (ibid., 148-254).

This new evidence on the settlement history of the Golan, based on a large, systematically studied data set from 45 settlement sites (see also below, Section E.2), supersedes the archaeological/historical reconstruction of the history of the Central Golan presented by veteran Golan researchers Z.U. Ma'oz and, in contrast, D. Urman, in a number of publications: that there was a virtual, or total, settlement gap in this area from the destruction of Gamala in 67 CE until the late 3rd or early 4th century (Ma'oz 1993a; 1995: 349; 1997: 421), or that the large number of Jewish settlements in the Central Golan was little changed from the 1st century CE through the Byzantine period (Urman 1985; 1995: esp. 383-384). Ben-David showed instead that Gamala was the *only* settlement destroyed in 67 CE, that the settlement pattern in the Central Golan was a dynamic one, characterized by numerous changes from the Early Roman through the Byzantine period, and that the number of settlements in this area in the Middle Roman period was one of the largest, if not the largest, of any period in late antiquity (Ben-David 1999, esp. 11-13, 222, 224).

2. Correspondence Analysis of the Golan survey data

Another, independent, analysis of the Golan survey data, using statistical analysis, is presented below. This analysis will provide an *objective statistical presentation* of the chronological sequence of the pottery corresponding to the Kefar Hananya Forms recovered in the Central Golan survey.[29] In order to facilitate the interpretation of the output from the statistical analysis, a table of the most common Kefar Hananya vessel forms (those included in the analysis; see below), and their dates as given in *CPRG*, is provided below.

Form	*Main period*	*Suggested dates (CPRG)*
3A	ER	mid 1st c. BCE - mid 2nd c.
4A	ER	mid 1st c. BCE - mid 2nd c.
4B	ER	mid 1st CE - mid 2nd c.
1A	MR	latter 1st - latter 3rd c.
1B	MR	late 1st/early 2nd - mid 4th c.
3B	MR	early 2nd - latter 4th c.
4C	MR	early 2nd - mid 4th c.
1C	LR	mid 3rd - latter 4th c.
1D	LR	mid 3rd - latter 4th c.
1E	LR - E Byz	mid 3rd - earlier 5th c.

Table 1 *The most common Kefar Hananya vessel Forms, in chronological order of earliest appearance. Shown for each Form are the main period or periods of occurrence, and the suggested dates given in CPRG. Our division of the periods for the classification of the Galilean pottery: Early Roman: mid 1st century BCE - mid 2nd century CE; Middle Roman: mid 2nd - mid 3rd c.; Late Roman: mid 3rd - mid 4th century; Early Byzantine: mid 4th - mid 5th century (see also CPRG 87). "Earlier" and "latter" refer to the first half and second half of the century, respectively (CPRG 97, n. 18).*

The number of rim fragments of each vessel form recovered at each of the Golan survey sites can be summarized, and these summaries, for all sites, can be expressed as a table where the rows are the individual sites and the columns the vessel forms. A statistical technique for analyzing such a table is Correspondence Analysis (CA).[30] CA, a descriptive technique that displays pattern in the data, is very effective for revealing relationships among the analyzed cases (in our example, archaeological sites) and among the variables (in our example, vessel forms), and between cases and vari-

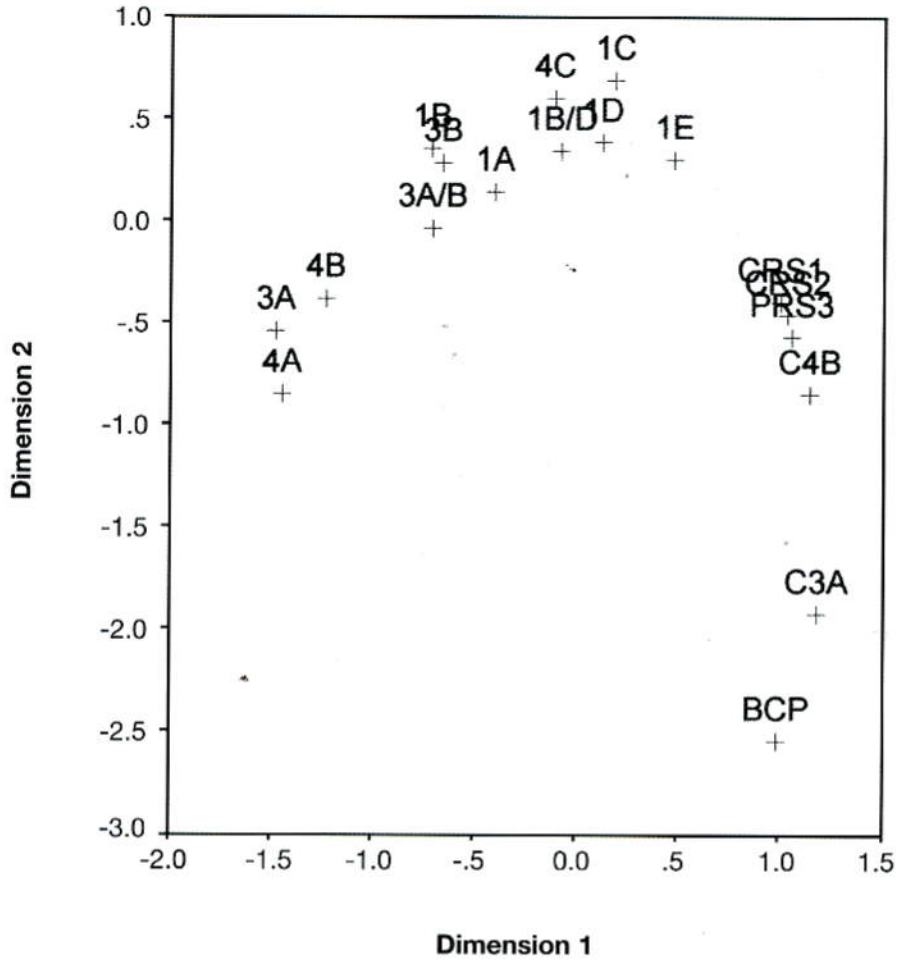

Fig. 2 *Correspondence Analysis plot of the Golan survey data set. The column plot shows a clear chronological ordering of the pottery forms, from Early Roman Forms 4A and 3A to Late Byzantine Forms C3A and BCP.*

ables. The output can be presented as three plots, a row plot, a column plot, and a combined plot showing both row and column points. In the present analysis, for example, in the row plot each site is described by the proportion of the vessel forms found at the site, while in the column plot each form is described by the proportion of that form recovered on the different sites. On the row plot, sites which have similar proportions of each form are shown in the same area of the plot, while on the column plot the forms that have a similar site profile are shown in the same area of the plot. Inertia is the term used for describing how much variation in the data is explained by each axis, or dimension, of the plot.

CA is often used for seriation. When the data derive from sites relatively well distributed in a single, relatively small, geographically defined and evidently culturally homogeneous locality, as in the present example, the ordering can be interpreted diachronically. The resulting order is relative, however, and external evidence is needed if the start and finish of the chronological sequence are to be identified.

The Golan survey data set is of sufficient quantity to, on the whole, reflect the pattern of usage of the various vessel forms over time in this geographical area. It can be shown, moreover, that the main biases of data derived from surface survey do not significantly compromise the validity of the output of the Correspondence Analysis presented here.[31]

The data from all surveyed settlement sites in the Central Golan (N = 45), and for all vessel forms of Roman and Byzantine date, not including storage jars, that account for at least 1% of the assemblage (N = 18), were analyzed by Correspondence Analysis. Twenty-three forms occurring in smaller proportions were omitted from this analysis to allow the names of the main vessel forms to be discernable on the plot. A total of 5916 vessels, with between 48 and 344 vessels from each site, were included in the analysis.[32]

Fig. 2, the column plot from this CA, shows a clear ordering of the vessel forms. The curved shape of the plot, known as the "horseshoe" or "Guttman" effect, is characteristic of CA in the presence of seriation structure (Baxter 1994: 119-120).[33]

As mentioned above, the order shown in the CA plot is relative and external evidence is needed to anchor the sequence in terms of absolute chronology. This evidence is provided by the fixed reference points discussed above: Golan and Kefar Hananya Forms 3A, 4A, and 4B occur at Gamala, with the former two Forms accounting for the bulk of the common cooking ware at the site in the Early Roman period (*CPRG* 166, 221-223, Table 11).[34] As mentioned, Gamala ceased to exist as a settlement site in the year 67 CE. A second reference point is provided by the date ranges of the Late Roman Red Wares (LRRW): Cypriot Red Slip (CRS) Forms 1 and 2,[35] and Phocaean Red Slip (PRS, also called Late Roman C) Form 3, which together range from about the latter part of the 4th until the early 6th century (on these Forms, see also below, Section F.3-4).

Inspection of Fig. 2 shows that all of the vessel forms assigned in Table 1 to the Roman period extend in sequence from Forms 3A, 4A and 4B of the Gamala repertoire, through Form 1E, appearing prior to the LRRW Forms of the Early - Middle Byzantine periods. Comparison of the sequence for the Roman period in the CA plot, Fig. 2, with the chronological ranges of the pottery forms given in Table 1 shows agreement. Thus, the sequence begins with Early Roman Forms 3A, 4A, and 4B, which appear separately, and ends with relatively late Forms 1C and 1D, followed by Form 1E, with the Middle Roman forms occurring in between.[36]

CRS Forms 1 and 2 and PRS Form 3 appear in a separate group, along with "Competing," (i.e., not made at Kefar Hananya, but the early examples occur together with Kefar Hananya Forms in Galilean assemblages of the Late Roman and Early Byzantine period; *CPRG* 155-164, and see below, Section F.3-4), Form C4B, a restricted rim cooking pot (henceforth: closed cooking pot) common in the Early - Middle Byzantine periods.[37]

The last and latest forms in the sequence on the CA column plot are Forms C3A (*CPRG* 156-159) and BCP (= Byzantine cooking pot), the common open ("casserole") and closed Byzantine cooking pots corresponding to types C5 to C7, and C3, respectively, of the Capernaum classification (Loffreda 1974: 48-49, 46). These two forms were the only Byzantine cooking pots found at the site of Kh. Daliyye in the Golan,[38] where the only examples of LRRW recovered were PRS 10 and CRS 9, dated by Hayes to the late 6th and 7th centuries (Ben-David 1999: 132-133; 216; Hayes 1972: 343-346 and 378-382, respectively).

To summarize: The chronological analysis by Ben-David (1999) of the pottery from the Golan survey, and the present Correspondence Analysis of the same data set, have shown that there is no significant discrepancy between the dates of the main Kefar Hananya pottery Forms and those of the virtually identical Forms made in the nearby Golan. These findings are consistent with the limited published chronological evidence currently available from excavations in the Golan: extensive excavations at Gamala (*CPRG*) and excavations of synagogues at Dabiyye and Qasrin, and of a residential structure at H. Kanaf (Killebrew 1991: 66-67 and Fig. 1; Porat and Killebrew 2000: 129-130, Fig. 19.2: 1-10; Ben-David 1999: 156-157, and see below, Section F.4), as well as with the occurrence of well-dated Kefar Hananya Forms in the same context, and sometimes in the same locus, with pottery of local Golan production (some of these associated vessels were analyzed: *CPRG* 165-166, 173-178). The findings from the analysis of the Golan survey data set, that the date ranges of the Golan pottery Forms in the Roman period correspond to those of Kefar Hananya, are also consistent with the fact that during a period of more than four hundred years the Kefar Hananya pottery Forms were imported in significant numbers (10-20% of the cooking ware) to the Golan sites – so these forms were well known in the Golan – while virtually identical forms were being made, employing the same technological tradition (Porat and Killebrew 2000: 129-130), at a number of locations in the Golan (*CPRG* 165-181, 190-200, 247-249). Consequently, the evidence from excavations in the Golan and from the analysis of the Golan survey data set can be used, together with the evidence from the Galilee, in the discussion below on the dating of the corresponding Kefar Hananya and Golan pottery Forms.

F. The chronology of the Kefar Hananya wares

Three sources of information are utilized below to update *CPRG* on the chronology of the Kefar Hananya wares: (1) Based on the demonstrated provenance at Kefar Hananya of most of the common cooking vessels of the Galilee (see above), use will be made of the available evidence on the history of pottery production at Kefar Hananya itself.[39] (2) Having established, employing Correspondence Analysis, that the chronological sequence of the common cooking pottery found at Golan sites is consistent with that of the corresponding Kefar Hananya Forms (see above), reference will also be made to the dating evidence provided by the Golan survey data set. (3) Chronologically well-defined assemblages that have become available since *CPRG* was submitted to press in 1988.

1. The Early Roman period

The earliest appearances of Kefar Hananya ware were dated in *CPRG* to the second half of the 1st century BCE, based on assemblages from the excavations at Capernaum and Meiron (a date of ca. 50 BCE was suggested for the beginning of production).[40] I cautioned, however, that closely datable assemblages from this early period were very few, and future published excavations might lead to a revision of several decades of the estimated initial production date at Kefar Hananya (*CPRG*: 114-117, 148-149).

Although the question of the date of earliest appearance of Kefar Hananya ware has still not been adequately resolved, additional closely dated evidence for part of the Early Roman period, beginning with the late 1st century BCE - early 1st century CE, has now been supplied by statified assemblages from Tel Anafa. Careful study by the excavators of the earliest occurrences of Kefar Hananya Forms at Anafa showed that they did not predate the Roman occupation at the site. The earliest well-dated examples of Kefar Hananya ware at Anafa appear in the earliest Roman phase, Roman 1A (ROM 1A), dated by coins, fine tableware, lamps and glass to the late 1st century BCE - early 1st century CE (Herbert 1994: esp. 21, 26, 29-30, 109-110; Meshorer 1994; Slane 1997: 261-264, 267, 301-302).[41] The site of Tel Anafa was abandoned, however, between the end of Hellenistic phase 2C, dated to 75 BCE, and the Early Roman occupation (Herbert 1994: 19, 21, and, e.g., 39, 98-100; Slane 1997: 257-258), and there is no way of judging from the Anafa evidence at what date between these two chronological markers the products of Kefar Hananya were first made and distributed.

Additional information in the Anafa report relevant to the chronology and typology of Kefar Hananya ware is the publication and dating for the first time of a newly identified Kefar Hananya vessel form, a cooking bowl that first appears in ROM 1A at Anafa, along with cooking pot Forms 3A and 4A.[42] Berlin reports confirmation by Adan-Bayewitz that this new vessel form is a product of Kefar Hananya, based on chemical analysis of examples recovered in excavations at Kefar Hananya (Berlin 1997a: 14-15, 112-114, PW 304-310).[43] Although these bowls, characterized by an overhanging rim, differ typologically from the series of Kefar Hananya cooking bowls that first appear in the latter part of the 1st century CE, as a *functional form* this vessel predates Kefar Hananya Form 1A as the earliest cooking bowl produced at the site (see also below).[44]

The available evidence from the archaeological investigation of Kefar Hananya itself is also consistent with a post-Hellenistic *terminus post quem* for the beginning of the settlement and of ceramic production at Kefar Hananya. No finds that can be assigned to the Hellenistic period, other than one coin (see below), have been found in the conventional excavations, shovel test, or surface survey[45] that have been conducted at the site. Remains dating to the late 1st century BCE - first half of the 1st century CE have been unearthed at Kefar Hananya, but statigraphic and typological analysis have not progressed far enough to enable narrower chronological definition. Only 16 coins of Hellenistic, Roman or Byzantine date were recovered in the course of the excavations, 11 from the main excavation area and the remaining five from the shovel test squares.[46] The earliest of these are a Seleucid specimen (possibly Antiochus III, 223-187 BCE), a coin of Tiberius dated to 20-21 CE, and a Tyrian coin of 41-42 CE. These three coins, although consistent in date with other excavated remains of the late 1st century BCE - first half of the 1st century CE, are too few to permit a more precise dating of the beginning of settlement and pottery making at Kefar Hananya.

All of the above evidence from the excavations at Tel Anafa and Kefar Hananya is consistent with the conclusion in *CPRG* that production of Kefar Hananya ware did not predate the Roman period.[47] The initial date of production, apparently

sometime between the mid 1st century BCE and the turn of the millenium, still needs to be better defined, however, with the aid of well-dated assemblages from Galilee and Golan sites and further evidence from analysis of the remains from our excavations at Kefar Hananya.

Supplementary evidence to that of Gamala (*CPRG* 118, 126-127, 165-181, 205-206, 221-223) for the pottery repertoire at another settlement that evidently ceased to exist in 67 CE is now supplied by extensive excavations at Iotapata (Adan-Bayewitz and Aviam 1997, and personal examination by the author),[48] while a terminal date in the 50s or 60s of the 1st century is indicated for the Roman settlement at Tel Anafa.[49] The survey collection from the geographically distinct eastern part of the village of el-Jumeize (henceforth: Jumeize) in the Golan (N = 328 identified vesssels) was characterized by the same vessel types, and apparently about the same 67 CE *terminus ante quem*, as Gamala, about two km to the east (Ben-David 1999: 114-116, 150-155).[50] Forms 3A and 4A predominate among the cooking wares at all of these sites, while Form 4B occurs in relatively small numbers at Gamala, Iotapata, and Tel Anafa but is more plentiful at East Jumeize.[51] The Anafa publication provides useful quantitiative data for each of these Forms. The predominance of Forms 3A and 4A (85% of all recognizable Early Roman cooking and kitchen/utility vessels [excluding jars]; Berlin 1997a: 31) and occurrence of Form 4B at pagan Anafa, as at Jewish Gamala and Iotapata, is noteworthy (Herbert 1994: 30; Berlin 1997a: esp. 14-15, 30-34 and n. 82; 86-87, 91-92, 102).[52] A few rare, early examples of cooking bowl Form 1A, apparently the latest Kefar Hananya Form to be introduced in this pre-67 period, have appeared at Iotapata and Jumeize,[53] in addition to several fragments of Form 1A previously reported from Gamala (*CPRG* 88). The dates given in *CPRG* for the initial production of Forms 4B and 1A, mid 1st century and "probably ... about the seventh decade of the first century," respectively (*CPRG* 88-90, 126-128), seem consistent with the new evidence for these Forms.[54]

Form 4B, along with two types of Eastern Sigillata A (ESA TA Types 23 and 35), served as chronological markers for the final phase of continuous Early Roman occupation (ROM 1C) at Anafa (Herbert 1994: 29-30; 109-110 and n. 308; Berlin 1997a: 86-87, 92).[55] The presence of Form 4B was similarly used as an indicator of the latest period of habitation at Iotapata (Adan-Bayewitz and Aviam 1997: 139, 141 n. 13).[56]

Results of the shovel test suggest extensive occupation at Kefar Hananya already in the Early Roman period (mid 1st century BCE - mid 2nd century CE) – pottery of this date has been recovered from 42 of the 68 squares – especially when the heavy overlay of remains from later periods is considered (Shenkman 1999). The common occurrence of Early Roman pottery in the shovel test squares is explained in part by the fact that pottery was being made at the site during this period (see above). But pottery of this period was also found in squares on the higher part of the Kefar Hananya slope, where there was no evidence of ceramic production (ibid.).

2. 2nd and 3rd centuries

The first two volumes of the Dor excavation final report (Stern 1995) present one large pottery assemblage of well-defined Roman date that included one example of Kefar Hananya Form 1A and two of Form 1B. The context, L. 4019 in Unit F 46, assigned to phase 1, was a broad, shallow pit that apparently cut through a phase 2 floor (L. 4072). The pottery deposit included examples of ESA and other imported forms, and six identifiable lamp fragments, all of which can be dated to the 2nd to early 3rd centuries CE (Guz-Zilberstein 1995: 321-325).[57] The cessation of the continuous Hellenistic and Roman settlement at Tel Dor is dated not long thereafter.[58]

Although the published drawings and descriptions of the examples of Kefar Hananya Forms 1A and 1B from the Tel Dor excavations left little room for doubt about their origin, due to the relatively large distance of Dor from Kefar Hananya (geodesic distance of about 57 km)[59] it was decided to systematically study and count vessel types in assemblages of Roman date from Tel Dor and analyze objectively-sampled pottery groups from that site.[60] The goals of this project were to estimate the proportions of Galilean pottery in Roman-period contexts at this coastal city, and investigate or verify by chemical analysis the site-specific provenances of various vessel types. The count showed that Forms 1A and 1B were not uncommon at the site. No examples of Kefar Hananya Forms of the Late Roman period (e.g., Forms 1C, 1D, 1E, 4D, 4E; cf. above, Fig. 2), dated in *CPRG* from the mid 3rd century, were found in any of the examined Tel Dor assemblages.[61]

In the first stage of the analytical study of the Roman-period pottery from the Tel Dor excavations, all examples of pottery pieces identified by visual in-

spection as Kefar Hananya Forms 1A and 1B from one locus containing a relatively large number of these Forms (L.7225 in Area B2) were taken for analysis.[62] This objectively selected sample, including five fragments of Form 1A and eight of Form 1B, was analyzed employing high-precision X-ray fluorescence analysis (Adan-Bayewitz et al. 1999). It was found that 12 of the 13 analyzed pieces matched closely in chemical composition with the Kefar Hananya provenance group. The last sample did not match as well as the others, but it was close in composition to the Kefar Hananya group and there is no reason to suspect that it was not made at Kefar Hananya. Despite the distance of Dor from Kefar Hananya, therefore, the findings from the analysis of these samples are consistent with the identification, by visual inspection, of Forms 1A and 1B found at Dor as products of Kefar Hananya.

Further evidence of the pottery repertoire typical of the Middle Roman period in the Galilee and Golan is now supplied by the survey and shovel test conducted at el-Qusayibe (henceforth: Qusayibe), one of Ben-David's Period Sites (Ben-David 1999: 142-143, 166-168). The 154 identified vessel rims collected in the site survey were of Hellenistic (12% of the rims), Early Roman (Forms 3A, 4A and 4B were common at the site), and Middle Roman (33% of the rims; mostly Forms 1A, 1B, 1B/D, 3B, and 4C) date. Four pieces of Form 1D were also recovered (cf. above, Fig. 2).[63] Remarkable was the absence at the site of any examples of Form 1E. This was by far the most common vessel Form recovered in the Golan survey, occurring at 93% of the sites and accounting for 30% of all identified vessels (Ben-David 1999: 166). The date suggested in *CPRG* for the first apparence of Form 1E (and Forms 1C and 1D) is the mid 3rd century.[64]

Although, a priori, we would expect to find on the surface of a settlement site potsherds from the latest period of its existence, we wished to test more rigorously whether the surface collection indeed represented settlement in all areas of Qusayibe. As part of a comparative methodological study of survey techniques by Ben-David and myself, we therefore conducted a shovel test at Qusayibe. About 100 identifiable rim sherds were collected from 15 test pits planned to cover all areas of the ca.10 dunam site. No significant difference was found between the proportions of pottery collected in the surface survey and shovel test, other than the absence from the latter collection of Form 1D. As in the survey at Qusayibe, no examples of Form 1E were recovered in the shovel test at the site.

Supplementary evidence, not yet published in detail, for the Middle Roman period comes from pottery assemblages recovered in excavations of residential structures at the site of Khirbet Nasr ed-Din, just west of Tiberias, and at Sepphoris.

The relatively extensive excavations (ca. 30 squares) at Kh. Nasr ed-Din produced a large assemblage with a well-defined Middle Roman date. The assemblage, dated by the excavator to the 2nd-3rd centuries (Ben Nahum 1999: 22),[65] is dominated by the Middle Roman Kefar Hananya Forms (above, Table 1) and contemporaneous Galilean storage jars, including many restored examples and large fragments. Except for a single vessel fragment, no examples of the latest Kefar Hananya Forms (e.g. 1E, 4D, 4E, see below, Section F.3-4) were noted by us in our examination of the Nasr ed-Din excavation collection.[66]

A study of a large pottery group with a *terminus ante quem* of 363 and relatively narrow date range, recovered from the earthquake destruction level of that date[67] at Sepphoris (from the western area of the summit and the Roman villa on the eastern part of the summit), has recently become available (Baluka 1999).[68] The principal evidence provided by this important collection pertains to the Late Roman and Early Byzantine periods, to be discussed below. Relevant to the 2nd-3rd centuries is the summary of the Kefar Hananya Forms prevalent in relatively well-dated Middle Roman cistern deposits on the western area of the summit of the site, and the information provided on whether these Forms occurred in the 363 destruction deposits.

Common in these 2nd-3rd century cistern groups were Kefar Hananya Forms 1A, 1B, 3B, 4C, 5A, 6A and 6B (ibid. 48, 51-52, 58-59, 63, 90-91).[69] Forms 1A, 4C, 5A, 6A, and 6B were completely absent, however, from the abundant finds in the 363 destruction level, while examples of Forms 1B and 3B were so few that Baluka questions whether their production continued until this period (ibid.). The Sepphoris 363 destruction level evidence relating to the chronology of all of these Forms is consistent with their terminal dates as suggested in *CPRG* (see now also the new evidence presented above).

3. 4th century

The study of the pottery group from the 363 destruction level at Sepphoris now provides valuable supplementary evidence for the mid 4th cen-

tury. This last habitation level prior to the 363 earthquake is well dated by coins to a relatively brief period, and the Late Roman Red Ware and lamps are consistent in date. Most of the coins date to 351-361 (Constantius II), while the latest specimen is of 361-363 (Julian) (Baluka 1999: 44, 90).[70] Late Roman Red Ware represented include African Red Slip (ARS) Forms 32/58, 59 (both 59A and 59B), 60, 61A, and 67, and Cypriot Red Slip (CRS) Form 1, all except for Form 60 with more than one example (ibid. 83-87).[71] The lamps are of two types: ovoid lamps with impressed decoration, and "bi-lanceolate" lamps.[72]

The chronological evidence provided by the 363 Sepphoris destruction level is largely consistent with the dates given in *CPRG*, contributing however in two instances to correcting or refining slightly (but significantly) the chronology of individual vessel types. The primary importance of the Baluka 1999 publication for the study of the pottery of Late Roman and Early Byzantine northern Palestine, however, is that it supplies a large assemblage from a destruction level narrowly dated to the mid 4th century, a period of transition in Galilean pottery production (ibid. 48-49, 90-92; *CPRG* 124, 148-150, 155-164). The group was systematically studied and carefully presented, moreover, by a researcher knowledgeable in Galilean pottery.[73] The finds from the destruction level relevant to the subject of this paper will therefore be presented in some detail in the discussion below.

Kefar Hananya pottery found in the 363 destruction level included: Forms 1D and 1E, the latter being the dominant and virtually the only Form 1 vessel in the assemblage, 4D, 4E, 5B, and 6C (Baluka 1999: 51-69). The latter five Forms are identified in *CPRG* (103-109, 130-135, 139-141, 144-146) as the latest common pottery types produced at Kefar Hananya. As mentioned above, a few examples of Forms 1B and 3B also occurred (Baluka 58-59, 63).

Classification of the Kefar Hananya pottery in the 363 destruction level to *functional* forms shows that only Forms 4D and 4E among the closed cooking pots were found, while Form 4C, the predominant closed cooking pot in 2nd to early 4th century contexts in the Galilee and Golan (*CPRG* 128-130, and see also above, Section F.2), was absent (Baluka 1999: 51-56). In contrast, both Forms 4D and 4E were absent from the 2nd-3rd century Sepphoris cistern deposits discussed above (ibid.). Among the cooking bowls and open cooking pots ("casseroles"), Kefar Hananya Forms 1B and 3B, both very common in Middle Roman Galilean and Golan assemblages (*CPRG* 91-97, 119-124, and see above) including at Sepphoris, were represented by only a few fragments, while Form 1E was common (Baluka 1999: 58-59, 63, 65-66). Form 1D was considerably less common than 1E throughout the Galilee and Golan (*CPRG* 100-103), and also at Sepphoris (Baluka 1999: 65). Note that while closed cooking pot Form 4C was superseded by Kefar Hananya Forms 4D and 4E which were common in the 363 destruction level, open cooking pot Form 3B was largely replaced in that level by the products of other pottery makers (see below). Forms 5B and 6C are the late versions of Kefar Hananya jugs with wide body and shoulder handles, and jugs, respectively (*CPRG* 139-141, 144-146; Baluka 1999: 67, 69).

Other cooking ware, not made at Kefar Hananya, was reportedly found in the 363 Sepphoris destruction level in even larger numbers than that of Kefar Hananya (Baluka 1999: 51). These cooking pots, called in *CPRG* "Competing Ware" (i.e., pottery that competed with that produced at Kefar Hananya, serving the same functions) and classed as Forms C3A (open cooking pot, "casserole"), C4A, and C4B (closed cooking pots), first appeared in the mid to latter part of the 4th century (dates of initial appearance suggested in *CPRG*: mid 4th, mid 4th, and latter 4th century, respectively; *CPRG* 155-164). They were shown to have been common in assemblages of the late 4th and early 5th centuries at Meiron and Capernaum, where they occurred in the same contexts with Kefar Hananya cooking ware (ibid.). Counts of Kefar Hananya Forms 4D and 4E and Competing closed cooking pots in stratum V of the Meiron II residential building, well dated to the late 4th to early 5th century, for example, showed that the latter cooking pots occurred in quantities comparable to those of the Kefar Hananya vessels (*CPRG* 161-162 and Table 11, 221-223). During the earlier part (i.e., first half) of the 5th century, these Competing closed cooking pots, and particularly Form C4B, replaced Kefar Hananya Forms 4D and 4E as the standard Galilean closed cooking pots (*CPRG* 149-150, 159-164). The open cooking pots of Kefar Hananya ceased to be produced by perhaps the third quarter of the 4th century; Kefar Hananya Form 3B was superseded by Competing Form C3A, which became the standard open cooking pot of the Galilee (*CPRG* 124, 156-159). The cessation of production

of open cooking pot Form 3B, one of the main Kefar Hananya functional Forms, marks the beginning of the decline of Kefar Hananya's hegemony in the Galilean pottery market (*CPRG* 124, 149, 240).

Assuming that Baluka'a assessment, that the Competing Ware Forms occur in the 363 destruction level in larger numbers than those of Kefar Hananya, is accurate (counts are not provided), this assemblage would now provide evidence for the *common use* of Competing Ware at Sepphoris at a somewhat earlier date (by 363) than that heretofore attested from the Meiron assemblages. It is likely, however, that the relative *quantities* of this pottery at a particular site were affected by the distance from their place or places of production (not yet clearly determined), which may have been closer to Sepphoris than to Meiron.[74]

Baluka (47, 51-52, 55, 91, 94) discusses in some detail the decline and cessation of pottery making at Kefar Hananya, suggesting that these developments may relate to the earthquake of 363. She notes correctly that the shape of Kefar Hananya Form 4E, the latest cooking pot Form introduced at Kefar Hananya, dating from about the mid 4th century (*CPRG* 132-135 and see also below; Baluka 1999: 54-56), differs markedly from that of the long line of morphologically similar cooking pots produced at Kefar Hananya from the Early to the Late Roman-Early Byzantine period (Forms 4A-4D).[75] Another cooking pot, Competing Form C4B (*CPRG* 162-164), is often indistinguishable in shape from Kefar Hananya Form 4E. The common occurrence of Competing Form C4B in the 363 destruction level at Sepphoris, now attested by Baluka (1999: 54-56), is significant. In *CPRG* (162-164) I noted, in contrast, that Form C4B had not been found in my counts of the pottery from Meiron loci datable to the decades around the mid 4th century and containing many cooking pots, nor did they occur in a Capernaum assemblage of similar date.

Based on the occurrence together of both Kefar Hananya Form 4E and Competing Form C4B in the 363 destruction level and the different, "larger and more gross" typological style of these cooking pots compared with the earlier cooking pots made at Kefar Hananya, Baluka hypothesizes that production of Form 4E represents an attempt by the Kefar Hananya potters to "survive" the new competition with the Competing pottery makers of Form C4B by imitating that Form in Kefar Hananya Form 4E. She further suggests that the production of Form 4E marks the beginning of the decline of the Kefar Hananya pottery making center, and that production at Kefar Hananya ceased entirely shortly thereafter, perhaps influenced by the effects of the earthquake of 363 (Baluka 1999: 51, 52, 54-56, 91, 94).

Baluka's suggested reconstruction of the relationship between Kefar Hananya Form 4E and Competing Form C4B, based on the Sepphoris evidence, is of considerable interest. As mentioned above, the discontinuation by about the third quarter of the 4th century of one of the main Kefar Hananya functional Forms, open cooking pot Form 3B, was identified in *CPRG* as marking the beginning of the decline of the pottery making center at Kefar Hananya, and the first appearances of Competing ware (Forms C3A and C4A) were dated to the mid 4th century. The new evidence for the *common occurrence* at Sepphoris already by 363 of Competing cooking ware provides new information relevant to this decline and the concomitant rise of Competing producers. The ca. mid-early latter part of the 4th century date proposed by Baluka (ibid.) for the *cessation* of pottery production at Kefar Hananya is contradicted, however, by the later dates suggested by Baluka herself, based on the Sepphoris evidence, for several of the Kefar Hananya Forms. The terminal dates given by her for Kefar Hananya Forms 1D, 1E, 5B, and 6C are: mid/end of the 4th century; end 4th century; end 4th/early 5th century; and early 5th century, respectively (Baluka 1999: 65-67, 69). It should be noted, however, that Baluka's study deals with the 363 destruction level, and no evidence on the pottery assemblages of the late 4th and early 5th centuries at Sepphoris has so far been published.

The latest common Kefar Hananya Forms, 1E, 4D, 4E, 5B, and 6C, all of which were found in the Sepphoris 363 destruction level, are all dated in *CPRG* until the earlier part (i.e., first half) of the 5th century (103-109, 130-135, 139-141, 144-146, respectively).[76] The evidence for the cessation of production at Kefar Hananya will be discussed in Section F.4 below.

To summarize corrections/refinements of the proposed *CPRG* dates for specific vessel Forms of 4th century date: The Sepphoris 363 destruction level provides a *terminus ante quem* for the appearance of Kefar Hananya Form 4E and competing Form C4B of virtually identical shape (Baluka 1999: 54-56). The beginning of production of Form 4E should apparently be placed not earlier

than the mid 4th century (and not "earlier," i.e., first half, of the 4th century, as suggested in *CPRG* 135), based both on the evidence presented in *CPRG* (132-135) and on the reported Sepphoris finds (Baluka 1999: 54-56). The earliest appearances of competing Form C4B, dated in *CPRG* (162-164) to the "latter," i.e., second half, of the 4th century, have now been shown to predate 363.[77]

Further evidence for the pottery assemblages typical of Middle and Late Roman settlements in the Galilee and Golan comes from Ben-David's Period Site of Fakhura in the Golan. Besides the survey, which produced 208 identifiable sherds, several residential rooms were excavated at the site (Bar Lev 1973a, 1973b) and the finds from this excavation (137 vessels) were also studied by Ben-David (1999: 158-161). The Early Roman period is attested at the site, but the large majority of the remains are of the Middle and Late Roman pottery Forms discussed above. No examples of Late Roman Red Ware (Ben-David's second "chronological anchor;" see above, Section E.1), common at Golan sites from the latter part of the 4th century, were found at Fakhura. Absent also were the Competing Forms discussed above, that first appeared around the mid 4th century, and examples of other Byzantine common wares (see also above, Fig. 2). Among the latest pottery Forms discussed above, Form 1E was abundant at Fakhura, and one example of Form 4D also occurred. Based on these finds, it can be concluded that the settlement at Fakhura evidently ceased to exist prior to about the mid 4th century (Ben-David 1999: 57-58, 158-161, 184).

Evidence for the Middle and Late Roman periods unearthed at Kefar Hananya showed that the remains at the site reach their greatest extent in these periods. Pottery of these periods was recovered also from the shovel test squares on the higher part of the Kefar Hananya slope, where there was no evidence of ceramic production, also occurring where few or no examples of Early Roman pottery were found (Shenkman 1999). The excavated kiln complex was dated to the 4th century, and evidence of pottery production at more than one location on the lower slope of Kefar Hananya during the Middle and Late Roman-Early Byzantine periods was found in the shovel test (ibid., and see above, Section D). Coins dating to the 2nd, 3rd, and 4th centuries were recovered in the excavations. Six of the 11 coins recovered from the main excavation area were of 4th century date.

4. The cessation of pottery production at Kefar Hananya

Defining chronologically the end of production at Kefar Hananya is of particular importance, not only for fixing the dates of the latest group of pottery Forms made at that pottery making center. Having demonstrated the site-specific production provenance at Kefar Hananya of these common Galilean pottery Forms, clarifying the reasons for the termination of pottery making at Kefar Hananya, the principal supplier of cooking ware to the Galilee from the Early Roman period, and the collapse of the distribution "network" for these wares could potentially shed light on historical processes in the Galilee in the Late Roman and Early Byzantine periods.[78] These periods were ones of dramatic change for Palestine, and particularly the Jewish and early Christian communities of the Galilee (see, e.g., *CPRG* 235-249).

The common occurrence of residual/redeposited pottery in a later context than the period during which the vessel was in use, or the appearance of later, intrusive sherds in an earlier context,[79] however, can confound efforts to define the terminal date of a pottery type or ware. This may be the result of conditions in antiquity (movement of a discarded vessel, or of earth containing that vessel), or of difficulties inherent in the excavation itself (Schiffer 1987). These difficulties require the archaeologist to thoroughly study stratified assemblages and sequences, and exercise care in defining the date ranges of a pottery type or ware (for procedures used to this end in *CPRG*, see above, Section C). They serve also to emphasize the importance of employing for dating, when available, (1) *in situ*, sealed or essentially sealed assemblages, such as the Sepphoris 363 destruction level discussed above, and (2) pottery groups from excavated or surveyed sites with a well-defined *terminus ante quem*, such as those discussed above (e.g., Gamala, Tel Anafa, Tel Dor, Kh. Nasr ed-Din, and the Golan survey Period Sites).

Another important class of evidence that can be used for defining the terminal date of a pottery type or ware are relatively late assemblages of substantial size, from the geographical area of distribution of the pottery, that include no examples of that type or ware (such as the absence of certain Kefar Hananya Forms from the Sepphoris 363 earthquake destruction level). Such assemblages provide a *terminus ante quem* for the final appearances of the type or ware in question, but may postdate that pottery by a consid-

erable period. Clearly, the most effective pottery groups for this purpose would be those that postdate only slightly the end of production and use. The abundance of Kefar Hananya pottery of the latest Forms, and particularly Form 1E and its Golan equivalent Form G1E, in Late Roman and Early Byzantine contexts in the Galilee and Golan, resulted, however, in the common occurrence of residual/redeposited examples of these vessels in later contexts.[80] The total absence, therefore, of Kefar Hananya ware in a Galilean or Golan assemblage is largely restricted to structures newly founded, without the use of earlier fills, in the Byzantine period, after Kefar Hananya pottery ceased being used. Relatively few such pottery groups have been published, however; newly available examples will be mentioned below.

In lieu of assemblages lacking *any* examples of Kefar Hananya ware, stratified sequences that show a striking decline in the relative quantities of this pottery can provide significant evidence consistent with the cessation of production. One such assemblage, discussed in *CPRG*, can be cited as an example: Floor A of room 124 of insula V at Capernaum contained only three fragments of Kefar Hananya Form 1E, compared with 30 cooking vessels of non-Kefar Hananya forms in this level, and 331 examples of Form 1E in the previous level (Loffreda 1974: 131, Fig. 45: 15-22; *CPRG* 96-97, 109). The assemblage is dated in *CPRG*, based on Late Roman Red Ware and other finds, to the mid to latter part of the 5th century, and the three examples of Form 1E are considered to be residual (ibid.).

Due to the importance of determining the terminal date of Kefar Hananya production, it is worthwhile reviewing the evidence and methods employed in *CPRG* for dating the latest Kefar Hananya and the Competing pottery Forms (see also above, Section C). The principal chronological evidence for the Late Roman and Early Byzantine periods came from excavations of residential structures at Capernaum and Meiron (supplemented now by the new evidence presented in this paper). The published information on stratified sequences at these sites was carefully studied, and all available dating evidence: principally coins and imported tableware but also lamps and other artifacts, was used. The dating evidence, including the list of Late Roman Red Ware Forms recovered, was presented in detail in *CPRG* (esp. 98-111, 119-124, 128-135, 139-141, 144-146, 148-150, 156-164) for chronologically significant assemblages. When relatively well-dated examples of Late Roman Red Ware provided a date later than that of the coins, that pottery and not the coins was used for defining the latest date of the context. Rim counts were taken of each vessel type recovered from well-dated Meiron excavation Fields I and II, the "Lintel House" and "Patrician House."[81] These counts are presented in *CPRG*, and those of MII, dating predominantly to the 4th-early 5th century, along with published quantitiative data for assemblages at Capernaum, were important for showing the proportions of the latest Kefar Hananya and the Competing Forms in the excavated assemblages (*CPRG* 91-146, 156-164, 205, and Table 11, 221-223). Based on this evidence, the first half of the 5th century, or ca. 430, was suggested as the date of final production at Kefar Hananya. It was emphasized, however, that that date should be seen as approximate, and that evidence from future excavations might suggest changes of several decades in either direction (*CPRG* 108-109, 132, 135, 141, 146, 148-149).[82]

The excavated Galilean/Central Golan assemblage that included the earliest well-dated remains but no examples of Kefar Hananya or corresponding Golan Forms came from "Building 300" at the Golan site of H. Kanaf. The Kefar Hananya and corresponding Golan Forms were very common at all except one of the 45 sites included in Ben-David's survey (including at the site of Kanaf itself; see *CPRG* 205, 221-223 and Table 11 for counts of pottery from the Kanaf excavations; Ben-David 1999). The single exception was Kh. Daliyye, where the only examples of Late Roman Red Ware recovered were PRS Form 10 and CRS Form 9, dated by Hayes to the late 6th and 7th centuries (ibid.: 132-133; 216; Hayes 1972: 343-346 and 378-382, respectively, and see above, Section E.2).

Building 300, the only residential structure excavated at Kanaf,[83] included courtyards and three rooms that were later divided, during the latter part of the 6th century, into two residential units (Ma'oz 1993b). A study of the abundant pottery from this Building, excavated to bedrock, was prepared by J. Magness for the Kanaf excavation final report (in press). Magness generously allowed Ben-David to study the pottery collection from Building 300 and to use her unpublished report. The Building 300 assemblage served as one of the Golan Period Sites (Ben-David 1999: 156-157).

Present in the Building 300 assemblage were examples of CRS Form 1, dating from the latter part of the 4th until about the third quarter of the 5th century (Hayes 1972: 372-373; for the initial

date, see above, Section F.3 and Baluka 1999: 86). Occurring also were PRS Forms 3C and 5A, and CRS Form 2, dated by Hayes from about 430[84] through the late 5th century; around 460-500; and from about the mid 5th to the early 6th century, respectively (Ben-David: ibid.; Hayes 1972: 329-340).

The dates of some of the common pottery Forms recovered from Building 300 are also consistent with the ca. third quarter of 5th century CRS Form 1 terminal date for the earlier deposits in this Building. Included are Forms C3A and C4B, but noteworthy in particular are examples of Form C4A (Ben-David: ibid.). The suggested date span for this Competing Ware Form given in *CPRG* (159-162) is the mid 4th to about the mid 5th century.[85]

The presence in Kanaf Building 300 of examples of CRS Form 1, dating until about the third quarter of the 5th century and contemporaneous ware, while no examples of any of the Kefar Hananya or corresponding Golan Forms occurred, shows that by about 450-475 CE, *or earlier*, Kefar Hananya and the corresponding Golan ware was no longer being produced. Considering the abundance of Kefar Hananya/Golan ware in the Golan, including at the site of Kanaf itself, it is apparent that even residual use of this pottery ceased by that date.

Other assemblages with no examples of Kefar Hananya ware date from the late 5th or early 6th century. These include the pottery from floor A of room 51 of insula II at Capernaum (Loffreda 1974: 129; discussed in *CPRG* 159), and a large, recently published group from excavations at Beth She'arim (Vitto 1996).

The available data from the excavations and shovel test at Kefar Hananya also shed light on the final stages of production at this pottery making center. We will first focus on Kefar Hananya Form 4E, both because it was the latest closed cooking pot Form made at Kefar Hananya, and because its date range (ca. mid 4th to earlier 5th century; *CPRG* 132-135 and see above, Section F.3) was the narrowest of the relatively common late Kefar Hananya Forms. The late date of Form 4E and its limited period of production, based on evidence from other sites, are also consistent with the findings from the Kefar Hananya excavations. Production of Form 4E at Kefar Hananya was demonstrated on chemical composition (*CPRG*, and see above, Section D), and examples of ceramic waste of Form 4E unearthed in the excavations and shovel test (Shenkman 1999: Table B1) provide archaeological evidence of its Kefar Hananya production provenance. It seems likely, moreover, that the unusually large number of Form 4E pieces collected at the road-cut slope of Kefar Hananya prior to excavations (*CPRG* Table 11, 221-223),[86] came from a dump of pottery discarded in production.

Although Form 4E was the latest closed cooking pot Form made at Kefar Hananya, it was not very common among the finds from the shovel test at the site: only 28 examples of Form 4E were recovered, from a total of 16 squares, compared, for example, with 651 pieces of Form 4C, found in 62 squares (Shenkman 1999: Table B7). Noteworthy also is the estimate provided by Loffreda of the quantities of Kefar Hananya Forms 4E and 4B-4C recovered at Capernaum: "a few score" and over 1000,[87] respectively. These data are consistent with the relatively brief period of production, suggested by the evidence from other excavations, for this latest Kefar Hananya cooking pot. As mentioned above (Section F.3), the Competing closed cooking pots, not produced at Kefar Hananya, occurred in late 4th-early 5th century contexts at Meiron in quantities comparable to those of Kefar Hananya Forms 4D and 4E (*CPRG* 161-162, Table 11, 221-223). And Kefar Hananya Form 4E was superseded by Competing Form C4B, of virtually identical shape (*CPRG* 132-135, 162, and see above, Section F.3).

Instructive also was the recovery in the Kefar Hananya excavations and shovel test of examples of the common closed cooking pots of Byzantine date: Competing Forms C4A and C4B, that were contemporaneous with the latest closed cooking pots made at Kefar Hananya and superseded them, and open Competing cooking pot Form C3A, which replaced Kefar Hananya Form 3B. Noteworthy, in particular, was the occurrence at Kefar Hananya, in a homogeneous stratified assemblage of Early Byzantine date unearthed in the main excavation area, and in the shovel test, of a few examples of Form C4A. The occurrence at Kefar Hananya of this Form, dated until about the mid 5th century (*CPRG* 159-162), is consistent with an end of production of Kefar Hananya ware, and import of Competing Ware to the settlement, by that date. In contrast, examples of cooking ware *of Roman date* that were not made at Kefar Hananya have not been recorded at the site.

The shovel test showed distribution at Kefar Hananya of Byzantine pottery Forms in small numbers and in only a limited area of the site (13 examples of Competing Forms C3A, C4A, and C4B, 18 pieces of Late Roman Red Ware spanning the Byzantine period, and other Byzantine pottery, found mainly in one area of the mid slope),[88] compared with the geo-

graphical distribution of remains from both the Roman and medieval periods (Shenkman 1999).[89]

G. Conclusions

The importance of determining site-specific production provenance, and of Correspondence Analysis of a data set from a high-resolution surface survey, for defining the chronology of a ceramic ware have been demonstrated. The latter statistical analysis has shown, moreover, that archaeological survey data, often viewed in pottery analysis as a neglected stepchild, can provide valuable independent evidence on ceramic chronological sequences.

The principal recent archaeological evidence relevant to the dating of Kefar Hananya ware has been reviewed. This evidence supplements that presented in *CPRG* for each of the subperiods during which Kefar Hananya ware was made. No major changes in the *CPRG* chronology of the Kefar Hananya group as a whole or of any of the individual Kefar Hananya Forms were indicated; slight, but significant, corrections/refinements could be made of the initial dates of appearance of two Forms discussed in *CPRG*, Kefar Hananya Form 4E and Competing Form C4B. Future publications of chronologically well-defined assemblages, including quantitative studies, could contribute to further refining the current chronology of the individual vessel Forms and determining more accurately the initial and terminal dates of production at Kefar Hananya.

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Notes

1. Some of the relevant archaeological publications will be referred to below.
2. *CPRG* was submitted for publication in 1988, and only relatively minor changes could be made to the text after that date.
3. This is Johnson's doctoral dissertation, used in *CPRG*. The final publication of the Jalame pottery is Johnson 1988.
4. A comprehensive work by the author and co-workers on the products of the second major pottery-making center of Roman Galilee, located at Shikhin (Fig. 1), and its competitors, is now in preparation. Included in that publication will be the chemical abundances and the drawings of the vessels in each of the provenance groups, micromorphological analysis of the pottery groups, statistical analysis of the chemical abundance data, a typological and chronological presentation of the pottery, data on geographical and quantitative distribution, and a discussion on the cultural, ecological, economic and historical implications of the archaeological and analytical evidence. On the identification of Shikhin, see Strange et al. 1994, 1995, and see also Adan-Bayewitz et al. 1995. For analytical studies on the pottery made at Shikhin and by its competitors, see Adan-Bayewitz and Perlman 1990; Adan-Bayewitz and Wieder 1992; Adan-Bayewitz et al. 1995; Adan-Bayewitz et al. 1999; Wieder and Adan-Bayewitz 1999, 2002; Adan-Bayewitz et al. 2002. On the vessel types made at Shikhin, see below, n. 9. For the literary sources on pottery making at Shikhin, see Adan-Bayewitz 1990a and *CPRG* 23-41.
5. On the discrepancy between the latest date of production and the latest use of common pottery, see below, Section D.
6. See, for example, Orton et al. 1993: 194: "...the formal study [of a pottery sequence generated by seriation] needs to be combined with understanding of the structure of pottery supply, which in turn relies on the combination of provenance studies and quantified data."
7. In the Philippines, Africa, and South America.
8. Factors affecting pottery longevity include strength, frequency of use, mode of use (i.e., the extent to which the vessel is moved about and handled), the presence of domestic animals, and the degree to which pots "wear out" (Arnold 1985: 151-155).
9. The Shikhin vessel types include storage jars, kraters, bell-shaped bowls, jugs and juglets; there is no evidence for the production of cooking ware at Shikhin. For examples of some of the Shikhin pottery forms, see Adan-Bayewitz and Wieder 1992, Fig. 5. The present paper will deal only with the Kefar Hananya pottery repertoire and related culinary wares.
10. In subsequent, recent, work we have found evidence of other, relatively minor, producers in Roman Galilee who made pottery of these or closely similar forms, that apparently had very limited distribution, compared with that of Kefar Hananya-made pottery. The production and distribution of these other pottery makers are now being studied by us.
11. On the analysis of the Roman pottery from Tel Dor, see below, Section F.2.
12. The theoretical and practical questions of the relationship between the sampled population and the total population, in relation to the analysis of the Kefar Hananya and Shikhin pottery groups, will be examined by us in a forthcoming study. The individual sample analytical data of the Kefar Hananya pottery and related samples will appear in the final publication of the Kefar Hananya excavations (see below).
13. Since publication of *CPRG*, two analytical studies employing petrography have been conducted by other re-

searchers on a total of 22 examples of the vessels discussed in this paper from sites in the Galilee and Golan. Except for possibly one piece (from Tel Anafa), the microscopic descriptions from these two studies were all consistent with our findings on the production and distribution of Kefar Hananya and corresponding Golan pottery Forms. The larger study (Porat and Killebrew 2000, esp. 129-130) included 4 samples from the site of Kefar Hananya and 3 from Korazim, in the Galilee, and 10 from Qasrin in the Golan. Based on petrographic analysis, the samples were classed to two Groups, 1a and 1b, the former including all 7 examples from the Galilean sites and 2 of the pieces from Qasrin, while the latter included the remaining 8 Qasrin vessels. Porat and Killebrew indicate that the microscopic profiles of Groups 1a and 1b are consistent with their assignment to Kefar Hananya and local Golan production, respectively. The second study (Rautman 1997) included 5 samples from Tel Anafa. I am informed by M. Wieder that the microscopic descriptions (ibid.) of all except for perhaps one sample (no. 19) are consistent with their identification as Kefar Hananya ware.

14. This text, to the best of our knowledge, is the only reference in the literature of the Roman period to the durability of common household pottery. On the quality of ceramic raw materials, and particularly soil material, as an important factor influencing the origin of pottery making and its development into a specialization, see Arnold 1985: 21-32. On ceramic ecology and specialization at Kefar Hananya, see *CPRG*, esp. 228-249; Adan-Bayewitz, in press.
15. The count and measurements were made by A. Sasson in the course of the 1989 excavation season.
16. Cf., for example, Shott 1985, and the method employed by Portugali (1982) for the investigation of sites in the Jezreel Valley.
17. The study of the finds from the shovel test at Kefar Hananya was part of Y. Shenkman's MA thesis (Bar-Ilan University, supervised by Adan-Bayewitz), on shovel testing as a method for clarifying settlement history (Shenkman 1999). The evidence from the shovel test at Kefar Hananya will be included in the final publication of the Kefar Hananya excavations. For the findings relevant to this paper, see below, Section F.
18. On scheduling of pottery making, and production at more than one workshop at the settlement, see also Adan-Bayewitz, in press.
19. See also above, n. 10. For evidence from surface survey on the distribution of the main Kefar Hananya Forms in the area of the Galilee north of the 'Akko to 'Ammi'ad Junction road and south and east of the Lebanese border, see now Frankel et al. 2001: 64-65, 113, 132, Table 3.5, Pls. 34-35, and see below, n. 21.
20. On these date limits, see below, Section F.
21. On the occurrence of Kefar Hananya ware at Tel Anafa, see also below, Section F.1. On Tel Anafa and the identification of its inhabitants, see *CPRG* 52-53, 215, 218, 220; Herbert 1994: 21-22, 30-31; Redding 1994; Berlin 1997a: esp. 14-15, 30-35; Rautman 1997; Gunneweg and Yellin 1997, and see below, Section F.1. In addition to Tel Anafa, vessels of Kefar Hananya Forms and composition from other pagan sites: the largely pagan cities of Susita-Hippos and Dor, have been analyzed by our research team (the writer, F. Asaro, R.D. Giauque and M. Wieder). The interpretation by Frankel et al. (2001: 113, cf. 132; pls. 34 and 35) that the geographical distribution of Kefar Hananya ware coincides with that of Jewish settlement (and influence [?]) is an oversimplification. On the ethnic distribution of Kefar Hananya ware see, meanwhile, *CPRG* 201-223, esp. 220. A discussion on the "archaeology of ethnicity," a subject much treated in recent years (see, e.g., Jones 1997), is beyond the scope of this paper. On differences between the geographical distribution of Kefar Hananya ware in the Early Roman as opposed to the Middle and Late Roman periods in the territory of Panias-Caesarea Philippi, see *CPRG* 215, 218; Berlin 1997a: 31-32. Diachronic analysis of quantitiative ceramic data from ongoing and completed surveys and excavations in areas on the periphery of the Galilee and Lower Golan will help to further clarify the factors (e.g., political/administrative borders, population identity, geographical barriers) that may have affected the distribution of Kefar Hananya ware and that of the corresponding Golan pottery Forms (on the latter Forms, see below, Section E).
22. The survey was conducted as part of the research for Ben-David's PhD dissertation (Bar-Ilan University, supervised by Adan-Bayewitz), on settlement in the Lower Golan during the Hellenistic, Roman and Byzantine periods (Ben-David 1999).
23. Only one fragment of Golan composition, of the forms discussed here, has so far been identified at a site in the Galilee (the site is on the coast of the Sea of Galilee) (*CPRG* 170-171, 213, 234, 247-249).
24. The available evidence suggested, however, that the Golan wares were generally contemporaneous with the Kefar Hananya vessels of comparable form. This included evidence from the Gamala excavations (see below), the occurrence of well-dated Kefar Hananya Forms together (sometimes in the same locus) with pottery of local Golan production, and unpublished stratigraphic and numismatic evidence provided by the excavators of the Golan sites (*CPRG* 165-166, 173-178; see also below).
25. The Gamala pottery is now being prepared for publication by A. Berlin.
26. On the classification and dating of these wares by Hayes and other researchers, see also below, Section F.3-4.
27. One of the five "Period Site" collections studied by Ben-David was from excavations of a residential structure at the site of H. Kanaf (Ben-David 1999: 156-157). On the pottery collection from Kanaf, see also below, Section F.4.
28. The Golan forms are classified with the same form numbers as those of Kefar Hananya, with the addition of a G prefix, e.g., Golan Form G1B (*CPRG* 83-150, 165-166, 172-179).
29. All of the Golan survey pottery of the relevant periods has been analyzed together, by Ben-David and also in the present analysis, without differentiating vessels made at Kefar Hananya. On macroscopic, microscopic, and chemical criteria for distinguishing the Kefar Hananya and Golan pottery, see *CPRG* 165-181, 190-200. Additional statistical analyses of the Golan survey data set using Correspondence Analysis will appear in a separate publication, by Adan-Bayewitz and Ben-David.
30. On Correspondence Analysis, see Greenacre 1993. For archaeologically oriented presentations, see Baxter 1994: 100-139 and Shennan 1997: 308-341. For a recent paper employing CA in a study of glass from Roman Britain, see Cool and Baxter 1999.

31. The biases of field survey data are now being studied by Ben-David and myself. On these biases see, for example, Orton et al. 1993: 212; Orton 2000: 44-57.
32. The data for each of the sites are given in Ben-David 1999. Only survey collections were included in the CA. The site of Dannikleh, yielding after repeated surveys only 5 identifiable sherds of pre-medieval date (ibid., 43-45, 180), was not included in the CA, and el-Jumeize has been treated as a single site (ibid., 114-116, 150-155, 209-210). The storage jars, not discussed in this paper, accounted for 8.3% of the Roman and Byzantine assemblage (7 forms). None of the forms included in the analysis occurred in proportions between 0.7-1%; in practice, therefore, all forms accounting for more than 0.7% of the assemblage were included in the CA.
33. 38% of the inertia is accounted for by the first dimension, and 16% by the second.
34. An early version of Form 1A appears at Gamala but is rare at the site; *CPRG* 88, 221-223, Table 11, cf. Ben-David 150-155.
35. The Cypriot production provenance assignment for this ware, proposed by Hayes based on the frequency of its occurrence in Cyprus (Hayes 1972: 371), is now supported by analytical evidence (Gomez et al. 1996).
36. Note that two instances of "intermediate" subforms, Forms 3A/B and 1B/D, not discussed separately in *CPRG*, have been classified among the Golan survey pottery and appear in the CA plot (Fig. 2). The separate classification of Form 3A/B resulted from the observation by Adan-Bayewitz that, in a small proportion of cases, examples of Form 3A found in 1st century CE contexts at Gamala and Iotapata can have a short rim, characteristic of Form 3B (*CPRG* 112, 119; on the *terminus ante quem* of Iotapata, see Adan-Bayewitz and Aviam 1997). Consequently, it would not be possible to classify conclusively some small, short rim fragments as 3A or 3B, and such fragments were classed as 3A/B. Examples of Form1B with a thickened rim were classified separately as Form 1B/D; in *CPRG*, both varieties of Form 1B were grouped together as Form 1B. As can be seen in Fig. 2, this separate classification distinguished an earlier and later variety of Form 1B. For examples of Kefar Hananya Form 1B and Golan Form G1B with thickened rim, here called 1B/D, see *CPRG*, Pl. 1B: 5, 12, 14, 19, Pl. G1B: 2, 5, pp. 92-95 and 173, respectively. On the typology and chronology of Kefar Hananya and Golan Forms 1B, 1D, 3A, and 3B, see *CPRG* 91-97, 100-103, 111-124, 173-174, 176. The possibility, previously suggested by the evidence from the Kefar Hananya excavations, that Form 4C in the Golan survey should be similarly classified to two subforms will be examined in a forthcoming CA study of the Golan survey data.
37. In *CPRG*, Competing Form C4B includes both ridged and plain rim cooking pots, in a sandy fabric, not made at Kefar Hananya (corresponding in form to Kefar Hananya Form 4E1 and 4E2; *CPRG* 132-135, 155-156, 162-164). In the Golan survey, however, this Form number was used only for the ridged version of this cooking pot (Ben-David 1999: 157). The ridged and plain rim cooking pots are also distinguished in the Capernaum publications, but examples of Kefar Hananya Form 4E are grouped together with the much more common examples of cooking pots with ridged rim in sandy fabric. On the classification and date of this pottery form at Capernaum (type C2), see Loffreda 1974: 45-47, 152-153. On Kefar Hananya Form 4E and the Competing Forms, see also below, Section F.3-4.
38. One fragment of Early Roman Form 4A was the only other cooking pot found at the site (Ben-David 1999: 133).
39. The analysis of the finds from the Kefar Hananya excavations (Adan-Bayewitz 1991; 1997) has not yet been completed. The final publication of those excavations will contribute additional evidence relevant to the history of production at Kefar Hananya.
40. On the question of the earliest date of production of the Kefar Hananya Forms, I differed from Loffreda (1982b: 286-287, cf. 290), showing 1) that the assemblages presented by him to substantiate a Hellenistic date for the first appearances of Kefar Hananya Forms 3A and 4A include vessels common in the Early Roman period (see also Berlin 1997a: 86 and n. 199), and 2) that the examples presented by Loffreda from other sites to show a Hellenistic date for Forms 3A and 4A are either not of this Form (the Form 3A examples) or not of Hellenistic date (the Form 4A examples) (*CPRG* 114-117 and n. 39).
41. Slane (1997: 261-264, 301-302), who published the fine wares from Anafa, seems to prefer a late 1st century BCE date for ROM 1A, with a *terminus post quem* "of ca. 5 BCE or even later" for the subsequent ROM 1B phase.
42. Forty-eight fragments of this bowl were recovered at Anafa, 32 of them from the ROM 1A - 1C phases (Berlin 1997a: 113).
43. The samples were analyzed by us, and the form identified as a product of Kefar Hananya, several years before Berlin inquired regarding the provenance of this form. Examples of this form from Tel Anafa that we have analyzed more recently also belong to the Kefar Hananya chemical compositional group. We are currently studying whether other uncommon pottery forms were also made at Kefar Hananya. Drawings of the analyzed samples and the individual sample chemical compositional data will be published in the Kefar Hananya excavation report.
44. Determination of the function of these newly identified bowls relies upon the reported traces of burning on the exterior of some examples (Berlin 1997a: 112-114). The Kefar Hananya cooking bowls, and particularly Kefar Hananya Form 1B, have been identified as the "kavkav," a cooking vessel mentioned several times in Rabbinic literature (Adan-Bayewitz 1986).
45. The surface survey at Kefar Hananya was conducted by my student U. Leibner, as part of research for his doctoral dissertation. My thanks to him for allowing me to examine the finds and refer to them here.
46. The Kefar Hananya coins were identified by D.T. Ariel.
47. In distinction to Safrai 2000: 78.
48. Josephus (*War* 3.141-288, 316-408, 432-442) describes in detail the siege and destruction of Iotapata in 67 CE by the Roman army, prior to the conquest of Gamala, and the archeological evidence for the cessation of settlement at the site is consistent with that date (Adan-Bayewitz and Aviam 1997).
49. Herbert (1994: 21, 26, 109-110) dates the end of the Roman settlement at Anafa to around the mid 1st century CE. Slane (1997: 261-262), however, feels that the transition from ROM 1B to ROM 1C occurred ca. 50, stating that it seems probable that ROM 1C continued into the 60s.

50. East Jumeize served as one of the Period Sites in Ben-David's study (1999: 150-155).
51. The East Jumeize assemblage included 86 rim fragments of Form 3A, 102 of Form 4A, 47 of Form 4B, and 4 of 1A (see below). The higher incidence of Form 4B at Jumeize is perhaps related to the occurrence at the site of ceramic waste, attesting to ceramic production. The Jumeize repertoire and wasters are now being studied and analyzed by our research team (Ben-David 1999: 114-116, 150-155, Pl. 1-2).
52. On the occurrence of Kefar Hananya pottery at Anafa and largely pagan cities, see also above, n. 21.
53. For the Jumeize examples, see Ben-David 1999: 152-154, Pl. 1:13-14.
54. Although it is possible that the presence at Anafa of a few examples of Form 4B while Form 1A does not occur at the site is to be explained by a slightly later date for the beginning of production of the latter Form, the scarcity of both Forms, and especially 1A, in assembages of this date makes such a suggestion speculative.
55. Slane reports (1997: 262, n. 37) that Berlin is willing to accept any date after 40 for the Anafa examples of Form 4B.
56. For another example of the use of Form 4B as a chronological marker, see Adan-Bayewitz 1990b. Although both Iotapata and Tel Anafa were occupied from the late 1st century BCE through about the mid/early third quarter of the 1st century, in contrast with the abundance of ESA at Tel Anafa, this fine tableware was very rare in Early Roman contexts at Iotapata (based on evidence from seven months of excavations), despite the fact that the latter settlement was situated much closer to the coast. The apparent concern for ritual purity, attested by other archaeological evidence, of the Jewish inhabitants of Iotapata in the Early Roman period has been suggested as an explanation for the dearth of imported tableware at this site (Adan-Bayewitz and Aviam 1997: 163-165). On the distribution of ESA in the Galilee also see now Frankel et al. (2001: 63, 110-116 [esp. 113], 132, 141-142, 151-153, Table 3.5, Pl. 32), who show relatively few ESA from the survey of sites in what was evidently the main area of Jewish settlement in the Upper Galilee, compared with the larger quantities of this ware at sites in the area to the west. Note, however, that all ESA is assigned by Frankel et al. (ibid. 63) to the Roman period, from 50 BCE until the end of the first century CE (ibid., 63). Late Hellenistic ESA was common, however, in Late Hellenistic (late 2nd - early 1st century BCE) contexts at Tel Anafa. For a detailed typological and chronological presentation of the Hellenistic and Roman ESA forms at Tel Anafa, see Slane 1997. For a survey of the distribution of Late Hellenistic ESA in Hellenistic Palestine, see Berlin 1997b: 24-26.
57. The assemblage included two examples of ESA Form 60A (Hayes 1985: 40; Rosenthal-Heginbottom 1995: 219: 22), African Red Slip (ARS) Form 23B (Hayes 1972: 45-48) and a vessel identified as ARS Form 181 (Hayes 1972: 200-202) (Guz-Zilberstein 1995: 321-325, Fig. 6.49-50, nos. 1-3, 8; the Kefar Hananya Form 1 vessels are nos. 10-12). The lamp types include one example of Broneer XXV, three local northern mouldmade discus lamps, and two "Deb'aal" lamps (Rosenthal-Heginbottom 1995: 243, 245-247, Types 21.2, 26.5-6, 26.13, 28.3-4, respectively).
    For the stratigraphical analysis of Unit F 46 and of Area C1, phase 1, see Sharon 1995b: 162-163, 195, 233-234; Saragusti and Sharon 1995: 239, 245, 247-248; Ben-Ari and Sharon 1995: 256. The later of two coins found in the loci assigned to Area C1, phase 1, dates to 129 or 121 CE (Gaba, Hadrian) (Meshorer 1995: 470, no. 100; Saragusti and Sharon, ibid.: 239). For inscriptions from Dor dating to the second century CE, see Gera and Cotton 1995a, 1995b.
    One further example of Kefar Hananya Form 1B came from the excavation of the drainage system in Areas C0 and C1 (L. 429, L. 430, and L.431). This assemblage included pottery of Hellenistic to 2nd or early 3rd century date (Guz-Zilberstein 1995: 313-314, Fig. 6.39:7; Ben-Ari and Sharon, ibid.). Another Dor context of similar date range, Area C2, L.4515, contained an example of Kefar Hananya Form 1A (Guz-Zilberstein 1995: 330-331, Fig. 6.58:8; Ben-Ari and Sharon 1995: 258).
58. The published coins from Tel Dor include eleven specimens that postdate the mid third century, but six of these were from unstratified contexts or were surface/topsoil finds. Only one coin recovered from a stratified context dates later than 300 (Meshorer 1995; see also Stern 1995c: 281-282). None of the published fine ware or lamps need to be dated later than the mid 3rd century. Four lamps dated "third century" were all from doubtful, contaminated or unstratified contexts (Rosenthal-Heginbottom 1995: 246-247, types 27 and 29; Saragusti and Sharon 1995; Ben-Ari and Sharon 1995: 255). On the date of the decline and abandonment of Tel Dor, see Stern 1995a: 4; idem 1995b: 48; idem 1995c: 279-283; Sharon 1995a: 17; idem 1995b: 233; Saragusti and Sharon 1995: 235, 237; Meshorer 1995. On evidence for later settlement at Dor (but evidently not on the Tel), see especially Di Segni 1994. From the latter part of the fifth century, Dor had become an episcopal see. A large church has been excavated east of the Tel; see Dauphin 1999; see also Tsafrir et al. 1994: 113.
59. Note, however, that a few examples of Kefar Hananya Forms have been recovered at Caesarea (*CPRG* 209). On the geographical and quantitative distribution of Kefar Hananya pottery, see *CPRG* 201-223.
60. The consent and encouragement of E. Stern, I. Sharon and B. Guz-Zilberstein are gratefully acknowledged.
61. Assemblages from the Roman-period phases of Tel Dor have so far been studied by me, with the generous assistance of B. Guz-Zilberstein, during three days of work at the excavation stores.
62. Special care was taken to insure that the analyzed group would not include two fragments from the same vessel. The laboratory analysis was done at the Lawrence Berkeley National Laboratory by R.D. Giauque of our research team. Examples of other vessel forms from the Roman assemblages at Tel Dor, including additional forms identified as products of Kefar Hananya, will be analyzed in subsequent stages of the project. The individual sample analytical data and statistical analysis will be presented in another publication.
63. A small number of Byzantine sherds, but no examples of LRRW, were found at the site. The Byzantine sherds are attributed by Ben-David (1999: 143, 166-167, 219) to seasonal agricultural activity.
64. The evidence from the Qusayibe survey suggests that the initial appearance of Form 1E may have been somewhat later than that of Form 1D.

65. The English translation appears on pp. 15*-16*.
66. Our thanks to H. Ben Nahum, excavator of the Nasr ed-Din site, for showing us (during 4.5 hours of intensive work) the excavation collection and for permission to publish this summary.
67. For the principal documentary evidence of the destruction wrought by this earthquake, see Brock 1976, 1977. For studies of the archaeological evidence of this destruction at sites in Late Roman Palestine, see Russell 1980; Baluka 1999; for the Sepphoris evidence of the destruction and the changes in the city in its wake, see also Weiss and Netzer 1996a, 1996b; Hoglund and Meyers 1996; Meyers and Meyers 1997; cf. Strange 1996.
68. The study appeared as a Hebrew University Master's thesis, supervised by Y. Tsafrir, on the archaeological evidence from Sepphoris relating to the earthquake of 363.
69. Forms 5A, 6A and 6B are jugs with a wide body and shoulder handles, and jugs, respectively. Although recovered at many sites in the Galilee and Golan, due in part to their small rim circumferences they are much less commonly found than the contemporaneous closed and open cooking pots. On these Forms (and also later versions Form 5B and 6C), see *CPRG* 135-146. For the identification of Form 5A-5B with *krozin*, a vessel mentioned in Rabbinic literature, see Adan-Bayewitz 1989.
70. The numismatic summary presented by Baluka is for the coins from the Roman villa on the eastern part of the summit.
71. These Forms are dated by Hayes to the late 3rd to early 4th century; ca. 320-380/400 (Form 59A) and ca. 320-420 (Form 59B); ca. 320(?)-380; ca. 325-380 or shortly thereafter; ca. 360-470; and late 4th century (or earlier) to about third quarter of 5th century, respectively (Hayes 1972: 95-107, 112-116, 372-373; 1980: 516 and 528 [on ARS Form 61A and CRS Form 1, respectively]). The occurrence in the 363 Sepphoris destruction level of examples of CRS Form 1 (Baluka 1999: 86), however, indicates that the Form was distributed by that date (cf. also Hayes ibid.).
72. For a discussion of the lamps, including recently published dating evidence, see Baluka 1999: 48 and n. 149.
73. Unfortunately, counts of the pottery forms are not provided. Baluka is preparing for publication the Sepphoris pottery from the western area of the summit and the Roman villa on the eastern part of the summit (Baluka 1999: 48-49, notes 147 and 151).
74. On the relationship between distance from place of production and quantitative distribution, see, for example, *CPRG*, esp. 170-171, 201-223, 247-249. Evidence for the production of cooking pots in this period has been found at the site of H. 'Uza in western Galilee (Getzov 1993; a draft of the 'Uza excavation report, including a report by D. Avshalom Gorni on the Late Roman and Byzantine pottery, was circulated in 1998). The chemical composition and distribution of the 'Uza pottery are being studied by our research team.
75. Although Kefar Hananya Forms 4A, 4B and 4C, and especially 4D, differ among themselves in vessel proportions (e.g., ratio of height to breadth, and of neck to body), these differences are not as pronounced as those that distinguish Form 4E from the earlier Kefar Hananya cooking pot Forms (*CPRG* 124-133).
76. Another Kefar Hananya vessel, Form 2, was also assigned an earlier 5th century terminal date (*CPRG* 109-111). This Form is uncommon, however (ibid.), and is not mentioned by Baluka. On the use of the terms "earlier" and "latter" part of the century, see caption to Table 1.
77. Baluka (1999: 55) misquotes (as the *beginning* and the *end* of the 4th century) the dates given in *CPRG* for the earliest appearances of Forms 4E and C4B, respectively.
78. For a discussion of the reasons for the cessation of production at Kefar Hananya, see *CPRG*, esp. 239-243. On Baluka's suggestion that the earthquake of 363 may have had an effect on Kefar Hananya production, see above, Section F.3. For a recent study on developments in Late Roman and Early Byzantine Palestine, see Safrai 1998; but see now the discussion of the numismatic evidence in Bijovsky 2000-2.
79. For quantitative examples of the considerable numbers of residual/redeposited artifacts found in later contexts, see, for example, Herbert 1994: 27-28; Berlin 1997a: 5, notes 16-17; Slane 1997: 255, note 4 and 263, n. 47. For a notable recent discussion on the nature of site deposits and "absolutely datable material" (e.g., coins and imported pottery) including the use of a method for analyzing stratified deposits that assigns different weights to intrusive and redeposited artifacts, see Saragusti and Sharon 1995.
80. On redeposition as a natural phenomenon, see, e.g., ibid.: esp. 235-236.
81. The collection of diagnostic sherds from the Meiron excavations had been saved and were available for study (*CPRG* 92-93, n. 11, and 205).
82. It is noteworthy that already in 1974 Loffreda proposed a *terminus ante quem* of about the end of the 4th century for his "classe A," among which were all of the Kefar Hananya Forms (as well as other ware) (Loffreda 1974: 154). He later suggested that classe A did not go beyond the first decades of the 5th century (Loffreda 1982a: 415).
83. The site of Kanaf, dating from the 2nd millenium BCE until modern times, includes remains of the Hellenistic, Roman, and Byzantine periods (Ma'oz 1993b).
84. This ca. 430 date for the initial appearance of PRS Form 3C was a recent evaluation kindly provided by Hayes (personal communication, April 2002). Hayes initially dated the Form to the mid 5th century, if not a little before (Hayes 1972: 337), later stating that new evidence might indicate that PRS Form 3 first occurred very close to the year 400 (idem 1980: 526).
85. One cannot be certain, however, that the Kanaf examples are not a version of later date, similar in form to C4A. Note that cooking pots similar in form to C4A occur in later contexts at sites located at a distance from the Galilee and Central Golan, such as Pella (see, e.g., Watson 1992). A single, similar example also occurred in a recently-published large assemblage, that does not predate the mid 5th century, from Beth She'arim (Vitto 1996: 132, Fig. 24: 11; for this assemblage, see also below). On the need to exercise care when attempting to date a vessel type found in one region using evidence from another region, see above, Section D.
86. On the pottery collected at the road-cut slope at Kefar Hananya, see also *CPRG* 64, 78 n. 12, 86, 109, 139-140, 204.
87. On the quantitative estimates of the pottery from the Capernaum excavations, see *CPRG* 206-207. Loffreda did not classify Forms 4B and 4C separately (*CPRG* 126, and 223, n. 9).

88. One coin dating to the 4th-5th century and a coin of 568-569 (Justin II) were recovered at the site.
89. In a footnote to a recent paper on the chronology of the ancient synagogues at Gush Halav and Capernaum, Magness (2001b: 70) wrote (my translation from the Hebrew): "in my opinion, the end of production of many of the local pottery types of the Late Roman period (such as the Galilean bowls [i.e., Kefar Hananya Form 1 – D.A.-B.]) was dated to the beginning of the 5th century as a result of their relation to coins. The chronology of the local pottery is based largely on Galilean synagogue sites, and especially on Capernaum; see for example: D. Adan-Bayewitz, *Common Pottery in Roman Galilee: A Study of Local Trade*, Ramat-Gan 1993. In other contexts at Capernaum (in the village houses) evidence was found that supports the impression that the local types should be dated later." Magness then presents the evidence she found for a later date, citing four assemblages from residential structures at Capernaum. (The English version of this paper, Magness 2001a, and her reply, Magness 2001c, to Meyers 2001 and Strange 2001, include similar claims, but no evidence is presented for the late dating.) These four assemblages and the information they provide will be discussed below.
The latest common Kefar Hananya Forms, 1E, 4D, 4E, 5B, and 6C, are all dated in *CPRG* until the earlier part (i.e., first half) of the 5th century (ibid. 103-109, 130-135, 139-141, 144-146, respectively); this terminal date is cited correctly in Magness 2001a (37, n. 109), but not in Magness 2001b (see the above paragraph). As mentioned earlier in this Section, the suggested date ranges given in *CPRG* for the pottery Forms were based on *all* available dating evidence: principally coins and imported tableware but also lamps and other artifacts. The chronologically significant evidence was presented in detail, and when relatively well-dated examples of Late Roman Red Ware provided a date later than that of the coins, that pottery and not the coins was used for defining the latest date of the context. For explicit mention of the dating of specific assemblages based on Late Roman Red Ware, in contrast to the earlier dates of the coins recovered from the context, see, e.g., *CPRG* 132, 134, 146.
As opposed, however, to the impression given by Magness (2001a: 37 and 2001b: 69-70), the large majority of the dating evidence used in *CPRG* came from excavations of residential structures and not from "synagogue sites." In fact, *no* stratified ceramic assemblages from below the synagogue at Capernaum dating later than about the early 4th century have been published to date. (Loffreda 1974 presents the pottery from the residential structures at Capernaum. For the published assemblages of earlier date, see Loffreda 1982b. Selected potsherds of later date, but not stratified assemblages, from below the synagogue have been published in connection with the discussion on the date of the Capernaum synagogue [Loffreda 1970b, 1972, 1979, 1982b]. Loffreda is now preparing the final publication of the pottery from the synagogue excavations). Magness' statement, therefore, that the *CPRG* dating was based "largely on Galilean *synagogue sites*, and especially on Capernaum" – implying problematic chronology (Magness 2001a: 27-33, 2001b: 61-66) – is puzzling and unfortunately misleading. The "other [residential] contexts at Capernaum" presented as evidence for later dating had, in fact, already been taken into account and three of the four assemblages cited by Magness (the three relevant assemblages) were discussed in greater or lesser detail in *CPRG* (see below).
And this is not the end of the confusion. Magness' choice and presentation of these four assemblages are not sufficiently attentive to Loffreda's written descriptions, or to the makeup of each assemblage (especially in nos. 1 and 2 below, where the assemblage represents an extended date span), or to the quantities of each Form found in each assemblage. The discussion below shows that the assemblages cited by Magness do not in fact provide convincing evidence of a terminal date later than that suggested in *CPRG* (i.e., the first half of the fifth century) for the latest Kefar Hananya Forms. As seen above, moreover, the evidence from the newly available assemblages presented in this paper is consistent with the *CPRG* estimated date for the end of production at Kefar Hananya.
(1) The first assemblage cited by Magness is from the habitation level above layer A of the southern court of insula I (the "insula sacra") at Capernaum (Loffreda 1974: 104-105, Fig. 32). In *CPRG* (111, n. 38) this assemblage is described as representing an extended date span, from the 3rd century, if not earlier, through the late 4th-earlier 5th (i.e. first half of 5th) century. The long duration of this level (ending with the construction above of the octagonal church) is discussed by Loffreda (ibid.: 104), who describes the difficulties encountered in its excavation, saying that the sole purpose of presenting the assemblage was to provide a *terminus post quem* for the octagonal church. Included were examples of Early Roman Form 3A, and vessels of Middle Roman date: Kefar Hananya Forms 1A and 4C, a large number of Form 3B, and fragments of round lamps with decorated discus (one illustrated example, Foto 24:8, has ovolo decoration; on this lamp, see, for example, *CPRG* 122, n. 49 and cited references), as well as examples of Late Roman and Early Byzantine pottery: Kefar Hananya Forms 1C and 1E, and Competing Forms C3A, C4A, and C4B. On the date ranges of the Kefar Hananya and Competing Forms, see above and Fig. 2.
Loffreda mentions explicitly that the Late Roman Red Ware (LRRW) bowls from this context were of CRS Form 1. One fragment that seems from the drawing to be PRS Form 3 is illustrated, but that piece is clearly described in the text as a different vessel: a deep bowl/basin classified as Capernaum Form D6 (Fig. 32: 7). This bowl is somewhat similar in form to PRS Form 3 (cf. Loffreda 1974: Fig. 14:4-5). Based on Loffreda's two explicit identifications in the text (first of the LRRW vessels that were found in this assemblage and then of this particular vessel), one needs to conclude, therefore, that Fig. 32:7 shows a Form D6 bowl that is close in form to PRS Form 3 (note, for example, that the vessel wall of this fragment is of uniform thickness, while that of PRS Form 3 often tapers below the rim [cf. Hayes 1972: 324]). The description of this pottery piece in the text was not noticed by Magness, however, who states that this assemblage included bowls of CRS Form 1, LRC (i.e., PRS) Form 3, and Galilean bowls (i.e., Kefar Hananya Form 1). (PRS Form 3 has a later date range than that of CRS Form 1 [Hayes 1972: 329-338; idem 1980: 525-527]; see also below.) Neither was the plentiful early pottery in this assemblage mentioned by Magness.
To summarize: (a) The Early/Middle Roman to Early Byzantine span of this assemblage is not helpful for defining the dates of the latest Kefar Hananya Forms.

(b) The latest clearly attested LRRW vessel in the group is CRS Form 1, dating from the latter part of the 4th until about the third quarter of the 5th century (Hayes 1972: 372-373, and see above). (The latest coins from this level date to 383-395 and the Late Roman period [ca. 300-ca. 450 according to the Capernaum chronology], while the single coin recovered from the level above dates to ca. 408-423 [Spijkerman 1975: nos. 7, 10-11, 13, 145; for this context, see also Corbo 1975: 98-100]).

(2) Another assemblage cited by Magness as evidence for a later dating, from room 119 of insula V at Capernaum (Loffreda 1974: 131, 133, Fig. 46), described in detail in *CPRG* (109, n. 33), represents an extended period, well attested both by the coins and the fine ware. Included were African Red Slip (ARS) Forms 32/58 and 50 A/B, dated by Hayes to the late third to early 4th century and ca. 300-360, respectively, while the latest of the LRRW vessels apparently dates to the 6th century. The 43 coins from this context date from 218-222 (Elagabalus) to 491-518 (Anastasius I, two examples), and include 11 specimens from the first three decades of the fourth century. It is hardly surprising, therefore, to find in this context 1 fragment of Form 1D, 7 of Form 1E, and 2 of Form 4D, along with more frequent examples of Competing Form C3A and numerous cooking pots of C4B (Loffreda, ibid.; Hayes 1972: 95-96; 69-73; 377, 379, respectively; Spijkerman 1975: nos. 678-718; for this context, see also Corbo 1975: 207). In this case also Magness cites only the presence of CRS Form 1 (although this is an error: this Form is not mentioned in the text, nor does it appear in the illustrations) and PRS Form 3, not mentioning the earlier (and later) remains.

(3) A third pottery group cited by Magness was from room 97 of insula IV at Capernaum (Loffreda 1974: 134-135, Fig. 48; cf. Corbo 1975: 201-202). In layer A, 7 coins dating to the first half of the 3rd century, two third century coins, and one of Late Roman date (ca. 300-ca. 450) were found. (Below this level was a homogeneous 1st-2nd century assemblage including pottery and coins.) The pottery recovered included Kefar Hananya Forms 1A, 1C, 1D, and 3B, but the large majority were of Forms 1E and 4D. Four pieces of LRRW were found: a large fragment of African Red Slip (ARS) Form 45B, dated by Hayes (1972: 62-65) to ca. 230/40-320, two examples of CRS Form 1, and one of PRS Form 3C (Loffreda, ibid; Spijkerman 1975: 115). The last vessel fragment, the artifact in the assemblage with the latest initial date, is dated by Hayes from about 430 through the late 5th century (on the date of PRS Form 3C, see above, this Section). It is noteworthy that no examples of Competing Forms from this context are mentioned; this is consistent with a relatively early terminal date for the assemblage (see also above, Section E.2 and Fig. 2). None of the pottery in this group, therefore, except for the PRS Form 3C fragment (perhaps intrusive?), needs to be dated later than the 4th century (see above, Sections E.2 and F; cf. also Loffreda 1974: 134).

(4) The fourth assemblage mentioned by Magness, from layer B of room 51 of insula II (Loffreda 1974: 128, Fig. 44: 1-9; Corbo 1975: esp. 178-179), was in fact one of the latest contexts discussed in *CPRG* in which Kefar Hananya ware was found (see 108 and n. 31 for a detailed list of the finds). The Kefar Hananya pottery included single examples of Forms 1D and 4D, several of Form 6C, and 30 rim fragments of Form 1E (one of which was analyzed; *CPRG* ibid. and Pl. 1E: 7). Examples of Competing Form C3A and 6 rim fragments of C4B also occurred. Late Roman Red Ware included one example each of ARS Forms 58 and 61 (probably Form 61A), dated ca. 290/300-375, and ca. 325-450 (61A: 325-380 or slightly thereafter; Hayes 1972: 92-96; 100-107 and idem 1980: 515-516, respectively). The most numerous LRRW type was CRS Form 1 (Loffreda, ibid.: 129), but PRS Form 3C and CRS Form 2 also occurred (counts of the last three LRRW Forms are not given by Loffreda). The seven coins recovered were from the second half of the 4th and first half of the 5th century (Spijkerman 1975: 108; Loffreda ibid.). The latest LRRW vessel found in this context was CRS Form 2 (ibid. Fig. 44:2), dated by Hayes (1972: 373-376) from about the mid 5th to the early 6th century. Note that the level immediately above, floor A of room 51, included numerous examples of CRS Form 2 while Kefar Hananya ware was completely absent (see above, this Section; Loffreda 1974: 129; *CPRG* 159 and n. 9). As discussed above in this Section, in Kanaf Building 300 both PRS Form 3C and CRS Form 2 were found (and also CRS Form 1, dated until about the third quarter of the 5th century) but no examples of Kefar Hananya/corresponding Golan Forms occurred. Relevant also to the chronology of bowls identified by Loffreda as corresponding to CRS Form 2 is the recent separate classification and dating of a Cypriot Red Slip bowl form occurring at many sites, including Capernaum (Meyza 2000: 511-512; Hayes 2001: 279, 282). Hayes (ibid.) classes the bowl as CRS Form 1/2, with a suggested date in the first half of the 5th century (or: [4th? and] 5th century). Meyza (ibid.) proposes classifying the vessel as K1 for Kourion 1, and cites evidence for its appearance in 4th century contexts. A more precise initial date for this Form is now provided, however, by its common occurrence in the 363 destruction level at Sepphoris (Baluka 1999: 87 and Pl. 9: 9-11). This same Form was classified by Loffreda as CRS Form 2 (or Form 9) (Loffreda 1974: 68, 70, 169 [TS 6]; idem 1982a: 414-415 and Fig. 4:3). A mid 5th to early 6th century date for vessels identified by Loffreda as CRS Form 2, therefore, cannot be taken for granted (although the single drawn fragment of CRS Form 2 from assemblage 4 is the better known CRS Form 2 and not CRS Form 1/2). Note also that, based on his evaluation of the large pottery corpus published from the Jalame excavations (in southwestern Galilee), including PRS Form 3C and many examples of CRS Form 2 (Johnson 1988: 145-167), Hayes places the effective end of the settlement at Jalame "after the mid-5th century; possibly nearer the end of the century," or at 475/500 (Hayes 2001: 278-279, 282) and in another publication, at ca. 480, even 500 (idem 1998: 11-12; cf. also Meyza 2000).

Given the exhaustive treatment in *CPRG* (83-150, 156-164) of a very large amount of dating evidence, including a detailed and methodologically balanced presentation of the evidence relevant for dating the latest Kefar Hananya Forms, one can only assume that Magness either misread or ignored it in putting forward her opinion that the dating of the local pottery forms was incorrect based on a skewed weighting of the evidence of the coins. As seen above, the new evidence presented in this paper is also consistent with the *CPRG* estimated date (the first half of the 5th century, or ca. 430) for the end of production at Kefar Hananya.

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