

## URBAN SURVEY AND THE *POLIS* OF PHLIUS

INTENSIVE SURFACE SURVEY in the Mediterranean world has been in a state of almost constant change since its introduction to the region some twenty years ago.<sup>1</sup> Central issues of survey methodology and interpretation are frequently debated, contributing to the increasing sophistication of the technique. One recent, and radical, development is the redefinition of the targets considered suitable for surface study. In the early days, "survey" meant work conducted exclusively in the ancient countryside; "big sites" such as urban centers were considered to be the province of the excavator and thus were avoided. Since the early 1980's, that deeply entrenched division of labor has been challenged sharply by the rise of urban survey; surface reconnaissance is now being applied to all sites in the landscape, regardless of size or character. This article presents the methodology and results of one such study, the Nemea Valley Archaeological Project (henceforth NVAP), at the site of Phlius in the northeastern Peloponnese (Fig. 1).<sup>2</sup>

<sup>1</sup> Works frequently cited are abbreviated as follows:

- Biers, 1968 = W. R. Biers, "Investigations at Phlius," unpublished Ph.D. dissertation, University of Pennsylvania, 1968
- Bintliff and Snodgrass, = J. Bintliff and A. M. Snodgrass, "Mediterranean Survey and the City," *Antiquity* 62, 1988, pp. 57–71
- Blegen, n.d. = C. W. Blegen, "Excavations at Phlius, 1924," n.d. (unpublished mss. in the possession of W. R. Biers)
- Leake = W. M. Leake, *Travels in the Morea*, London 1830
- Pritchett = W. K. Pritchett, "Military Operations at Phleious 369–366 B.C.," *Studies in Ancient Greek Topography*, II, *Battlefields*, Berkeley 1969, pp. 96–111
- Ross = L. Ross, *Reisen und Reiserouten durch Griechenland. Reisen im Peloponnes. Erster Teil*, Berlin 1841
- Whitelaw and Davis = T. M. Whitelaw and J. L. Davis, "The Polis Center of Koressos," in *Landscape Archaeology as Long-term History: Northern Keos in the Cycladic Islands*, J. F. Cherry *et al.*, ed., Los Angeles 1991, chapter 12
- Wright *et al.* = J. C. Wright, J. F. Cherry, J. L. Davis, E. Mantzourani, and S. B. Sutton, "The Nemea Valley Archaeological Project: An Interim Report, 1984–87," *Hesperia* 59, 1990, pp. 579–659

Orthographic note: Although current style would use the spelling "Phlious", the form initiated in the earlier reports (see footnotes 28–30 below) has been retained for consistency—Ed.

<sup>2</sup> This research was carried out by the Nemea Valley Archaeological Project, sponsored by Bryn Mawr College and conducted under the auspices of the American School of Classical Studies at Athens with permissions from the Greek Ministry of Culture and Sciences. The Project was directed by James C. Wright; John F. Cherry, Jack L. Davis, and Eleni Mantzourani jointly directed all survey operations. Funding was provided by the National Endowment for the Humanities (Grants RO-20731, RO-21715), the National Geographic Society (Grants 2971-84, 3265-86), the Institute for Aegean Prehistory (Grants in 1984–1987, 1989), and private donors. Apart from the directors of the project, there are many people whose contribution to the work at Phlius must be gratefully acknowledged. Jonathan Allen assisted me with the architectural mapping of the site and was an unfailing ally for the entire investigation. Robert F. Sutton, Jr. directed the museum study and processing of the finds and has undertaken their final detailed publication. I thank him and all others who dealt with Phliasian material: E. A. Athanassopoulou, Hugh Elton, Carolyn Koehler, Cynthia Kosso, Daniel Pullen, Laurie Roberts, Jeremy B. Rutter, Kathleen Slane, and Thomas Strasser. Team workers in the field were William Alexander, Douglass Bailey, Evi Baxevasi, Nick Ceh, Helen Elsom, Trish

## URBAN SURVEY AT PHLIUS

With hindsight, the development of urban or "large site" survey was inevitable once the analysis of regional settlement hierarchies was accepted as a viable and legitimate goal. The dominant role of cities and towns in the Mediterranean world, central places identified by their economic or administrative importance rather than by any arbitrary size criterion, requires no emphasis. Vital as rural settlement and land-use data undoubtedly are, in the absence of evidence from larger settlements, many aspects of social and economic behavior within a region must remain unknown. Where did the majority of the population reside? Were there significant changes in population levels over time? When did the central place appear (or disappear), and what impact did this have upon rural settlement patterns? What were the economic and political relationships between a town and its countryside?

To answer such questions, it is necessary to know several things about a major settlement: the over-all history of occupation of the site, signs of functional variation across the site, and alterations in total site size and configuration through time. It is reasonable to begin by asking what part excavation could play in providing the required information. Only rarely have sites been excavated extensively enough to offer a reliable representation of diachronic activity across the entire settlement.<sup>3</sup> Even for the most famous or most excavated cities, the ability to observe diachronic change is limited; it is non-existent for less known and poorly explored centers. Nor is this situation likely to improve in the near future, given the heavy costs of excavation. This is not to deny the fruitfulness of using excavation and survey results in tandem: several surveys have been conducted around major excavated centers in an attempt to link important sites with their rural hinterlands.<sup>4</sup> But this linkage, if often productive, inevitably remains somewhat artificial. Field walking in the countryside and excavation in the city generate two very different sorts of evidence, demanding two very different processes of inference and interpretation. In order to produce comparable evidence for town and country, a comparable methodology must be applied across the entire landscape.

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Filkins, Kevin Glowacki, Sanne Houby-Nielsen, Lina Kangalou, Mette Korsholm, Dimitra Papakonstantinou, Sriyan Pietersz, Eleni Psoma, Alexandra Roberts, Laurie Roberts, Nick Rutter, and Nauyia Vrettakou. Paul Cartledge, John F. Cherry, Jack L. Davis, Cynthia Kosso, Anthony Snodgrass, Robert F. Sutton, and James C. Wright all commented helpfully on this manuscript. I must particularly acknowledge my debt to Professor William Biers (University of Missouri-Columbia) for his generous support and advice about my work at Phlius. For a preliminary report of results from the Nemea Valley project, see J. C. Wright *et al.*

<sup>3</sup> On the dangers of inference from inadequate excavation samples, see A. M. Snodgrass, "La prospection archéologique en Grèce et dans le monde méditerranéen," *AnnEconSocCiv* 37, 1982, pp. 800–812. Some sense of settlement size and development can be gained, however, if a site is widely tested through excavation: e.g., S. Symeonoglou, *The Topography of Thebes*, Princeton 1985; T. M. Whitelaw, "The Settlement at Fournou Koriphi Myrtos and Aspects of Early Minoan Social Organisation," in *Minoan Society*, O. Kryzskowska and L. Nixon, edd., Bristol 1983 (pp. 323–345), pp. 338–340.

<sup>4</sup> Carthage: J. A. Greene, "The Carthage Survey," in *Archaeological Survey in the Mediterranean Area*, D. R. Keller and D. W. Rupp, edd., Oxford 1983, pp. 197–199; Heraclea Minoa: R. J. A. Wilson and A. Leonard, Jr., "Field Survey at Heraclea Minoa (Agrigento), Sicily," *JFA* 7, 1980, pp. 219–239; Camarina: *AR* 1981/1982: pp. 89–90; Megalopolis: J. A. Lloyd, E. J. Owen, and J. Roy, "The Megalopolis Survey in Arcadia: Problems of Strategy and Tactics," in *Archaeological Field Survey in Britain and Abroad*, S. Macready and F. Thompson, edd., London 1985, pp. 217–224; Halieis: T. van Andel and C. N. Runnels, *Beyond the Acropolis*, Stanford 1987.

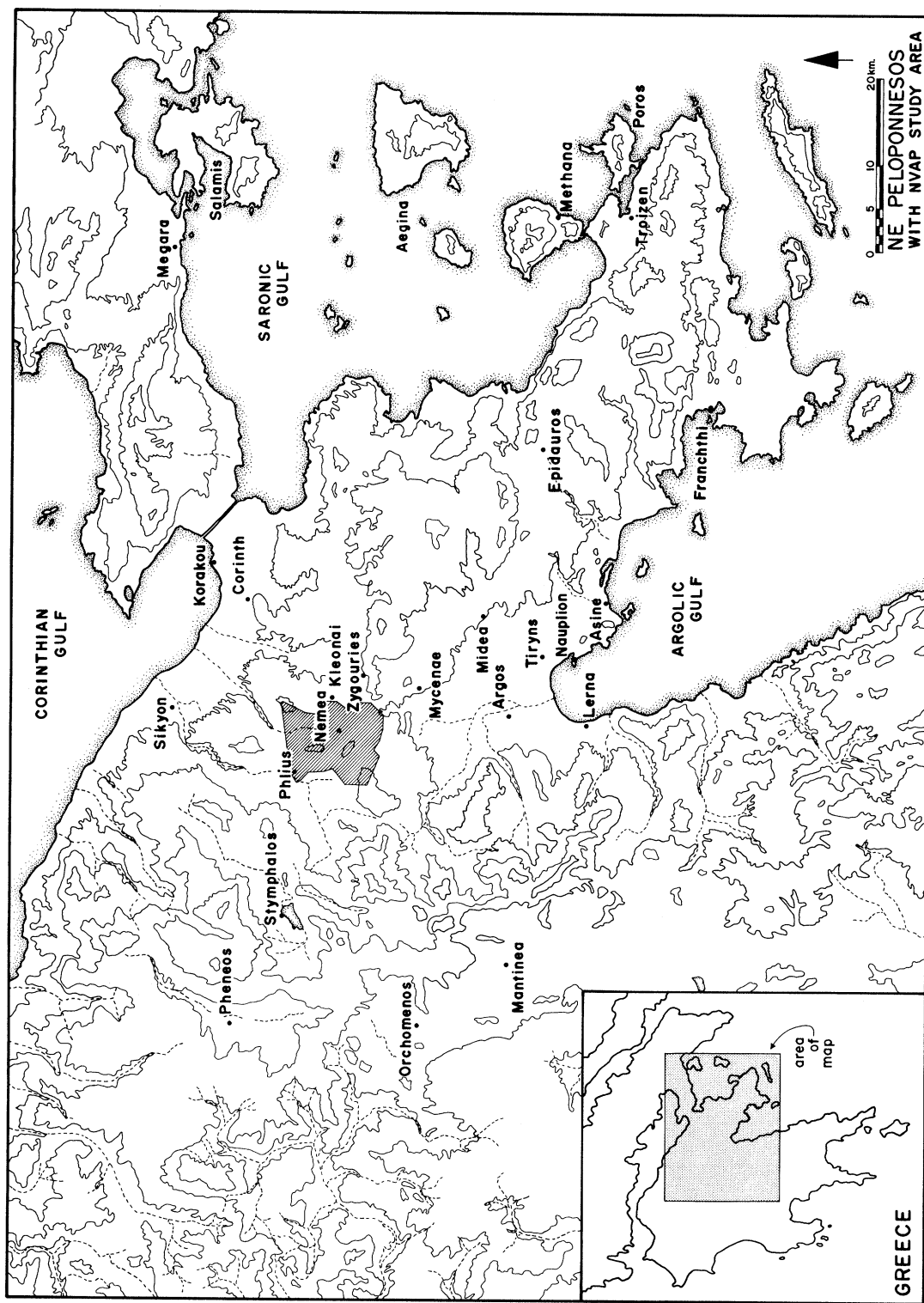


FIG. 1. Map of the northeastern Peloponnese showing the area investigated by the Nemea Valley Archaeological Project

As this paper attempts to illustrate, urban survey can provide a helpful contribution to the general problem of studying long-term change throughout entire regions. Its potential has long been appreciated in areas with well-established traditions of surface reconnaissance, for example in Mesopotamia and Mesoamerica.<sup>5</sup> The intensive surveys characteristic of the Mediterranean basin are a recent innovation, yet several urban surveys have been undertaken, particularly in Greece.<sup>6</sup> Great variety in theoretical goals and field methodologies has marked this development, and predetermined, "cook book" strategies are no more desirable in urban than in rural surveys.<sup>7</sup> Nevertheless, open discussion of aims and results can only facilitate future work at large sites. In that light, we assess the relative successes and shortcomings of the urban survey at Phlius.

In the design of the NVAP survey, the need to record and compare diachronic activity in the town and in the countryside was acknowledged, and an ancient urban center was deliberately included within the survey zone. Phlius, best known in its manifestation as a Classical *polis* or city-state, was an attractive candidate for surface investigation for several reasons. First, the population center of the Phliasian valley now lies farther south at New Nemea (formerly Agios Georgios), and very few modern structures encumber the ancient site. One basic prerequisite for urban survey is a lack of modern over-burden; the technique would be highly inappropriate in the case of a heavily built-up community, for example at modern Thebes. Second, the site of Phlius has been the object of no less than three separate excavation campaigns (see pp. 432–433 below). With these excavations and the NVAP

<sup>5</sup> For a recent example from Mesopotamia see W. Ball, D. Tucker, and T. J. Wilkinson, "The Tell al-Hawa Project: Archaeological Investigations in the North Jazira 1986–87," *Iraq* 51, 1989 (pp. 1–66), pp. 20–39.

<sup>6</sup> In Italy, Doganella in South Tuscany, a 250 ha. Etruscan settlement discovered in the course of the Albegna survey, has been subjected to an intensive examination: L. Walker, "The Site of Doganella in the Albegna Valley: Spatial Patterns in an Etruscan Landscape," in *Papers in Italian Archaeology*, IV, iii, *Patterns in Protohistory*, C. Malone and S. Stoddart, edd., Oxford 1985, pp. 243–254; *idem*, "Survey of a Settlement: A Strategy for the Etruscan Site at Doganella in the Albegna Valley," in *Archaeology from the Ploughsoil*, C. Haselgrove, M. Millett, and I. Smith, edd., Sheffield 1985, pp. 87–94. For Africa, P. Cressier, "Ramassage raisonné du matériel archéologique de surface sur le site médiéval Musulman d'Azelik-Takadda (département d'Agadez, République du Niger)," in *Structures de l'habitat et occupation du sol dans les pays Méditerranéens: les méthodes et l'apport de l'archéologie extensive*, G. Noyé, ed., Rome 1988, pp. 345–352. In Greece, the city of Koressos (18 ha.) was field walked in 1984: Whitelaw and Davis. The Cambridge and Bradford Boeotia Expedition in 1984–1986 undertook the study of three large sites simultaneously, Askra (11 ha.), Haliartos (ca. 30 ha.), and Thespiiai (over 100 ha.): Bintliff and Snodgrass, *Antiquity* 62. Ongoing work includes the Lakonia Survey at Chrysapha and the Menelaion (*AR* 1987/1988, p. 26) and at Halai in East Lokris (*AR* 1988/1989, p. 47).

<sup>7</sup> J. F. Cherry, "Frogs Around the Pond: Perspectives on Current Archaeological Survey Projects in the Mediterranean Region," in *Archaeological Survey in the Mediterranean Area*, D. R. Keller and D. Rupp, edd., Oxford 1983 (pp. 375–416), pp. 404–405. Other types of urban studies should be mentioned, for example, careful architectural mapping of extant remains, such as Roller's work at Tanagra, or subsurface prospection, such as Williams' work at Stymphalos: D. Roller, "Recent Investigations at Grimádhā (Tanagra)," in *Boeotia Antiqua*, I, *Papers on Recent Work in Boeotian Archaeology and History*, J. Fossey, ed., Amsterdam 1989, pp. 129–163; R. E. Jones, "Geophysical Prospection at Ancient Stymphalos," in *Science in Archaeology*, R. E. Jones and H. W. Catling, edd., Athens 1986, pp. 35–38; H. Williams, "Investigations at Stymphalos, 1984," *Classical Views* 4, 1985, pp. 215–224. Limited subsurface prospection through magnetometry was conducted at Phlius in 1986 by James Foradas (Ohio State University) in the agora area of the site (approximately 3300 sq. m. covered), but results are not yet available. Such techniques, however, do not provide the controlled diachronic coverage characteristic of urban survey as defined here.

survey, some comparison of surface and subsurface results becomes possible; this complex relationship has not received sufficient systematic attention in the Mediterranean (see pp. 446–460 below).

As an additional attraction, Phlius does not exist in a historiographical vacuum. Ancient sources make reference to the *polis*, giving some hints of its history and topography. Travelers in the early modern era also mention Phlius; their descriptions leave us in no doubt that the ancient architectural remains have suffered significant losses since the 18th and 19th centuries. The steady disappearance of such ancient material, coupled with recent episodes of destructive agricultural and building activity on the site, gave a final impetus to this survey. “Cultural resource management” is not a concept often associated with classical archaeology, but it seems justified in this context.

One major disadvantage of the survey at Phlius was the position of the site on the extreme northwestern edge of the NVAP survey permit territory (Fig. 2). From the outset, it appeared unlikely that the extent of the site could be fully defined in all directions. Establishing Phlius’ relationships with the subsidiary settlements of its obvious catchment area, the Phliasian valley proper, was never the goal of the survey; the primary focus of the Nemea Valley Project lay in its eponymous valley to the east. Clearly these are drawbacks which prevent the complete potential of urban survey from being realized.<sup>8</sup> Nonetheless, a significant proportion of the urban site proper was available for investigation, and the relationship of Phlius to the Nemea Valley is also worthy of attention, especially given the rather unusual character of that particular valley system (see pp. 462–463 below).

#### THE TOPOGRAPHY OF PHLIUS

The region known as *Phlissia* is a broad, fertile valley lying at the head of the Asopos River, which flows north to the Gulf of Corinth, with the upland plain of Stymphalos some distance to the west and the Nemea Valley immediately to the east (Fig. 1). The valley, ringed by mountains, is connected by passes to several important routes of communication in the northeastern Peloponnese. The over-all strategic importance of the Phliasian plain is debatable, but it was sufficient to provoke a degree of military activity in the area, particularly in the 4th century B.C. (see p. 429 below).

At the northeastern edge of the valley a spur of conglomerate bedrock extends from the range of hills known today as Prophitis Ilias (ancient Mount Trikaranon); this westward-running ridge forms the acropolis of ancient Phlius. It is neither very rugged nor particularly steep, and it stands on average only about sixty meters above the level of the plain, but the defensive capacity of the site is enhanced by some very broken terrain on its slopes and by formidable stream gullies a few hundred meters to the north and south. The acropolis also affords a comprehensive panoramic view and is a natural location from which to command the plain below.

The ridge rises from a saddle separating it from the parent mountain and extends about a kilometer into the valley proper (Fig. 3). At its broadest, the ridge is about 500 meters wide, but it tapers considerably at its western end; it also slopes down to the west in a series

<sup>8</sup> The Boiotian urban surveys are more fortunate in their ability to delimit their large sites on all sides; see Bintliff and Snodgrass, *Antiquity* 62.



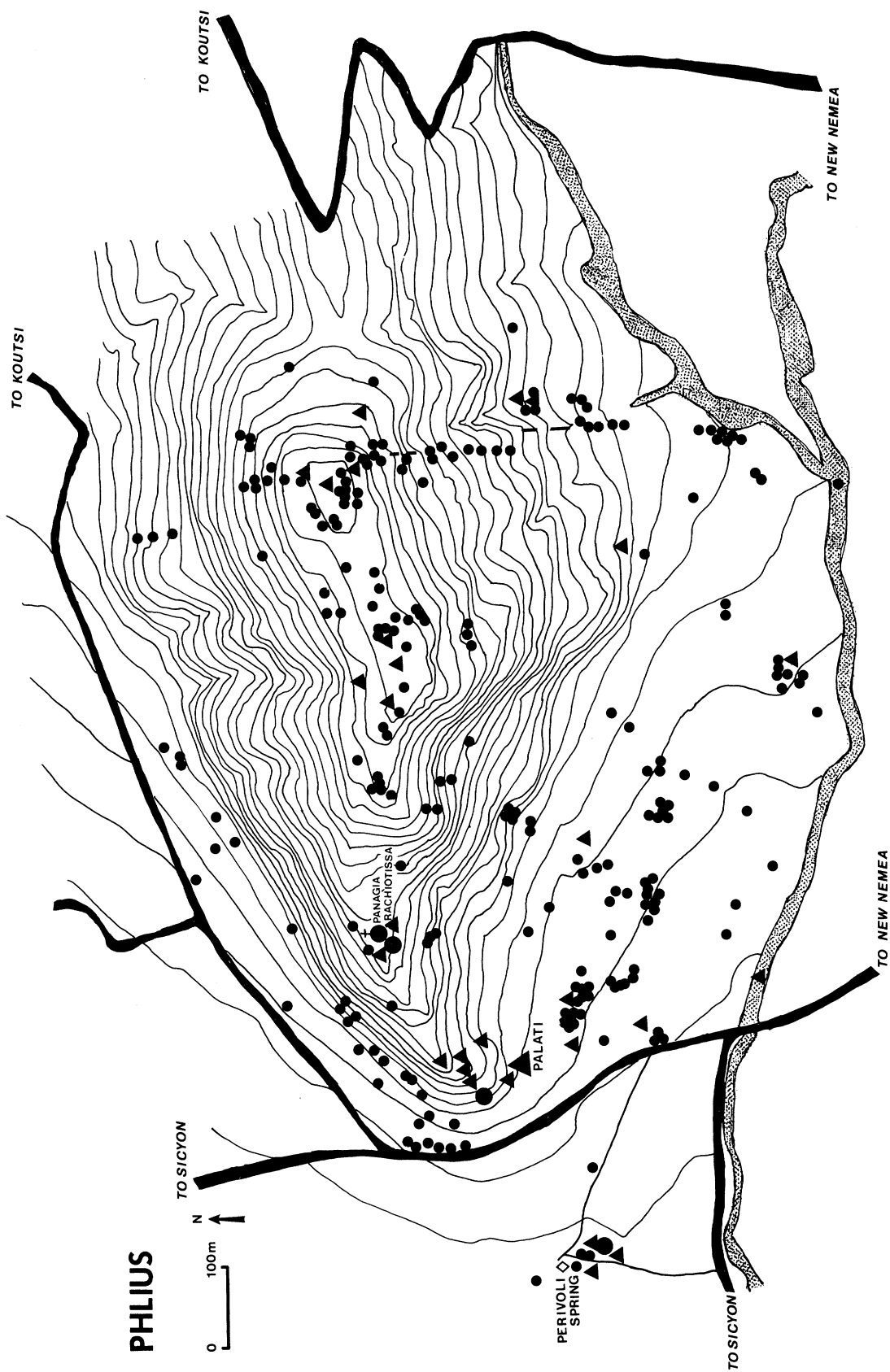


FIG. 3. Distribution of architectural remains at Phlius. ● = simple worked blocks; ▲ = other architectural elements; — = extant stretches of the eastern city wall line

of natural terraces. Uncultivated scrub dominates the relatively flat and wide acropolis summit and its upper slopes; the northern slope, extremely steep in places, is covered by dense maquis, while the southern one presents several sheer rock faces. To the east, the descent from the acropolis to the saddle is in gentle contours, allowing terracing for olives. It is at the narrow western end, today mere scrub and grass on an exposed and rocky surface, that most of the extant architectural traces of the site are located. The chapel of Panagia Rachiotissa, the most conspicuous feature of the site today, stands near this west end of the ridge (p. 437 below). Intensive cultivation makes a patchwork of the lower slopes below the acropolis and of the plain to the west and south, where the agora and part of the lower town appear to have lain. Wine and currant grapes are the most common crops today, Phliasian wine being celebrated now as in antiquity, but olive groves and cereal fields are also found.

The Asopos River, which winds northward through the Phliasian plain, lies some 700 meters from the western foot of the acropolis. Stream gullies north and south of the acropolis flow down from Prophitis Ilias to join this river. In addition to these possible periodic water sources and the several ancient cisterns that have been identified on the acropolis, Phlius presumably relied for its water supply on a spring, the only one known today, some 250 meters to the southwest from the end of the ridge, in the area known as the Perivoli (Garden). The spring has an abundant flow and attracted frequent comment in the travelers' accounts; that it flowed in antiquity seems very likely since (see p. 458 below) dense remains of settlement reaching back to prehistoric times exist in its immediate vicinity. A modern irrigation system has been built around the spring, causing much disruption to this part of the site.

#### HISTORICAL BACKGROUND

Although Phlius is a relatively little known site, our documentary sources provide sufficient information to compile a general, if scrappy, political account of the city. This is not the place to rehearse all of Phliasian history, but a brief background sketch may be helpful.<sup>9</sup> The literary evidence gives one intriguing hint about the earliest days of the city. According to Strabo (8.6.24) and, less directly, to Pausanias (2.12.4), Phlius was a secondary foundation: Homeric Araithyrea (*Iliad* 2.571) was the primary "pre-Dorian" settlement in the Phliasian valley; only at some later point did its inhabitants shift to the acropolis site of Phlius, reputedly some thirty stades (5.5 km.) away. The exact location of Araithyrea has long been the subject of speculation, possibly lying to the south near Mount Kelossa (or Kelousa, present day Megalovouni) or to the west at Aïdonia.<sup>10</sup>

The historical sources remain vague about the settlement after its reputed transfer to the acropolis site. The "Dorian Invasion" is said by Pausanias (2.13.1–2) to have led to internal dissensions in the city, with parts of the population emigrating eastward; some connection with the Ionian migration may be buried in this legend. The philosopher Pythagoras was claimed as a descendant of these emigrants, and according to Cicero (*Tusc. Disp.* 5.3.8–9), he returned to Phlius to debate the nature of Philosophy with the local

<sup>9</sup> For a more detailed account, see E. Meyer, *s.v.* Phleius, *RE* XX, i, 1941, cols. 269–290, although it is worth bearing in mind Pausanias' remark, "I know that most of the traditions concerning the Phliansians are contradictory . . ." (2.12.3).

<sup>10</sup> S. G. Miller, *Nemea: A Guide to the Site and Museum*, Berkeley 1990, pp. 52–53.



tyrant. Such tales and the attribution (possibly mistaken) of 6th-century coinage to the city,<sup>11</sup> are practically all that is known, from non-archaeological data, of Archaic Phlius. Evidence for the formation of the Phliasian *polis* so far remains invisible, although it has become increasingly apparent, notably through surface survey investigations at other sites, that the processes underlying the rise of the *polis* resulted in several different paths of regional development.<sup>12</sup>

The political narrative picks up in the 5th century B.C. The *polis* participated in the Persian Wars, providing 200 men at Thermopylai and 1000 at Plataia (Herodotos, 7.202, 9.28.4). During this period, the Phlians also developed a policy for dealing with the proximity of powerful neighbors. Argos may have been the nearer threat, but Phlius became an early and constant ally of Sparta, a choice for which she suffered during the Peloponnesian War (Thucydides, 5.83.3, 5.115.1, 6.105.3). The strategic location of Phlius (for the Spartans, at any rate) was demonstrated during this conflict, not least by the use of the plain as a Lakedaimonian mustering ground (Thucydides, 5.57). But apart from its supporting role in such power politics, little is known of Phlius in the 5th century B.C. Slightly more detail is available for the succeeding century. *Stasis* between oligarchic and democratic factions caused much internal strife, resulting in a great number of exiles; it also brought Spartan wrath down upon the city (in the form of a 20-month siege by Agesilaos).<sup>13</sup> Internal and external troubles continued into the 360's, including several raids made by neighboring states allied with Phliasian exiles. Xenophon's *Hellenika* (6.4.9 and 18, 7.2.3 and 5–11) narrates some of the attacks made upon the Phliasian acropolis and the sorties made in defense, providing us with a topographic description of the city, particularly of aspects of its fortifications. Xenophon also mentions border forts (both defensive and hostile) in the hills ringing the city; towers discovered in the Nemea Valley survey may include these forts.<sup>14</sup>

In comparison to the 4th century, the Hellenistic period in the life of the city received little comment from the ancient sources. In 229 B.C., Kleonymos, the tyrant of Phlius, resigned his position, and the city joined the federal association of the Achaean League (Polybios, 2.44.6). Shortly after this event, the reforming king of Sparta, Kleomenes III, annexed the city, possibly installing a garrison, during his short-lived campaigns in the Peloponnese (Polybios, 2.52.2). With the downfall of Kleomenes III in 222 B.C., Phlius may have rejoined the Achaean League and shared its general fortunes during the years of the Macedonian

<sup>11</sup> B. V. Head, *Historia Numorum*, 2nd ed., Oxford 1911, p. 408, and, more recently, J. D. MacIsaac, "Phliasian Bronze Coinage," *ANSMN* 33, 1988 (pp. 45–54), p. 46.

<sup>12</sup> On *polis* formation: for Korossos, Whitelaw and Davis; for Haliartos and Thespiiai, Bintliff and Snodgrass, *Antiquity* 62, pp. 62, 66–67; see also A. M. Snodgrass, "The Rural Landscape and Its Political Significance," *Opus* forthcoming.

<sup>13</sup> 390/89 B.C.; Xenophon, *Hellenika* 4 and 5, esp. 5.3.10–25; R. P. Legon, "Phliasian Politics and Policy in the Early Fourth Century," *Historia* 16, 1967, pp. 324–337; P. A. Cartledge, *Agesilaos and the Crisis of Sparta*, London/Baltimore 1987, pp. 262–266, 372–373.

<sup>14</sup> Pritchett. Aside from those observed by NVAP (e.g. site numbers 800, 911), towers are known further to both west and east: Wright *et al.*; A. Frickenhaus and W. Müller, "Aus der Argolis," *AM* 36, 1911 (pp. 21–38), p. 24; A. W. Lawrence, *Greek Aims in Fortification*, Oxford 1979, pp. 178, 444, note 11. On towers in the Argolid generally, see L. E. Lord, "The 'Pyramids' of Argolis," *Hesperia* 7, 1938, pp. 481–527; *idem*, "Watchtowers and Fortresses in Argolis," *AJA* 43, 1939, pp. 78–84; *idem*, "Blockhouses in the Argolid," *Hesperia* 10, 1941, pp. 93–112; H. M. Fracchia, "The Peloponnesian Pyramids Reconsidered," *AJA* 89, 1985, pp. 683–689; J. Wiseman, *The Land of the Ancient Corinthians*, Göteborg 1978, pp. 116–120.

Wars. The Phliasian plain was said to have been ravaged by the troops of Philip V in 197 B.C., the year of his defeat by the Romans at Kynoskephalai (Livy, 33.14.7–8). If Phlius was indeed a member of the Achaean League in the 2nd century, then the victory of Rome over that association in 146 B.C. would have brought the city into submission and probably established some manner of tribute-paying relationship with Rome. At the latest, the transition of Phlius from an independent *polis* to a dependent administrative unit of the empire would have occurred around the time of Augustus.

Under the empire, Phlius continued in relative obscurity. The city receives only the briefest mentions in passing (e.g., Pliny, *NH* 4.5.13; Ptolemy, 3.14.37), with the exception of Pausanias' invaluable eyewitness account (2.12.3–14.4) in the 2nd century after Christ. The periegete's narration implies that he traversed the entire length of the city; he enumerates (in his usual fashion) the cults and myths of each locale encountered along the way. Several useful topographical reference points, particularly an allusion to the theater, provide a rough idea of where the agora and certain temples were situated at that time. As always, Pausanias' interests extend only to a narrow range of topics, but he nonetheless gives an over-all impression of civic prosperity, with at least a dozen cults operational and well maintained in the Early Roman era.

A considerable gap in information about the site follows. The latest reference to the city in antiquity dates from the 7th century after Christ; the site is assumed to have been abandoned with the Slav invasions of that time.<sup>15</sup> A gap in the documentary evidence suggests that a long break in occupation then intervened, for the next indication of activity comes some eight hundred years later. Leake reported hearing from local informants that "an Episcopal church" of the province of Corinth had existed at the site, probably in the agora area at the western end of the ridge.<sup>16</sup> This bishopric is believed to have been in existence from the 15th to the 17th century. Phlius, apparently now known as *Polyphant* or *Polyfengo*, was also recorded as a staging post on the way from Corinth to Arcadia in the 14th century.<sup>17</sup>

The ridge was early and correctly identified as the acropolis of Phlius, and the European tourists of the 18th and 19th centuries became frequent visitors; the accounts of Leake, Ross, and Frazer are particularly valuable.<sup>18</sup> Leake in 1830 referred to a "tjiftlík" (i.e., *çiftlik*) in the plain below the spur; this usually refers to a settlement dependent upon a landlord of large holdings, ranging in size from a single farmstead to a small village. Most travelers made no mention of contemporary habitation at the site, for Agios Georgios at the

<sup>15</sup> Meyer (footnote 9 above), col. 287.

<sup>16</sup> Leake, p. 342.

<sup>17</sup> R. Rodd, *The Princes of Achaia and the Chronicles of the Morea*, London 1907; M. Kordosis, *Συμβολή στην Ιστορία και Τοπογραφία της Περιοχής Κορίνθου στους Μέσους Χρόνους*, Athens 1981. E. A. Athanassopoulou (Department of Anthropology, University of Pennsylvania) is studying the Byzantine material from the NVAP survey.

<sup>18</sup> Leake, p. 342; *idem*, *Peloponnesiaca: A Supplement to Travels in the Morea*, London 1846, pp. 339–351; Ross, pp. 25–39; J. G. Frazer, *Pausanias's Description of Greece*, London 1898, III, pp. 75–82, and V, pp. 549–550. For other reports of Phlius: C. Bursian, *Geographie von Griechenland II (Peloponnesos und Inseln)*, Leipzig 1868–1872, pp. 32–35; E. Curtius, *Peloponnesos II*, Gotha 1852, pp. 470–482; E. Dodwell, *A Classical and Topographical Tour through Greece II*, London 1819, pp. 211–213; W. Gell, *Itinerary of the Morea*, London 1817, pp. 386–390; F. C. Pouqueville, *Voyage de la Grèce*, Paris 1826/1827, V, pp. 296–313; W. Vischer, *Erinnerungen und Eindrücke aus Griechenland*, Basel 1875, pp. 278–286; F. G. Welcker, *Tagebuch einer griechischen Reise I*, Berlin 1865, pp. 308–312.

southern end of the Phliasian plain (modern New Nemea) was obviously now the residential center of the region. Phlius' appeal for the majority of these tourists lay in the challenge of correlating the visible remains with Pausanias' temples and of identifying the terrain of Xenophon's battle narratives; the latter tradition resulted eventually in some very worthy topographical studies of the Phliasian plain.<sup>19</sup>

This brief review of Phliasian history demonstrates that the understanding of long-term economic and social processes in this urban center is very frail; whole epochs are scarcely represented in the historical record. One good example is the Late Roman period (approximately 3rd–7th centuries after Christ), perceived, on both historical and archaeological grounds, as a time of transition, marked not least by the division of the Roman empire, taxation in kind, major alterations in settlement and land-use patterns, the rise of the colōnate, and increasingly sharp social distinctions.<sup>20</sup> The historical evidence does not offer any clues to how Phlius responded to these changes or to what role the city may have played in the Late Roman landscape. Nor will that state of knowledge (short of the chance epigraphic discovery) be altered in the future without the contribution of archaeology.

Another area where the ancient sources remain reticent is demography; estimates of the population of Phlius at any single time based on literary evidence are extremely tenuous. The most direct testimony belongs to the Classical period, when Xenophon described Phlius as a city "of more than 5000 men" (*Hellenika* 5.3.16), a considerable number when compared to the majority of Greek *poleis*.<sup>21</sup> Beyond occasional references similar to this, however, evidence of demographic fluctuations is lacking in the documentary sources. Nor does archaeology offer a means to take an accurate census: numerous techniques have been tried, but all are to some extent problematic.<sup>22</sup> Survey evidence, for example, has been used in the past to generate regional population estimates.<sup>23</sup> Numbers of sites and their relative sizes are assumed to correlate directly with the total number of inhabitants, although admittedly

<sup>19</sup> A. G. Russell, "The Topography of Phlius and the Phliasian Plain," *AnnLiv* 11, 1924, pp. 37–47; Pritchett; K. Adshead, *Politics of the Archaic Peloponnese: The Transition from Archaic to Classical Politics*, Aldershot 1986, pp. 1–18; N. Faraklas, *Ancient Greek Cities*, No. 11, *Phleiasia*, Athens 1972.

<sup>20</sup> For Late Roman survey patterns see J. L. Bintliff and A. M. Snodgrass, "The Cambridge/Bradford Boeotian Expedition: The First Four Years," *JFA* 12, 1985 (pp. 123–161), pp. 147–149; Van Andel and Runnels (footnote 4 above), pp. 113–117.

<sup>21</sup> W. A. McDonald, *The Political Meeting Places of the Greeks*, Baltimore 1943, pp. 65–66. The context of Xenophon's remark is a defiant meeting of the Phliasian assembly outside the city walls as a show of civic strength; the likelihood of some exaggeration here is obvious. But if Xenophon is at all accurate, then Phlius had "a citizen body more than three times as big as Sparta's and indeed among the larger ones in Greece" (Cartledge [footnote 13 above], p. 265). See also E. Ruschenbusch, "Die Zahl der griechischen Staaten und Arealgrösse und Bürgerzahl der 'Normalpolis'," *ZPE* 59, 1985, pp. 253–263; M. I. Finley, *Politics in the Ancient World*, Cambridge 1983, p. 59. J. Beloch calculated a total population of 10,000 in the 5th and 15,000 in the early 4th century (*Die Bevölkerung der griechisch-römischen Welt*, Rome 1886, p. 118).

<sup>22</sup> Population estimates based on the evidence of architectural remains such as wall perimeters, theater capacities, or water-supply systems are dubious under the best of circumstances and are notoriously unsound as diachronic indicators; e.g., P. Salmon, *Population et dépopulation dans l'Empire romain*, Brussels 1974, p. 9; cf. F. Hassan, *Demographic Archaeology*, New York 1981.

<sup>23</sup> M. Wagstaff and J. F. Cherry, "Settlement and Resources," in *An Island Polity: The Archaeology of Exploitation in Melos*, M. Wagstaff and C. Renfrew, edd., Cambridge 1982 (pp. 246–263), pp. 252–253; Van Andel and Runnels (footnote 4 above), pp. 169–176. For a Mesoamerican comparison, see G. Feinman, S. Kowalewski, L. Finsten, R. Blanton, and L. Nicholas, "Long-term Demographic Change: A Perspective from the Valley of Oaxaca, Mexico," *JFA* 12, 1985, pp. 333–362.

the precise nature of this relationship is disputable and subject to great temporal and geographical variation. Nevertheless, archaeological evidence does allow us to assess relative population change, albeit only crudely, and in terms of order-of-magnitude estimates. With the help of urban surveys, the possibility of tracing demographic variation from prehistoric to modern times can now be improved (however crudely) by including the dominant settlements in the landscape.

Even if the Classical citizen body was as sizable as Xenophon asserts, the political history of Phlius (at least in the Classical/Hellenistic era) can only be viewed as the struggle of one minor *polis* in its relations with greater cities, as it was balanced among Athens, Argos, and Sparta.<sup>24</sup> This view is reinforced by the general historical record, in which lesser *poleis* such as Phlius play purely incidental roles, appearing only tangentially in the sources, usually when engaged in conflict. Although these small cities greatly outnumbered their more famous counterparts, forming what has provocatively been termed the "Greek Third World", they can hardly be studied and appreciated as complex socio-political entities if we are confined to documentary sources.<sup>25</sup> The inclusion of an archaeological component in the investigation of growth and development at these small urban centers becomes essential.

#### PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

Despite the dismissive reference in the *Blue Guide* to its "somewhat indeterminate remains,"<sup>26</sup> Phlius is in fact a much excavated site with, as mentioned, three past excavation campaigns prior to the 1986 NVAP survey. Each of these presents striking contrasts in respect to research goals and methodological rigor: indeed, the history of digging at Phlius recapitulates in microcosm major stages in the development of archaeology in Greece.

In the first campaign, which lasted only a week, Henry and Charles Washington sampled areas on the acropolis and in the presumed agora. The findings of this excavation, conducted in 1892, were published some thirty years later in a brief article: the main aim was to identify certain architectural remains as the temples mentioned by Pausanias.<sup>27</sup>

Next, Carl Blegen spent two months at Phlius in 1924 (the year of his campaigns at the near-by prehistoric sites of Zygouries and Tsoungiza). Blegen sank more than eighty test trenches scattered widely over the acropolis and in the plain immediately to its north, south, and west, as well as in the vicinity of the Perivoli spring. In his succinct publication, Blegen firmly established the location of the agora of the city at the western edge of the acropolis ridge. Five major structures were there identified: a "basilica", a theater, a stage building, a hypostyle hall, and a Roman bath or gymnasium. Another revelation was the long history of occupation at Phlius, with "an almost unbroken series descending from the third millennium B.C. to medieval times."<sup>28</sup> Blegen referred to the campaign of that season as "primarily

<sup>24</sup> This was perceived in antiquity as well: "No one . . . would reproach Epidaurians or Corinthians or Phliasians if they thought of nothing else than to escape destruction and save their own lives . . ." (Isokrates, *Arch.* 91).

<sup>25</sup> The term "Greek Third World" is derived from H.-J. Gehrke, *Jenseits von Athen und Sparta: das dritte Griechenland und seine Staatenwelt*, Munich 1986; for related ideas see M. Amit, *Great and Small Poleis: A Study in the Relations Between the Great Powers and the Small Cities in Ancient Greece*, Brussels 1973.

<sup>26</sup> S. Rossiter, *Blue Guide: Greece*, 4th ed., London 1981, p. 256.

<sup>27</sup> H. S. Washington, "Excavations at Phlius in 1892," *AJA* 27, 1923, pp. 428–446.

<sup>28</sup> C. W. Blegen, "Excavations at Phlius, 1924," *Art and Archaeology* 20, 1925 (pp. 23–33), p. 32; Blegen,

exploratory" in character and, as Washington had done, called for more extensive work at the site.

Blegen's own mention of a possible second season was premature, however; after 1924 he never returned to Phlius. Information from his numerous, if eccentrically documented, test trenches lay untouched for many years, until William Biers deciphered the Blegen excavation notebooks as part of his doctoral dissertation. Some detailed articles, notably on the prehistoric pottery and on an Archaic votive deposit, have been published on the basis of this material.<sup>29</sup> In 1970, Biers himself began a three-year program of excavation in the agora area, the major contribution of which has been the further elucidation of some of the structures touched on by Blegen: the theater, the skene building, and the "basilica", now known as the Palati, an imposing public structure of Classical date.<sup>30</sup> To these recent campaigns, conducted under the aegis of the American School of Classical Studies, should be added various short-term rescue excavations on and around the acropolis by the Greek Archaeological Service; full details of these, however, remain unpublished.

These excavated areas and the finds from them, although indispensable for certain aspects of the history of the site, nevertheless encompass only a small fraction of the hypothesized extent of the Classical *polis* and do not help determine what that extent might actually have been. Not surprisingly, the most detailed and carefully documented excavation, that of Biers, is also the most circumscribed in its scope and spatial coverage; little or no light was shed on many of the periods noted for Phlius by Blegen. More comprehensive coverage of the site was obviously required if Phlius was ever to be considered part of a larger regional picture.

### INVESTIGATIONS AT PHLIUS IN 1986

The inclusion of Phlius within the territory of the Nemea project generated much discussion about the best way to approach a big site in the context of an ongoing intensive regional survey. Two basic tasks were seen as essential to any adequate treatment: first, the detailed recording and mapping of extant architectural features, followed by the intensive collection of artifacts from as much of the surface of the site as possible. The former was carried out by the author and a student assistant, while the latter required the deployment of a larger team of field walkers.

#### SITE MAPPING

As already mentioned, the early travelers had referred to a great deal of ancient material scattered about the site. No systematic recording of all ancient remains, however, had

n.d. For the inscriptions from this excavation see R. Scranton, "Inscriptions from Phlius," *Hesperia* 5, 1936, pp. 235–246. Some material from Phlius is on display in the archaeological museum of Ancient Nemea: Miller (footnote 10 above), pp. 73–74.

<sup>29</sup> W. R. Biers, "Six Sherds from Phlius," *AJA* 71, 1967, pp. 79–90; Biers, 1968; *idem*, "Excavations at Phlius, 1924: The Prehistoric Deposits," *Hesperia* 38, 1969, pp. 443–448; *idem*, "Excavations at Phlius, 1924: The Votive Deposit," *Hesperia* 40, 1971, pp. 397–423; *idem*, "From the Furnace," *AAA* 4, 1971, pp. 414–416.

<sup>30</sup> W. R. Biers, "Excavations at Phlius, 1970," *Hesperia* 40, 1971, pp. 424–447; *idem*, "Excavations at Phlius, 1972," *Hesperia* 42, 1973, pp. 102–120; *idem*, "The Theater at Phlius: Excavations 1973," *Hesperia* 44, 1975, pp. 51–68.

ever previously been attempted. To those from other traditions of archaeology, it may seem peculiar that so much excavation could have been done at a settlement for which no adequate general site map was available and where no inventory exists of surviving architectural remains, yet Phlius is in these respects not unusual among Classical *polis* sites. Considering how much has evidently been lost since the accounts of the early visitors to the site, there is some urgency in recording what yet survives. As a second goal, architectural plotting provides an alternative means of measuring human activity at the site, complementing other forms of surface collection.

On-site autopsy involved the labor of two people for the equivalent of three working weeks. Armed with an enlargement of the 1:5000 base map (Geographiki Uperesia Straton), they walked, as systematically as time and terrain permitted, over the entire acropolis, in the plain to the south, and around the Perivoli spring. Whenever any architectural element or other notable item was found, it was recorded by (1) an assigned in-field number; (2) a rough sketch; (3) measurement; (4) description, including type of stone; (5) photograph; (6) plotting onto the base map.<sup>31</sup> Over 400 in-field numbers were thus assigned, the majority of which denote individual worked blocks (usually undistinguished wall blocks) or small concentrations of such items. Other features recorded include more informative architectural remains such as architrave fragments, column drums, and capitals, as well as cisterns, bedrock cuttings, statue bases, wall segments, millstones, and inscriptions (Fig. 3); two Late Classical grave stelai were recovered (Fig. 4).<sup>32</sup>

An effective check on this procedure was provided by the next stage of the fieldwork, in which a larger team covered the same terrain (see pp. 440–442 below); a reassuringly small number of new features were encountered in this second pass. On the other hand, numerous blocks and wall segments were observed in areas not initially examined, particularly just beyond the western foot and to the northwest of the acropolis. Local residents also speak of antiquities in the plain running out towards the Asopos, beyond the area available to us for

<sup>31</sup> This detailed information is stored in the NVAP archives at Bryn Mawr College and in field notebooks kept in the Nemea Museum.

<sup>32</sup> I must thank Dr. Joyce Reynolds for her invaluable help in discussing and dating these inscriptions.

(1) Grave stele, rectangular in shape, of fine local conglomerate broken away at the left side and below. Max. pres. H. 0.60 m.; W. 0.38 m.; Th. 0.13 m. Letter height 0.04 m. Inscribed on one face, which is roughly dressed, within a smoothed band (H. 0.55 m.) near the stele top:

ΦΙΛΛΙΧΑ

Found in a modern dump at the extreme northwest end of the survey area (IV-13-270/271), now in the Nemea Museum (inv. no. 9413-8-999). Probably 4th century B.C.

(2) Grave stele (Fig. 4), of fine smoothed poros stone. Max. pres. H. 0.30 m.; max. pres. W. 0.30 m.; Th. 0.15 m. Letter height 0.06 m. A thin border (W. 0.02 m.) all around the stele and a horizontal band running 0.12 m. from its top are set approximately 5 mm. lower than the rest of the smooth surface of the stele. Inscribed within this band are three letters:

ΕΥΔ[...]

Found just outside the eastern circuit of the city wall (IV-13-123), now in the Nemea Museum (inv. no. 9413-9-956). Late 4th–early 3rd century B.C.

This stele fits within a Phliasian tradition in grave markers identified in the 19th century by Ludwig Ross, who observed approximately a dozen similar examples built into structures in the village of Agios Georgios (now New Nemea). They are apparently an unusual regional type. Ross suggests that the lettering and the upper portion of the stele may have been painted a solid color. For complete examples of the type, see *IG IV*, 452; Ross, pp. 29–31.

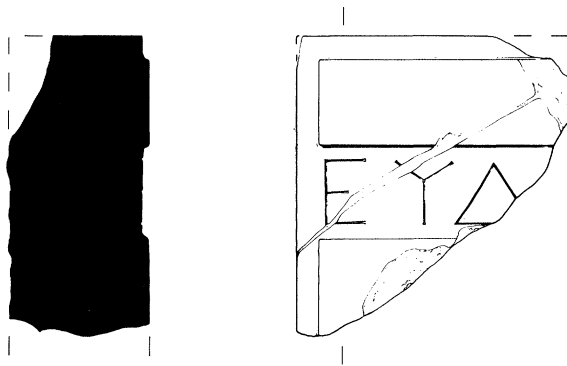


FIG. 4. Grave stele of late 4th/early 3rd century B.C. from Phlius

study.<sup>33</sup> Within the area that could be covered, however, special attention was paid to certain key features: the line of the city wall, the chapel of Panagia Rachiotissa, and the west end of the acropolis.

#### *The Line of the City Wall*

Much of the city wall has been destroyed, and dense maquis shields large sections of the remainder from view, but at least part of the circuit can be established with confidence. Best preserved is the eastern section, running down from the summit of the acropolis to the stream gully to the south (Fig. 3). Traces of two towers (the one at the northeast corner is probably the “Corinthian gate” of Xenophon, *Hellenika* 7.2.11) are visible on the eastern, higher end of the acropolis. At a few points, the eastern wall line is preserved to a height of two or three courses and a width of over two meters. Today, this portion of the fortification circuit is marked by a line of heavy vegetation, amongst which short sections can be glimpsed almost all the way down to the gully. This gully should in all probability be accepted as the southern boundary of the walled area, although Blegen, for one, implied a continuation in the fields to the south.<sup>34</sup> Little trace of the southern circuit remains today; its return north, forming the western boundary of the intramural area, will be discussed below (pp. 436–437). The northern fortification line, running along the crest of the acropolis ridge before descending to the plain, boasts several long, more complete stretches. One notable feature, probably a tower or gate, extends 11 meters east to west, with a north–south return of 4.8 m., standing five courses (1.8 m.) high (Fig. 5). It should be noted that this structure, the “Corinthian gate” on the eastern acropolis, and several other parts of the circuit are so heavily overgrown that serious structural deterioration is occurring.<sup>35</sup> The upper eastern section of the ridge

<sup>33</sup> This is also suggested by the results of Blegen’s test trenches to the southeast of the Perivoli spring (Blegen, n.d., pp. 7–10). I must thank William Alexander for this and other items of information from his local sources.

<sup>34</sup> Blegen, n.d., p. 4.

<sup>35</sup> G. Gauvin, “Corinthian Fortifications of the Classical and Hellenistic Periods,” in *Archaeological Survey in the Mediterranean Area*, D. R. Keller and D. W. Rupp, ed., Oxford 1983, pp. 257–259.

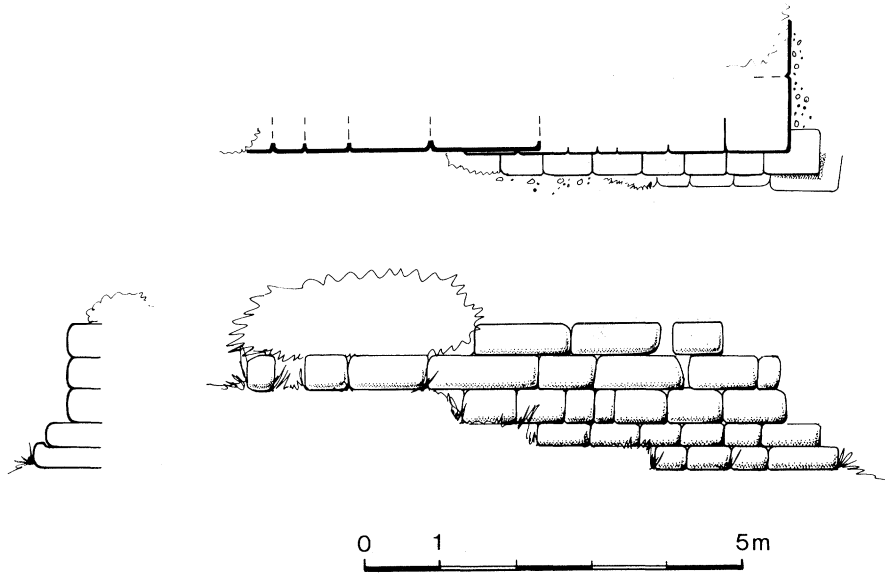


FIG. 5. Plan and elevation of possible gate or tower in the northern fortification circuit at Phlius (drawing by Rosemary Robertson)

appears to have been separately walled within the over-all circuit; this was considered the acropolis proper. That the superstructure of at least part of this walling may have been mud brick, resting on a stone socle, is suggested by a reference in Xenophon to enemies digging (*διώρυττον*) through the wall of the acropolis.<sup>36</sup> At present, the Phliasian fortification system is usually dated to the 4th century B.C., both on historical and stylistic grounds, though earlier and later episodes of building or repair have been suggested.

The putative line of the western city wall is of particular importance, for it determines what portion of the intramural area of the city was actually surveyed. To north, east, and south, NVAP coverage was able to reach or even exceed the likely city perimeter. On the western side, however, the situation is more complicated and remains unresolved. Various lines of argument can be reviewed. First, some early travelers' accounts suggest that the southern wall ran along the tributary stream gully perhaps to the Asopos, followed the river some way north, then returned eastward to climb the acropolis ridge. Leake, for instance, reported:

The town appears to have covered the southern side of this hill (the acropolis), and below it to have occupied all the angle bounded by the river Asopos, and the brook already mentioned (the southern stream gully). The wall is traceable on the south-eastern descent from the acropolis to the brook, and for a short distance along its bank. On the south-west it seems not to have inclosed so much of the plain; for after its descent from the hill it is traced for a short distance only along the foot and then crosses to the Asopos.<sup>37</sup>

<sup>36</sup> On the acropolis walls: Xenophon, *Hellenika* 7.2.6–8; Blegen, n.d., pp. 18–19; Pritchett, pp. 102–103, 109; G. Roux, *Pausanias en Corinthie*, Paris 1958, p. 165. On the mud-brick wall: Xenophon, *Hellenika* 7.2.8; Lawrence (footnote 14 above), p. 57. For a general discussion of the fortification system and its date, see Biers, 1968, pp. 151–159.

<sup>37</sup> Leake, p. 340; see also Bursian (footnote 18 above), p. 34 and Frazer (footnote 18 above), p. 77.



Such a circuit would have been perhaps some four kilometers long, considerable but not impossible for an early 4th-century date.<sup>38</sup> If this reconstruction were correct, then the survey covered approximately one-half of the intramural area of Phlius. Unfortunately, the boundaries of our study area did not allow us to trace and verify this route in its entirety.

Faraklas illustrates, but does not discuss in detail, an alternative plan of the circuit with a more limited size, in which the southern wall turns northward just beyond the line of the present day road that passes the western end of the acropolis.<sup>39</sup> Observations made by an NVAP team in 1989 raise an additional possibility for the course of the western city wall. A distinct drop in ground level, leaving a scarp *ca.* two or three meters high, can be traced along a north-south running line, approximately at the western boundary of NVAP field walking in 1986 and bisecting the Perivoli spring area. Numerous worked blocks are visible in the scarp, as well as a distinct segment of wall within a field track along this line. In this possible reconstruction, the wall would run north from the stream gully, enclosing the area of the major spring and its apparent concentration of ancient architectural features, before turning east again at some uncertain point. If either this or Faraklas' reconstruction is accurate, then almost the entire intramural territory of Phlius has been intensively surveyed. But definitive proof of this is clearly still lacking; only wider reconnaissance in the field might distinguish between these possible circuit plans.

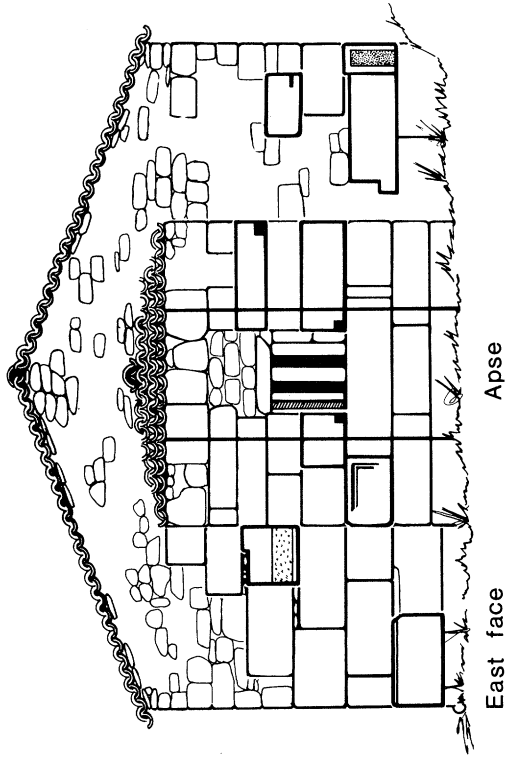
### *The Chapel of Panagia Rachiotissa*

Early modern travelers frequently identified this small chapel, situated on one of the lower western plateaus of the acropolis, as the site of an antique temple to Asklepios. Fragments of various dates, ranging from Classical to Byzantine, are incorporated within its walls or lie around the chapel; the *spolia* include a triglyph block, a Doric capital, column fragments, statue bases, numerous ashlar blocks, and, framing the present doorway, two capitals in a Byzantine style. Not surprisingly, Blegen dug heavily at this location, encountering numerous Byzantine graves and various foundations, but the area was too severely disturbed by building activity to reconstruct with confidence any particular structure on the spot. Blocks built into the heavily whitewashed structure were not documented individually but were recorded in a detailed series of overlapping black and white photographs. Figures 6 and 7 represent the plan and four faces of the building, in which individual items of *spolia* are easily identified.<sup>40</sup>

<sup>38</sup> Lawrence (footnote 14 above), pp. 117–122; F. E. Winter, *Greek Fortifications*, London 1971, pp. 111–114.

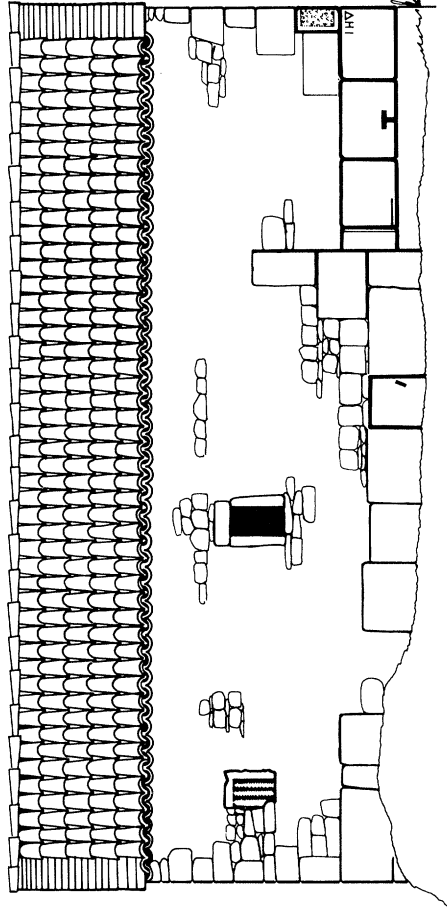
<sup>39</sup> On the other hand, Faraklas' map is clearly in error as regards the northern portion of the city wall, and so perhaps little should be made of his reconstruction (Faraklas [footnote 19 above], p. 22 and fig. 22). Ross (p. 34) published a small sketch plan of the site in which his suggested line for the western edge of the fortification circuit also fell well short of the Asopos.

<sup>40</sup> *Spolia* and early accounts of the chapel: Russell (footnote 19 above), p. 39; Frazer (footnote 18 above), p. 80; Ross, p. 32; Vischer (footnote 18 above), pp. 280–281. For a catalogue of some pieces see Biers, 1968, pp. 186–191. On excavation at this point see Blegen (1925, footnote 28 above), pp. 31–32. Ross in 1841 reported the chapel as “roofless”; Russell in 1924 claimed it had been rebuilt fairly recently. The chapel remains in periodic use today, although visitors must avoid Blegen's still open test trenches. The photographs were taken by Taylor Dabney, official photographer of NVAP, and they are available in the archives of the project at Bryn Mawr.

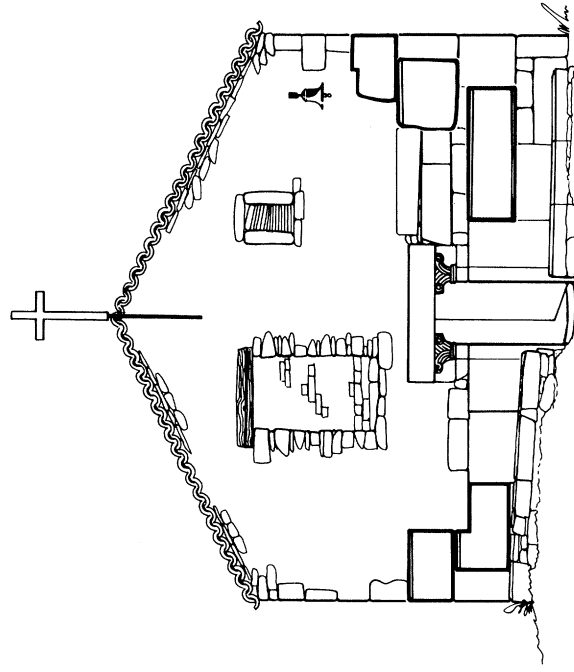


Apse

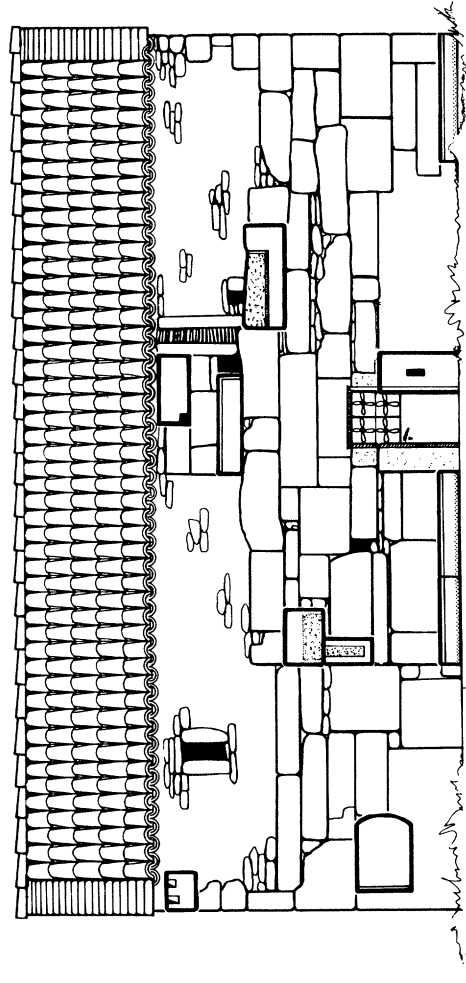
East face



North face



West face



South face

FIG. 6. Elevations of the Panagia Rachiotissa chapel at Phlius (ancient blocks preserving architectural features [e.g., clamp marks, drafted margins, triglyphs] shown in bold outline; drawing by Rosemary Robertson)

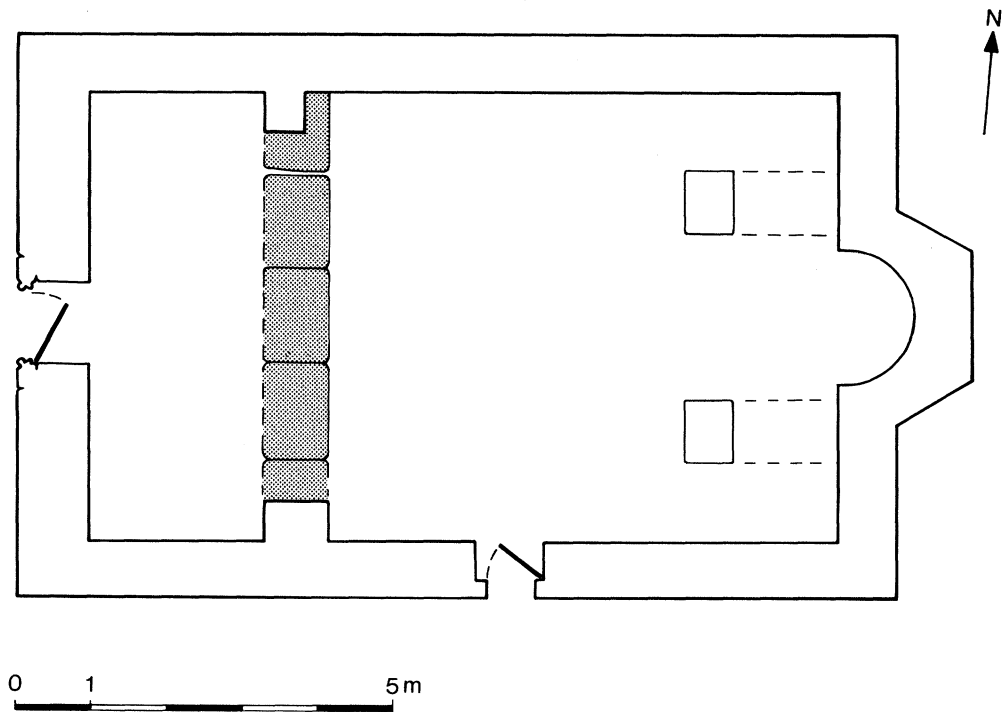


FIG. 7. Plan of the Panagia Rachiotissa chapel at Phlius (drawing by Rosemary Robertson)

#### *The West End of the Acropolis*

Downslope and to the west of the chapel, blocks, walls, bedrock cuttings, cisterns, and even traces of entire building foundations are exposed on the narrow and rocky tip of the ridge. The proximity of the Palati, theater, and agora area of the site (as revealed by excavation; pp. 432–433 above) makes this dense concentration of features unsurprising (Fig. 3).

The identification of the structures in Pausanias' account was not an aim of this project, nor does the range and quality of the surviving material hold out much hope for such attempts.<sup>41</sup> The objective was rather to gain an impression of where worked blocks or other features were located as a means of identifying concentrations of building activity or other functionally distinct areas. The present state of the site, however, allows few inferences to be made. The majority of architectural finds can be dated only to the Greco-Roman era, while the frequent discovery of material in farmers' dumps, in stream gullies, or at the edges of fields and paths points to a distribution disrupted by intensive cultivation. Nevertheless, it seems likely that a cluster of blocks marks the existence of a structure somewhere in the vicinity, if not its exact location. Features that remain *in situ*, such as wall segments or cisterns, are naturally more reliable indicators.

<sup>41</sup> No sign of any regular pattern, such as an urban grid system (as was seen, for example, at Tanagra: Roller [footnote 7 above]), emerged from this analysis. For a demonstration of the types of architectural reconstructions that are possible in more encouraging circumstances, see C. Williams, "Hellenistic and Roman Buildings in the Medieval Walls of Mytilene," *Phoenix* 38, 1984, pp. 31–76.

Figure 3 records traces of building activity across the entire explored portion of Phlius, both acropolis and lower town. Excluding the obvious line of the eastern city wall, a predominant westward bias to the pattern can be detected, with the best preserved and most visible remains lying at that end of the ridge, in the agora area, and around the Perivoli spring. As discussed below (pp. 445–446), geomorphological factors may play some part in this apparent distribution. But on the whole, this pattern is not surprising and is in general accord with Pausanias' description of Phliasian topography; Phlius is a westward-running ridge, and control of the fertile plain it overlooks is one obvious function of any settlement here. More intriguing are the apparently empty zones within what was once definitely part of the lower town. How then was space used within this urban landscape? Was the intramural area fully inhabited in some periods and not in others? What effect did such changes have on extramural residence patterns?<sup>42</sup> The possibility, however, that subtle variations of settlement density within and beyond the walls at different periods are more likely to find clear expression in patterning of artifacts rather than of architecture led to the next investigative stage at Phlius: the intensive surface survey of the site.

#### FIELD-WALKING STRATEGIES

The first decision to be made concerned the division of the site into manageable study units. In the methodology employed by NVAP, the most important such unit is the "tract", an area of ground normally less than one hectare in extent and defined in terms of its relative homogeneity of current land use and the extent to which the surface is obscured by vegetation, both factors of obvious importance in later analysis and interpretation. The result of such an approach is a series of maps showing the distribution of artifacts over an irregular patchwork of fields of variable shapes and sizes.<sup>43</sup> Tracts were defined in this fashion at Phlius, which thus became just one part of a far larger pattern of artifact distribution, constituting some 7 percent of the tracts walked in the course of the Nemea Valley project. The area eventually covered by the team (*ca.* 120 hectares = 337 tracts) included all of the main acropolis ridge, strips roughly 200 meters wide to its north and west, and the plain to the south as far as the major stream gully; the eastern boundary was the saddle dividing the acropolis spur from Prophitis Ilias while the western limit was an arbitrary line running north from the gully through the Perivoli spring area (Fig. 8).

The procedure for artifact collection within these urban tracts was organized in three separate stages, each designed to produce independent but complementary evidence.

#### *Stage 1*

The procedures involved are identical to those used on all tracts throughout the NVAP survey area, ensuring direct comparability between data from Phlius and from the rest of

<sup>42</sup> Literary sources inform us about non-residential uses of intramural space: Xenophon (*Hellenika* 7.2.8) reports grain grown within the Phliasian acropolis walls; Pausanias (2.13.3) saw a sacred grove of cypress trees on the acropolis; cf. V. D. Hanson, *Warfare and Agriculture in Classical Greece*, Pisa 1983, p. 67, note 3.

<sup>43</sup> For a brief description of the NVAP survey methodology see J. F. Cherry, J. L. Davis, A. Demitrac, E. Mantzourani, T. F. Strasser, and L. E. Talalay, "Archaeological Survey in an Artifact-rich Landscape: A Middle Neolithic Example from Nemea, Greece," *AJA* 92, 1988 (pp. 159–176), pp. 162–163 and Wright *et al.*, pp. 604–608.



FIG. 8. Density of sherds observed in each tract at PHLIUS

the survey area.<sup>44</sup> Individual walkers, spaced at approximately 15-meter intervals, followed linear routes across the tract, noting for each 100-meter segment the observed quantities of pottery and tile and collecting all potentially diagnostic pottery and tile, all chipped and ground stone, and any other less common type of artifact. The information from these "Tract" or "T" samples forms the basis for mapping differential artifact densities across the site (Fig. 8).

### *Stage 2*

Immediately after the completion of Stage 1, team members re-walked the tract in a number of back-and-forth sweeps collecting potentially diagnostic finds not just from the linear transects but from any part of the tract. The gathering of such material (designated "Field Grab" or "FG" samples) fulfilled two main objectives. First, it ensured that no important data had been overlooked in those parts of the tract not directly inspected in Stage 1; its efficacy was demonstrated by the discovery in this way of two of the most interesting individual features (an Archaic votive deposit in Tract IV-13-28 and a Geometric grave in Tract IV-13-209). Second, it provided samples larger than those from Stage 1, which seemed required for the detailed study of functional and temporal variation across such an extensive and productive site; some critics have doubted the ability of simple survey methods to detect the more subtle traces of occupation from less dominant periods on a complex site.<sup>45</sup>

### *Stage 3*

While these two stages were being carried out, a single team member laid out a circular collection unit 10 sq. m. in area at the approximate center of each tract and collected from it all visible archaeological material (designated "Field Middle" or "FM" samples). Although labor-intensive, this procedure served the important function of providing a relatively unbiased sample of material, guarding against the possibility that field walkers tend to spot certain types of finds more readily than others.<sup>46</sup>

Exceptions to this general strategy at Phlius were few. On the northwest slope of the site, very tall and nearly impenetrable maquis made the implementation of Stages 2 and 3 physically impossible, while slope angle, density of vegetation, or fencing prevented a very small percentage of the site from being covered at all. For all other tracts, however, the three types of sample are available, each sample group kept carefully separate from the others in recording and processing.

Some comment on the relative cost effectiveness of urban survey is not inappropriate. Surface collections of the sort just described, over 120 hectares of the site, required 88 person-days, an average rate of around 10 or 11 hectares (or *ca.* 30 tracts) per day. Comparative

<sup>44</sup> Each tract at Phlius received an identifying number, in the same way as every other tract within the NVAP survey zone. Phlius falls in Area IV, Sector 13 of the permit territory of the project, therefore its tracts are numbered from IV-13-1 to IV-13-337. See Wright *et al.*, p. 604 for details.

<sup>45</sup> J. Parsons, "Prehistoric Settlement Patterns of the Texcoco Region, Mexico," *Museum of Anthropology, University of Michigan, Memoirs* 3, 1971, p. 23; W. T. Sanders, J. Parsons, and R. Santley, *The Basin of Mexico*, New York 1979, pp. 63-64.

<sup>46</sup> S. Shennan, *Experiments in the Collection and Analysis of Archaeological Survey Data: The East Hampshire Survey*, Sheffield 1985, pp. 33-45; see also J. B. Rutter, "Some Thoughts on the Analysis of Ceramic Data Generated by Site Surveys," in *Archaeological Survey in the Mediterranean Area*, D. R. Keller and D. W. Rupp, ed., Oxford 1983, pp. 137-142.

figures from other sites are scarce. At Koressos on Keos a less intensive survey took approximately 16 person-days to cover 40 hectares of the site, while 300 person-days were involved in the investigation of the prolific site (over 100 hectares in extent) of Thespiiai in Boiotia. More revealing, perhaps, is the comparison of typical labor costs in urban excavation *vs.* urban survey. William Biers' three-year excavation campaign at Phlius appears to have consumed at least 400 person-days, not including the labor of Greek workmen, to investigate an area roughly equivalent to 1.5 of our 337 survey tracts. At Thespiiai, Snodgrass estimates that the labor invested in surveying the entire settlement would have been sufficient to excavate only about 50–100 square meters of the Classical site (i.e. between 0.000037 and 0.00007%). The point of such comparisons is not to belittle excavation, the only suitable technique for many archaeological situations, but rather to emphasize the efficiency of urban survey in relation to the range and volume of information it can produce.<sup>47</sup>

The use of these collection procedures at Phlius resulted in significant quantities of finds; in total, about one thousand find-bags were processed, containing over 7000 sherds and over 2500 fragments of tile. NVAP was particularly fortunate in generous museum facilities and storage space; even so, these quantities of material were processed, studied, and stored only with great difficulty.<sup>48</sup> It is readily acknowledged that many other survey projects are far more severely constrained by available space and study time and that under such circumstances the methodology described here would have to be modified.

An analysis of the Phliasian collection strategy could be of use for such future modifications. Figure 9 represents the percentage of finds discovered through the three different collection types (for convenience the data are divided into four broad chronological divisions). Certain basic conclusions can be drawn from this distribution. The Field Middle (FM) collection, implemented to prevent low visibility periods from escaping notice, indeed proved very helpful in locating the generally less diagnostic ceramics of prehistoric date. Yet these collections (inevitably composed for the most part of worn and unidentifiable fragments) made an increasingly poor showing for the later periods. Certainly a wide range of ceramic fabrics, especially tile types, were assembled through these especially thorough samples, but given the constraints of many field projects, such a service alone would not justify this extremely labor-intensive practice. The Field Grab (FG) collection also fulfilled its primary function; many of the most highly diagnostic pieces and exceptional features were discovered at this stage of fieldwork. But the grabs did not so much add a new dimension to the pattern of diachronic activity at Phlius as supplement that already established through the first stage of the investigation. A very striking feature presented graphically in

<sup>47</sup> Koressos: Whitelaw and Davis; Thespiiai: A. M. Snodgrass and J. F. Cherry, "On *Not* Digging Up the Past," *The Cambridge Review* 109, 1988 (pp. 9–13), p. 13. For the excavation at Phlius, the rough data cited here were taken from the articles by Biers (footnote 30 above).

<sup>48</sup> On the difficulties of work at larger sites under less favorable circumstances, see Bintliff and Snodgrass, *Antiquity* 62, p. 65. The detailed analysis and definitive publication of NVAP ceramic finds is the responsibility of Robert F. Sutton, Jr. (Indiana University, Purdue University at Indianapolis). It should be noted in passing that this large-site collection strategy was also utilized at two other settlements, of Late Roman and Byzantine date (Sites #600 and 704). These sites had been discovered and initially walked (Stage 1 at Phlius) in 1985; their size (20 and 35 hectares respectively) and complexity had made their final collection problematic. This was quickly completed in 1986 by adding Stages 2 and 3 of the Phliasian strategy; all three levels of information are now available for analysis.

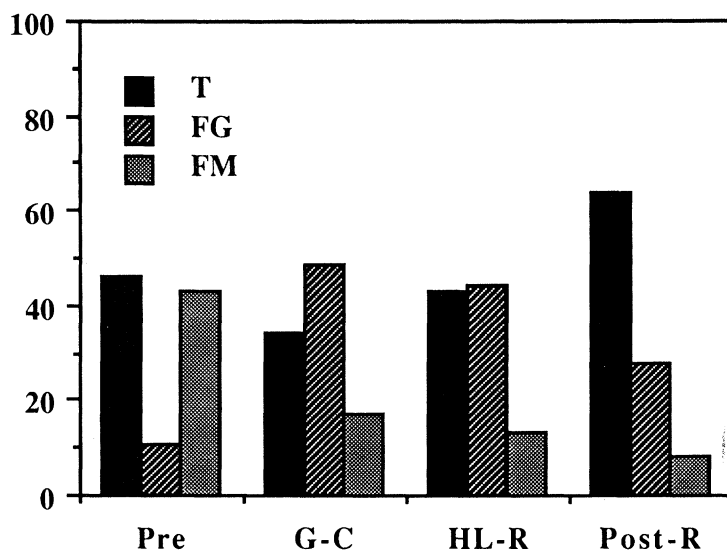


FIG. 9. The relative efficiency of the three collection strategies employed at Phlius, as measured by the percentage of datable finds

Figure 9 is the steady performance of the Tract collection (T), by far the most consistently successful of the three strategies. An adequate, if far more skeletal, sense of site history could have been derived from this level of collection alone.<sup>49</sup> At this point, the over-all chronological development of the site is of primary concern; further study will reveal which collection stage provided the best indicators for functional variation across the settlement.

Under ideal conditions, of course, as intensive a surface investigation as possible should be undertaken: the greater the size of the controlled collection, the more refined the chronological and functional analysis of a settlement. The stress placed, however, upon museum staff and storage cannot be underestimated. Urban survey strategy must adapt to particular project circumstances; the Phliasian experiment suggests that some simplification of its methodology would not have irreparably weakened its final results.

## DISTRIBUTION AND DATE OF SURFACE REMAINS

### ARTIFACT DENSITIES AND THEIR INTERPRETATION

It is appropriate to begin this section with two basic questions: what is the over-all distribution of artifact remains in the surveyed area, and was the site fully defined through this surface investigation? The map of sherd densities (Fig. 8) echoes the western distribution of architectural elements, with the greatest concentrations of material recorded in the southwest quadrant. These high densities undoubtedly continued for at least some distance further, and it is very obvious that the full extent of the site to the west was not adequately delimited (see pp. 436–437 above). The southern boundary of the site is also somewhat

<sup>49</sup> Of the total number of sherds collected and studied, Tract collections were responsible for 26%, Field Grabs 28%, Field Middles 30%. Revisitation collections, essentially an additional grab sample taken in a very few tracts, accounted for 16%.



problematic. Travelers reported seeing cultural debris beyond the deep stream gully (and thus outside the survey zone), suggesting the existence of some kind of “suburb”.<sup>50</sup> Certainly, numerous blocks in modern rubbish piles are still visible in the area. On the other hand, this zone would in all likelihood have been beyond the city wall proper (pp. 434–435 above); at least the intramural portion of the Classical city has been intensively covered to the south. To the north, the survey extended up to and beyond the city-wall line; it is notable that sherd densities in the plain below the ridge were relatively low. A similar situation exists in the eastern sector of the site, where little material was discovered outside the line of the fortification wall. The region immediately adjacent to the eastern and southeastern boundaries of Phlius was surveyed by another NVAP team, which likewise observed a marked drop-off in artifact densities, although they located at least one large site of primarily Byzantine date at some distance to the southeast of Phlius.

Arguments similar to those used for the architectural distributions could be made to account for the westward bias of artifact material: an interest in the fertile plain running out to the Asopos and the attraction of the Perivoli spring (see p. 440 above). Both distribution patterns argue for a differential utilization of the area of the classical *asty*. Variability in sherd densities can reveal, through careful inference, variability in levels of human activity and, by extension, in population estimations. Raw density counts and distribution patterns, however, offer little to those interested in specific historical questions about the settlement; analyses on a period-by-period basis become the logical next step. First, however, the validity of these basic data must be assessed. Two major factors can mask or bias spatial and chronological patterns of artifact distribution: (1) conditions of visibility and land use and (2) the effects of post-depositional activities, notably geomorphological processes.

Visibility and land-use information were recorded for every NVAP tract; the differences involved in surveying a well-plowed vineyard as compared to a scrub-covered hill-slope are obvious, and both situations are present at Phlius. An alternative artifact-density map, with values adjusted to make some allowance for low visibility, revealed that for two areas within the surveyed zone, poor surface visibility may indeed have distorted our evaluation of the amount of cultural material actually present. One area is the high eastern summit of the acropolis ridge, the other those fields to the extreme southeast of the urban survey territory, near the modern road. No rigid formula has been applied here to compensate for these two zones, for no simple correlation between visibility and artifact density can safely be assumed. It is wiser simply to keep in mind that these two areas may be consistently under-represented in the over-all density map (Fig. 8) and the period-by-period density maps (Figs. 11–20). Apart from these two exceptions, however, visibility conditions do not noticeably bias the observed density distributions; the areas of densest concentration and relative scarcity remain the same.

Geomorphological processes are a second possible distorting factor in the patterns of surface material. The ridge, as already noted, is constituted of a conglomerate bedrock much harder and more durable than the soft limestone of Prophitis Ilias; the break between these two zones falls more or less to the east of the line of the eastern city wall, where the spur separates from the higher slopes to the east. A strong contrast exists, therefore, between the

<sup>50</sup> E.g., Ross, p. 33; Pritchett, p. 100; Russell (footnote 19 above), p. 40; Frazer (footnote 18 above), p. 77.

gentle marl slopes of that end of the ridge and the sharper, more broken terrain and abrupt descents of the west end (see contours in Fig. 3). Colluvial material would be shed from both geological units, although in greater quantity from the limestone slopes of Prophitis Ilias than from the Phlius ridge itself.

Observations made by Ann Demitrack in August 1989 suggest the presence of a significant overburden of colluvium at the eastern end of the urban survey territory, particularly in those fields furthest to the southeast.<sup>51</sup> In this area, tracts with significant densities of artifacts proved either to have been bulldozed or to lie near stream gullies, which served to flush such material away. Colluvial deposits decrease westward away from the source of the more easily eroded marl limestone, and a different and thinner soil cover was noted, the product of less intense erosional activity on the conglomerate ridge itself. The *in situ* foundations of the Palati at the western end of the ridge indicate the existence of approximately one meter of colluvial cover in fields quite close to the western end; this undoubtedly would have diminished (down perhaps to as little as 0.5–0.4 m.) as one moved south toward the stream gully. The fields to the north of the ridge were also less heavily covered, as the disturbance of a Geometric burial by plowing demonstrated for the northwest corner of the surveyed area (p. 458 below).

How significant a problem do geomorphological processes thus present to the analysis of human activity at Phlius? As well as the general lack of cultural material on the steep upper slopes of the acropolis ridge, there is a disturbing, if predictable, correlation between artifact density and distance from a source of colluvial material. For an acropolis site, post-depositional processes are inevitable, but two mitigating factors at Phlius can be taken into account. First, the chief over-burden is believed to postdate most periods of occupation at Phlius and would thus (at any rate as far as the pre-Byzantine periods are concerned) be relatively uniform in its impact on chronological patterns. Second, the intensive cultivation of the fields on the lower slopes and in the plains around the acropolis ensures that new cultural material is constantly brought to the surface, although the extent of such mixing depends greatly on the depth of both plowing and colluvial cover. This agricultural activity also provides a partial response to those who worry about the domination of material from later phases of site occupation; repeated plowing, by disturbing and mixing once stratified layers, produces a more representative sample at the surface. In short, while post-depositional disturbances have clearly affected observable archaeological patterns at Phlius, their impact is not so severe as to preclude all further analysis.

#### CHRONOLOGICAL PATTERNS

Blegen reported almost continuous human activity at Phlius from Neolithic to Turkish times; the periods observed through the NVAP survey and the relative amount of material retrieved for each are presented in Figure 10. Given the poor quality and condition of many of these surface finds, flexible ceramic identifications were often necessary. Four categories, of descending levels of chronological specificity, were used here:

<sup>51</sup> I must thank Ann Demitrack, the NVAP geologist, for her work at Phlius. For her more detailed analyses of the Nemea Valley proper, see Wright *et al.*, pp. 587–591 and Cherry *et al.* (footnote 43 above), pp. 165–167.

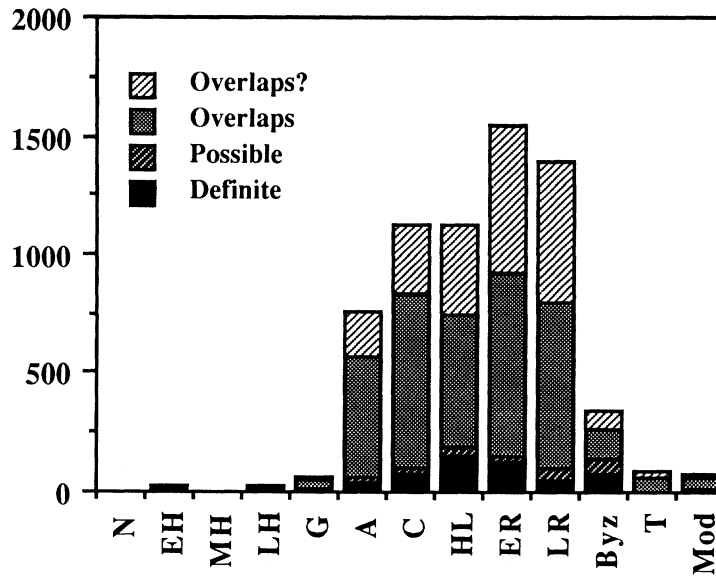


FIG. 10. Totals of definitely or probably datable artifacts collected at Phlius, by period

- 1) Sherds *definitely* dated to one phase and to that phase alone (e.g., A)
- 2) Sherds *possibly* dated to one phase and to that phase alone (e.g., A?)
- 3) Sherds *definitely* dated to a range of two or more periods (e.g., A–C)
- 4) Sherds *possibly* dated to a range of two or more periods (e.g., A–C?)

To generate period distribution maps from this data, weighted values were assigned to each of these categories, with period-specific material accorded a higher score than the “overlaps”. Figures 11–20 thus demonstrate relative levels of activity on a field by field basis, using *all* possible information from the surface collections.<sup>52</sup> These period-by-period distributions can be reviewed briefly and linked, where possible, to the historical sketch outlined earlier. In addition, some impression will be given of how this information tallies with that of previous excavation campaigns at the site. In this context, Blegen’s numerous scattered test trenches (footnote 28 above) provide the most useful excavation data; the more circumscribed areas dug by the Washingtons (footnote 27 above) and by Biers (footnote 29 above) are of less use for the general picture.<sup>53</sup>

<sup>52</sup> It should be noted how much information would be lost if the evidence of period-specific sherds *only* was considered. This method of presentation was pioneered by the Keos survey: J. F. Cherry, J. L. Davis, and E. Mantzourani, “Greek and Roman Settlement and Land Use,” in *Landscape Archaeology as Long-term History: Northern Keos in the Cycladic Islands*, J. F. Cherry, J. L. Davis, and E. Mantzourani, edd., Los Angeles 1991, chap. 17. For the period distribution maps, by this weighting procedure, for example, one definitely dated Archaic sherd received a value of 1, one A? = 0.75, one Archaic–Classical = 0.5, and so on. To appear on Figures 11–20 at all, a tract must have produced at least the equivalent of one possible sherd of the specific period. In addition to the data represented here, approximately 650 sherds of “Historical” date and over 500 completely undiagnostic pieces, chiefly from FM collections, were recorded.

<sup>53</sup> Two major problems with Blegen’s information should be clarified. First, only 34 of the original 85 trenches dug by Blegen fell within the surveyed zone *and* had datable pottery in association. Second, the mere presence or absence of material dated to a specific period, rather than any more sophisticated quantification, is all that Blegen’s documentation allows.



FIG. 11. The distribution of datable artifacts collected at Phlius: ▲ = Neolithic; ● = Early Helladic. Increasing sizes indicate value ranges 0.75–1.5, 1.5–3, and greater than 3.



FIG. 12. The distribution of datable artifacts collected at Phlius: ▲ = Middle Helladic; ● = Late Helladic. Increasing sizes indicate value ranges 0.75-1.5, 1.5-3, and greater than 3.



FIG. 13. The distribution of datable artifacts collected at PHLIUS: Geometric. Increasing sizes indicate value ranges 0.75-1.5, 1.5-3, and greater than 3.

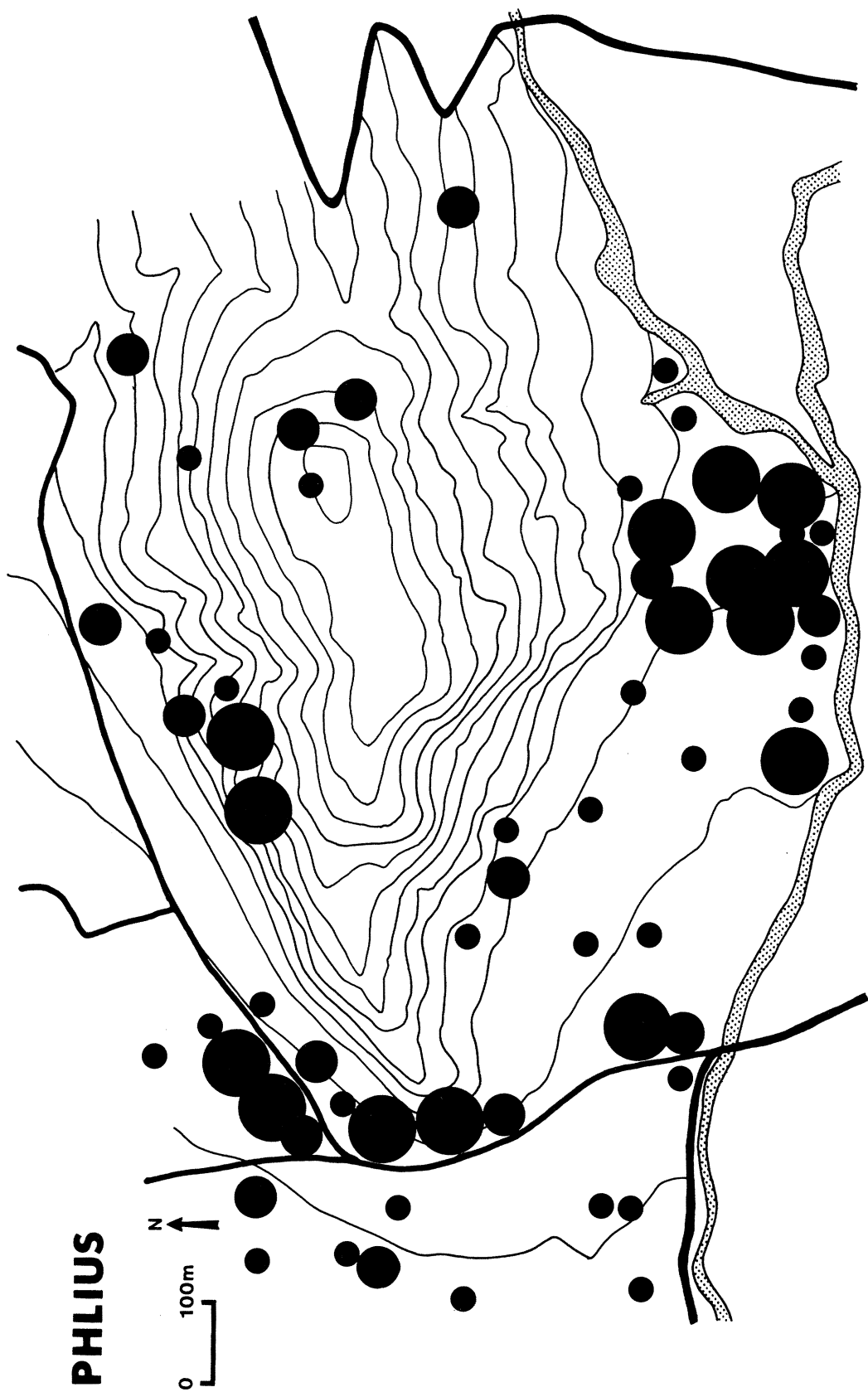


FIG. 14. The distribution of datable artifacts collected at Phlius: Archaic. Increasing sizes indicate value ranges 0.75-1.5, 1.5-3, and greater than 3.



FIG. 15. The distribution of datable artifacts collected at PHLIUS: Classical. Increasing sizes indicate value ranges 0.75-1.5, 1.5-3, and greater than 3.



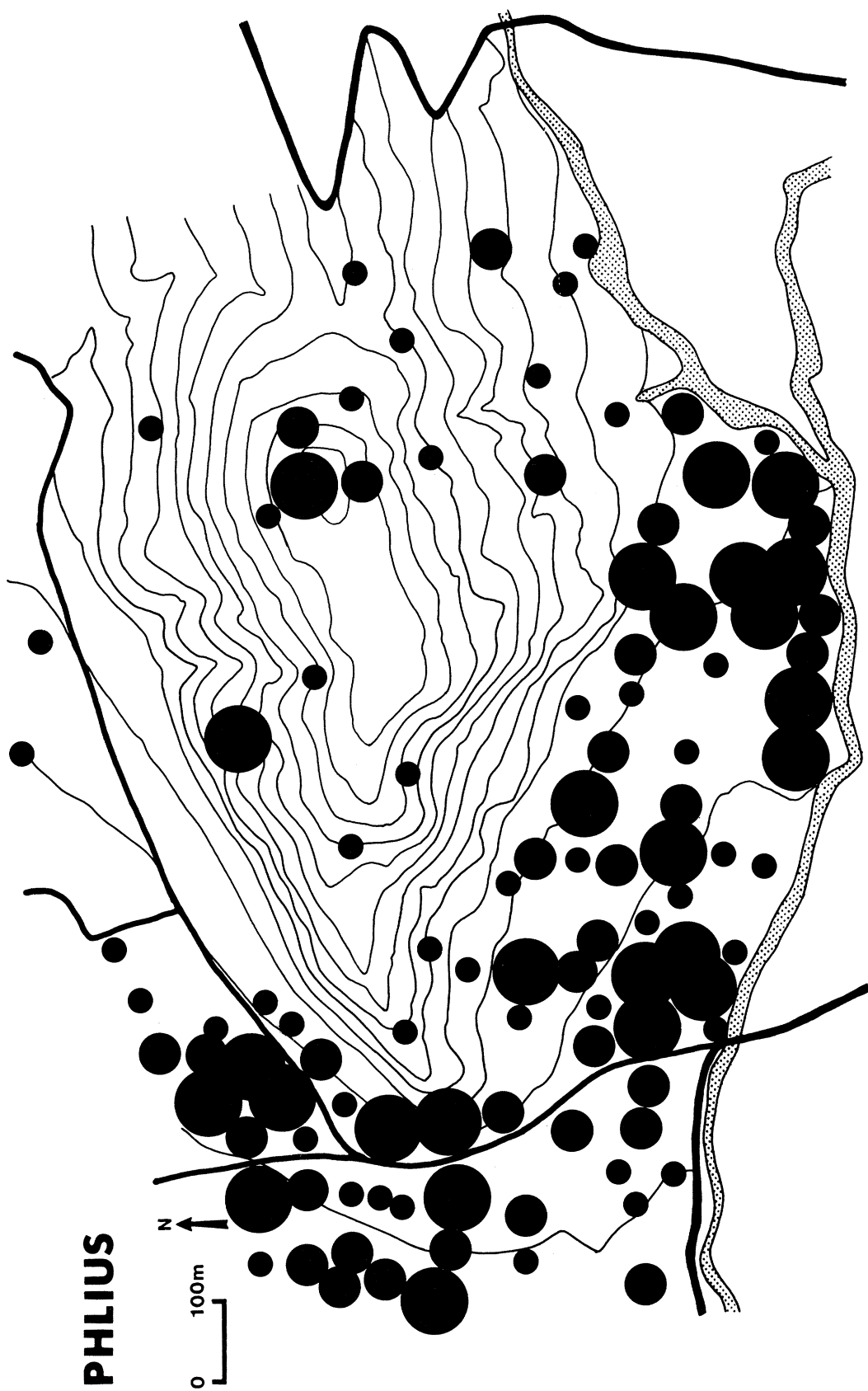


FIG. 16. The distribution of datable artifacts collected at Phlius: Hellenistic. Increasing sizes indicate value ranges 0.75-1.5, 1.5-3, and greater than 3.



FIG. 17. The distribution of datable artifacts collected at Phlius: Early Roman. Increasing sizes indicate value ranges 0.75–1.5, 1.5–3, and greater than 3.

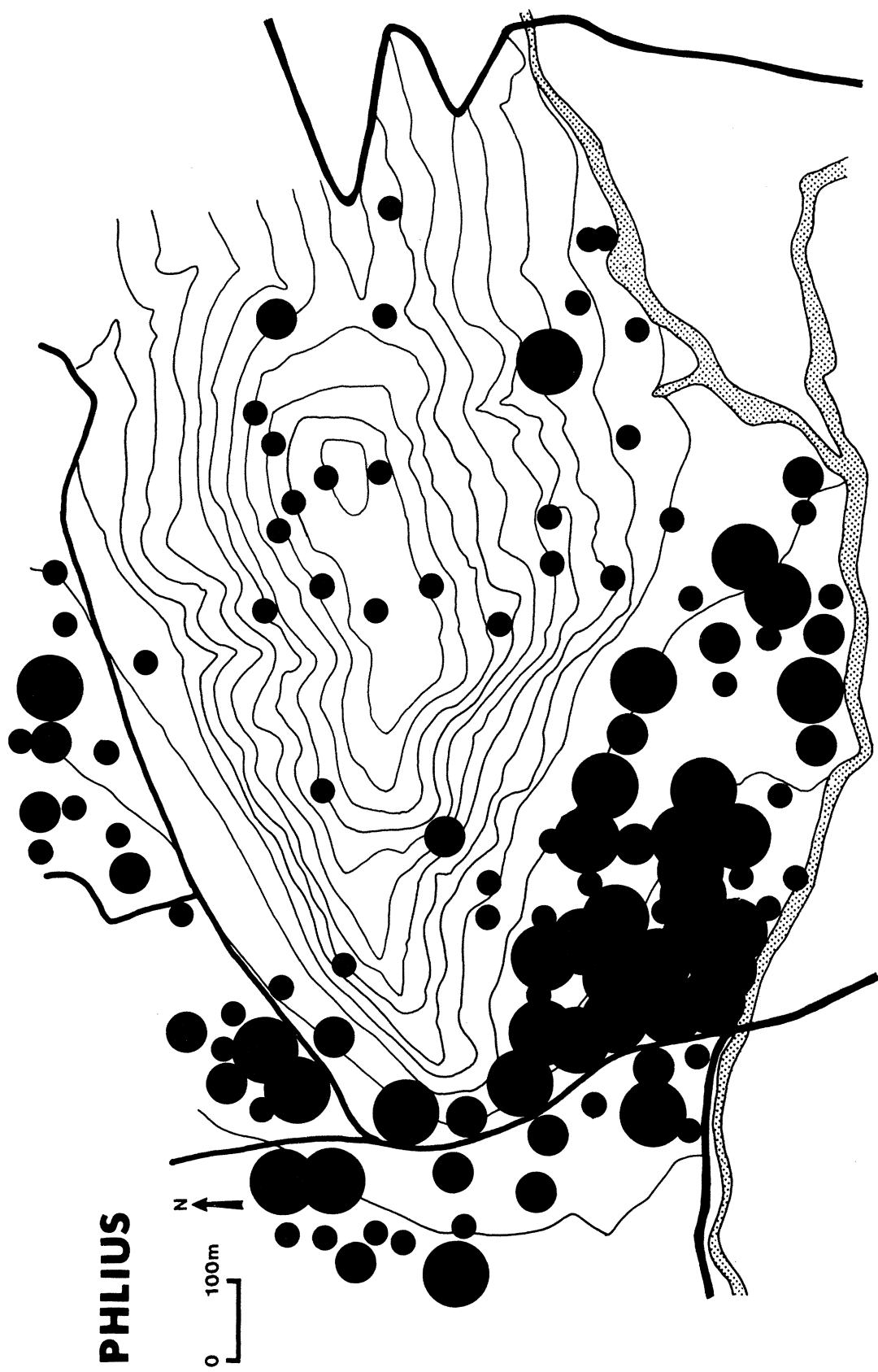


FIG. 18. The distribution of datable artifacts collected at Phlius: Late Roman. Increasing sizes indicate value ranges 0.75-1.5, 1.5-3, and greater than 3.



FIG. 19. The distribution of datable artifacts collected at Phlius: Byzantine. Increasing sizes indicate value ranges 0.75-1.5, 1.5-3, and greater than 3.



FIG. 20. The distribution of datable artifacts collected at Phlius: Turkish. Increasing sizes indicate value ranges 0.75-1.5, 1.5-3, and greater than 3.

Figures 11 and 12 present evidence for the prehistoric occupation of Phlius. Ten pieces of chipped stone (obsidian and chert), chiefly flakes and blade fragments, were found.<sup>54</sup> Only one Neolithic sherd could be precisely dated: it belongs to the Early Neolithic epoch, the subphase most visible in Blegen's excavation as well. More notable is the Early Helladic occupation, observed both on the acropolis and in the plains; the material there is almost entirely of EH II date (Fig. 11). Blegen too found large quantities of EH II sherds, both on the acropolis and in the vicinity of the Perivoli spring; in the latter area, material of this date was associated with house walls. The excavation evidence had suggested a break in subsequent occupation, but the survey did produce one definite example each of EH III and of Middle Helladic material. As for the Late Helladic component at the site (Fig. 12), Blegen had found just one Mycenaean kylix stem and a steatite whorl, a dearth of evidence which he took as proof of the alternative Mycenaean center at Homeric Araithyrea (p. 428 above). The survey data (with LH II and LH III definitely represented) do point to a slightly greater human presence on the site at this time, without undercutting significantly the possible existence of a more major Mycenaean settlement elsewhere in the Phliasian plain.<sup>55</sup>

Traces, more plentiful than from earlier periods, have been found of Geometric activity at the site, chiefly at the west end of the ridge (Fig. 13). Such a distribution agrees with Blegen's report of burials southeast of the Perivoli spring. The most remarkable Geometric feature discovered through survey at the site was a grave in a deeply plowed and much disturbed field (Tract IV-13-209) to the northwest of the ridge. The skeletal remains were those of a man in his late twenties; two almost complete pots, of Early or Middle Geometric date, were found in close association and are likely to be grave goods.<sup>56</sup>

A great expansion of Phlius in the Archaic period is visible in the survey data (Figs. 10 and 14). Use is attested for the acropolis itself, the west end of the site, and for the first time, much of the plain to the south. Ridge and "lower town" presumably now formed a cohesive unit, a development that would correlate with the new status of Phlius as an independent, self-constituted *polis*. Two separate votive deposits provide further evidence of this status; chiefly of Archaic date, from civic cults on the summit of the acropolis and on its slopes, one was found by Blegen, the other in the course of our surface investigations.<sup>57</sup> Blegen's

<sup>54</sup> Dr. John F. Cherry (University of Cambridge) will be publishing this material, as well as all other chipped and ground-stone tools from the NVAP survey.

<sup>55</sup> On the prehistoric component at the site: Blegen (1925, footnote 28 above), pp. 26–27; Biers (1969, footnote 29 above); R. Hope Simpson and O. T. P. K. Dickinson, *A Gazetteer of Aegean Civilisation in the Bronze Age*, I, *The Mainland and Islands*, Göteborg 1979, p. 68 (A72). The fallacy of assuming that a site important at one time was always so is illustrated by Vermeule's apparent assumption, on Blegen's slim evidence alone, that Phlius in the Mycenaean period was an established village in the neighborhood of Sikyon: E. Vermeule, "Baby Aigisthos and the Bronze Age," *PCPS* 33, 1987 (pp. 122–152), p. 134.

<sup>56</sup> Lyla Pinch made the identification of the skeletal remains. The two aryballois (of EG or MG date) found in the grave are illustrated in Wright *et al.*, fig. 22:b, c, pl. 96:a (inv. nos. S 9413-2-468, S 9413-2-476).

<sup>57</sup> Blegen's deposit was on the south slope of the ridge, that of the survey on the north (in Tract IV-13-28, with some material from surrounding tracts probably also related). Blegen's deposit was declared "to represent significant sanctuary activity from the beginning of the seventh century into the fifth century B.C.," with most material dating from the 7th and 6th centuries: Biers (1971, footnote 29 above), p. 399. The roughly contemporary deposit found by the survey included both miniature and full-sized vessels, as well as figurine types quite unlike those found by Blegen. Robert F. Sutton, Jr. will publish this material in detail; see his comments in Wright *et al.*, pp. 647–649 for a preliminary analysis.

discovery of an Archaic public structure (the hypostyle hall) and a possible industrial establishment likewise suggested a flourishing community in this era. To the Classical period, however, belong most other dated architectural remains, for example the Palati and the city wall. On the whole, the evidence of artifacts for the Classical period revealed an intensification of the Archaic pattern of occupation (Fig. 15). The Hellenistic period (Fig. 16), through both excavation and survey data, presents a similar picture.

No apparent discrepancy exists between Pausanias' account of a flourishing city of the 2nd century after Christ and the survey evidence for the Early Roman period (Fig. 17), which boasts the widest and most intensive utilization of the explored portion of the site. Particularly high densities of material are found in the agora area to the southwest, where Biers' excavations had already uncovered episodes of Early Roman building activity and repairs (for example in the theater).<sup>58</sup> For the Late Roman period (Fig. 18), the survey data indicate further concentration in this part of the site, without significant contraction of settlement elsewhere.

A hiatus in occupation during the Dark Ages of the 7th–9th centuries after Christ, so typical of rural survey results in Greece, appears to have occurred at Phlius as well. A much more circumscribed reoccupation took place in the Middle Byzantine era (10th–early 13th centuries), the clearest signs of which are to be seen to the southwest, although Blegen did report some material on the acropolis and “Frankish” graves around Panagia Rachiotissa (Fig. 19).<sup>59</sup> On the whole, however, the acropolis appears to have been relinquished as a major component of the settlement, perhaps in response to some shift in locational priorities. A clue may be provided by an impressive walled enclosure of well-mortared tile and rubble, measuring 140 meters east–west and 110 meters north–south, which lies immediately to the west of that dense concentration of Byzantine settlement in the southwest quadrant of the site. The structure, clearly visible in aerial photographs, is certainly associated with Byzantine and later material; it is not yet clear if it had any connection with the late mediaeval bishopric that reputedly existed at Polyfengo.<sup>60</sup>

Traces of Turkish occupation are rarer still, again being largely restricted to the southwest corner of the site: this area around the Perivoli spring was evidently both the first and last to be occupied (Fig. 20). Leake's reference to a “tjiftlik surrounded with large poplars, in the plain below the hill of the Acropolis and within the inclosure of the ancient town” probably describes this vicinity.<sup>61</sup> Within the total area surveyed, today just three small

<sup>58</sup> Biers (1973, footnote 30 above), pp. 119–120.

<sup>59</sup> Biers, 1968, pp. 167–168.

<sup>60</sup> See p. 430 above. The enclosure is roughly rectangular in shape but with a large “bite” taken out of the southeast corner (the east wall measures only 26 meters). A ditch, perhaps a robbing trench, bisects the enclosure from east to west. The maximum preserved height of these walls is approximately 2 meters, their width about 0.6 meters. The walls show the use of leveling courses, and at some points a second, different building phase begins at a height of one meter. Small square windows were let in the walls, which, oddly enough, incorporated no *spolia*, despite the accessibility of well-cut ashlar blocks.

<sup>61</sup> Leake, p. 342. On *çiftliks* see J. M. Wagstaff, *The Development of Rural Settlements: A Study of the Helos Plain in Southern Greece*, Trowbridge 1982, pp. 13–28. The enclosure just described might have to be considered in this context as well. On the relocation of settlements see J. Bintliff and A. M. Snodgrass, “The End of the Roman Countryside: A View from the East,” in *First Millennium Papers: Western Europe in the First Millennium A.D.*, R. Jones, J. Bloemers, S. Dyson, and M. Biddle, edd., Oxford 1988, pp. 175–217;

seasonal fieldhouses and the foundation of one older abandoned structure exist; a few houses are clustered just north of the Perivoli spring near the chapel of Agia Marina. Two kilometers to the south of Phlius, approximately four thousand people now live in New Nemea (Fig. 2).

#### URBAN SURVEY, DEMOGRAPHY, AND REGIONAL SETTLEMENT PATTERNS

The foregoing review of the survey results demonstrates a coherent pattern of long-term change in the size and configuration of the settlement at Phlius. While it is reassuring to note a fairly good measure of congruence between survey and excavation data, the correlation also serves to reinforce the limitations of the latter: generalizations about activity at the site as a whole could not rest upon such slender foundations without an alternative source of spatially more extensive and diachronically unbiased information. With this survey information, especially when taken in conjunction with rural settlement evidence, previously intractable issues can at least begin to be addressed. By way of example, I will turn briefly to just three such areas here.

The first of these is demographic change, a major parameter of social and economic behavior. Various inadequate means of assessing over-all population change have already been mentioned (pp. 431–432 above), and urban survey was suggested as one way to judge long-term trends in settlement populations, measured by shifts in site sizes through time (as in Figs. 11–20). Taking just one example, a comparison of the Geometric (Fig. 13) and Archaic (Fig. 14) periods at Phlius is quite striking. The change no doubt reflects the constitution of Phlius as an independent *polis*, but it is also consistent with evidence for population growth elsewhere in Greece during Archaic times. Other large site surveys, such as at Koressos on Keos, also witness this growth. These distribution maps, of course, reflect relative population change, rather than calculations of absolute numbers of people. Given the temporally and culturally specific relationship of people and space, the geomorphological problems discussed earlier, and lingering uncertainties about site boundaries, it is probably unwise to attempt estimates of absolute population figures (i.e. number of individuals per hectare) with the Phliasian data, although at least one other urban survey elsewhere has attempted this.<sup>62</sup> Yet impressions of even relative demographic variability over time are exceptionally useful in reconstructing the history of a regional central place.

The second issue is the historical rise and fall of such places; the primacy of urban centers throughout much of Greek history has already been stressed. The Classical *polis* structure, with the dominant *asty* containing most of the population and serving as socio-political, religious, and economic center, is just one such long-lived formation, the mediaeval *kastro* another. In reconstructing the past political or economic organization of a region, it becomes vital to determine when major settlements begin to flourish or, equally important, when they go into terminal decline. The debate about the “end” of the Greek *polis*, for

S. B. Sutton, “What Is a ‘Village’ in a Nation of Migrants?” *Journal of Modern Greek Studies* 6, 1988, pp. 187–215.

<sup>62</sup> Whitelaw and Davis; R. F. Sutton, Jr., “Appendix 12.1: The Finds from Koressos (Site 7),” in *Landscape Archaeology* (footnote 52 above), chap. 12.



example, would obviously benefit from closer study of city behavior in late antiquity, especially when this can be related to the significant rural changes observed during the period.<sup>63</sup> For broadly based observations on the birth and subsequent transformation of these important centers, we are dependent upon the potential results of urban survey, except in a handful of cases where documentation is sufficiently abundant or the site extensively dug: not surprisingly these two categories often overlap.

Finally, the study of central places, their population and history, must be deeply involved in any sound analysis of regional settlement patterns. No matter how well understood activity in the countryside may be and however intensive and thorough the rural survey, serious interpretative problems will arise in the absence of equivalent information relating to the top of a regional hierarchy, i.e., the urban area. The need to assess the significance of nucleated versus dispersed settlement patterns, and cyclical shifts between the two conditions, appears as one chief difficulty. These shifts can be observed several times in the long-term record provided by various Greek survey projects. The problem is the equifinality of the nucleated pattern: it could result either from depopulation or from population movement (from countryside to town).<sup>64</sup> These two possibilities obviously carry very different implications for the socio-economic history of a region. Past survey projects, with their primarily rural focus, have usually been forced to stop at this point in the argument: they are able merely to present the two alternative explanations. Understandably, this has somewhat weakened survey's claim to possession of a unique regional perspective. Adding the apex of the settlement pyramid to survey's larger picture allows the argument over nucleation and dispersion to be carried forward to a logical, and more satisfying, conclusion.

A single example will suffice. In the Late Hellenistic/Early Roman period, rural settlement numbers in Greece markedly decline; this "nucleated" pattern is observed wherever survey results are available from central and southern Greece and the Aegean islands.<sup>65</sup> What happened, however, at the urban centers? In Boiotia, survey work at Thespiiai demonstrated a distinct contraction in site size and a decline in artifact densities between the Classical/Early Hellenistic and Late Hellenistic/Early Roman epochs. With both urban and rural shrinkage attested, regional depopulation on a significant scale seems undeniable for that portion of Early Imperial Boiotia.<sup>66</sup> Northwest Keos also displays a definite decline in population during this epoch; there the process can be related to the synoecism of Koresos with a neighboring town and its subsequent abandonment.<sup>67</sup> At Phlius, however, a very

<sup>63</sup> S. E. Alcock, "Archaeology and Imperialism: Roman Expansion and the Greek City," *JMA* 2, 1989 (pp. 87–135), pp. 105, 119–121; T. Gregory, "Cities and Social Evolution in Roman and Byzantine Southeast Europe," in *European Social Evolution: Archaeological Perspectives*, J. Bintliff, ed., Bradford 1984, pp. 267–276; cf. F. Papazoglou, *Les villes de Macédoine à l'époque romaine*, Paris 1988.

<sup>64</sup> On nucleated versus dispersed settlement see Wagstaff and Cherry (footnote 23 above), pp. 251–256; C. N. Runnels and T. van Andel, "The Evolution of Settlement in the Southern Argolid, Greece," *Hesperia* 56, 1987 (pp. 303–334), pp. 322–330. On the problems of distinguishing between these two possible explanations see Bintliff and Snodgrass, *Antiquity* 62, pp. 69–71; Wilson and Leonard (footnote 4 above), p. 220.

<sup>65</sup> S. E. Alcock, "Roman Imperialism in the Greek Landscape," *JRA* 2, 1989, pp. 5–34.

<sup>66</sup> Bintliff and Snodgrass, *Antiquity* 62, pp. 69–70; Bintliff and Snodgrass (footnote 61 above), p. 178; S. E. Alcock, "Changes on the Ground in Early Imperial Boeotia," in *Proceedings of the Sixth International Boeotian Conference*, J. Bintliff, ed., Liverpool forthcoming.

<sup>67</sup> Whitelaw and Davis; Cherry, Davis, and Mantzourani (footnote 52 above).

different pattern has now clearly emerged. When Early Roman Phlius is compared to its Classical predecessor (Figs. 17 and 15), an expansion is seen in the settlement area and, by extrapolation, also in its population. This at very least allows the alternative possibility of in-migration from countryside to town, arguing against a demographic downturn in that portion of the Corinthia. To put it simply, urban survey results from different regions are beginning to reveal subtly different historical and demographic patterns, adding new information to established reconstructions.

### CONCLUSION

If, as I believe, the results of urban survey take on their greatest significance when brought into relation with wider regional patterns of settlement and land use, then this article remains, in one sense, a preliminary study. But that will not always be the case. While the lack of information from the Phliasian plain itself is admittedly a liability, Phlius should certainly not be regarded as a completely isolated urban unit. What of the relationship of the city to the remainder of the intensively surveyed NVAP territory (Fig. 2)?

Assessing the nature and frequency of connections between Phlius and the Nemea Valley is difficult from historical evidence alone. Despite Phlius' proximity to the Sanctuary of Zeus, the city does not appear to have taken any active interest in the Nemean Games, where the chief political competitors were Argos, Kleonai, and Corinth. Indeed, the only specific reference linking Phlius and the games appears in a Pindaric victory ode in which Nemea is described as lying beneath the "primeval mountains of Phlius" (*Nemean* 6.45), a remark which cannot be made to carry any political significance. Whether this silence signals a genuine absence of communication between the two adjacent valleys remains unproven. Adshead suggested that poor access routes between Phlius and the area to the east focused Phliasian interests securely on the western side of Mount Trikaranon (Prophitis Ilias),<sup>68</sup> but the distance and difficulty of travel between Phlius and Nemea cannot be substantially greater than that between Nemea and Kleonai to the east. It is certainly true that modern inhabitants of the Nemea Valley regularly travel west to New Nemea for supplies and services. In this context, numismatic evidence from the excavations by the University of California at Berkeley in the Sanctuary of Zeus can be cited. In the sanctuary as a whole, Phliasian coins are far less common than those of Sikyon, Argos, or Corinth, but within a zone of possibly permanent residence, the proportion of Phliasian coins jumps from 6.5% to 24%. One interpretation of this pattern could be that the permanent inhabitants of the area had more constant interaction and commerce with Phlius than the transient festival crowds. The evidence, though slender, is suggestive.<sup>69</sup>

In antiquity, the Nemea Valley was acephalous in character, apparently never possessing any major political center of its own; political and economic control of the valley system was transferred periodically from one external power to another. These hegemon were

<sup>68</sup> Adshead (footnote 19 above), p. 6.

<sup>69</sup> S. G. Miller, "Excavations at Nemea, 1981," *Hesperia* 51, 1982 (pp. 19–40), pp. 35–36 and note 49. It has now been suggested, however, that these structures may be quarters for sanctuary officials rather than the domiciles of a permanent local population: Miller (footnote 10 above), pp. 75–77.

often located at a significant distance from the valley: Argos is the chief example. The potential role of Phlius, a much nearer city, as a convenient socio-economic center, even marketplace, for the inhabitants of the Nemea area should not be lightly dismissed. In any case, Phlius is the only urban center which can be related rigorously to the NVAP survey territory. Integration of all survey results thus becomes a major priority, but one which must await the full publication of the survey project.

Finally, it is worth asking what classical archaeologists and ancient historians gain from the evidence of urban survey. Minor cities such as Phlius indisputably constituted the most common type of political unit in ancient Greece. Yet until very recently ancient historians, and with far less reason classical archaeologists, have all too obediently followed the research paths dictated by the surviving ancient literary and historical sources, with the inevitable consequence that scholarly attention has been tightly focused on a handful of clearly exceptional and highly atypical cities. Urban survey allows, indeed forces, an expansion in that field of vision. The technique offers a unique means to approach marginal *poleis* such as Phlius, establishing their long-term history of occupation and placing them within their regional setting, and thus provides an unprecedented opportunity to explore the true diversity of the ancient city.

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