OHIO STATE ARCHAEOLOGY FIELD SCHOOL GREECE SITE: http://isthmia.osu.edu/arched/survey.html

Survey Procedures

Figure 7.4 : Field Walkers

The actual process of field survey differs from project to project, but there are some overriding principles that govern most processes. Many survey projects incorporate two or more phases of research with different purposes, involvement, and technique. At the basic level, surveys are generally investigative in that they aim to discover the kinds of artifacts and features present (or absent) over an extensive region. Walkers spaced at equal distances walk as a group across a field, counting artifacts and flagging representative pieces for later analysis (Figure 7.4). This phase is efficient, cheap, and painless, allowing a quick assessment of artifact potentials for the survey area. A second, more involved and intensive phase is necessary for areas with high artifact concentrations and will be discussed in the next section.

In the first phase of survey, projects often incorporate a nonsystematic component, which involves scouting out different parts of the landscape to get a general impression of the material there. If the survey is systematic, walkers will be spaced at regular intervals across the field, thereby covering a representative area. The amount of representation depends upon the goals of the project but one walker for every ten to fifteen meters is typical. In EKAS, this first level of research is called the Discovery Phase. Walkers placed every ten meters can visually cover one meter to the left and one to the right, a total coverage of 20% for each Discovery Unit; this means that eight of every ten meters goes unexamined and artifacts in these areas will be unnoticed.

Survey procedure in general is simple and straightforward. When the team leader gives the signal, participants transect the landscape, walking in their "swath" at a set pace and direction. Often where crops or trees are large, it is easiest to walk in the same direction as the vegetation; if the survey area is an open field, the team leader may choose a set bearing to follow with the compasses. The pace varies according to the amount of ground visible, amount of background disturbance (such as rocks, wood, and leaves), and the density of artifacts. It is necessary to take more time in a field that is cluttered with artifacts, stones, and vegetation than a field with light scatter of debris.

Figure 7.5 : Locating Cultural Materials

As the walkers transect the field, they constantly scan the ground for artifacts (Figure 7.5). When someone sees cultural material on the ground, he / she informs the other walkers by shouting "pottery," "flake," or whatever the artifact is (If the artifact is especially rare, the field walker may do a little dance). This informs the other crew members about artifact

scatter areas which may spread into their own swaths and generally encourages participants to keep the eyes to the ground and remain attentive. For site-based surveys, all artifacts found in the same general location belong to the same "site" and are placed in the same site bag. An archaeological "site" in this sense is simply the term used to denote a cluster of artifacts that are spatially definable. The cluster itself is not always culturally significant and may entail nothing more than coincidental association. EKAS uses not a site-based approach but a geomorphological one. Artifacts found in the same Discovery Unit (usually a small field or area considered to be geomorphologically the same) belong to the same context even when they are not found in proximity to one another. Thus, if a Roman amphora sherd and an obsidian bladelet spread twenty meters apart belong to the same Discovery Unit, they are artifacts with similar geomorphological histories.

Artifacts are collected according to the research design and project goals, and a collection strategy is decided before survey begins. What will be done with the archaeological material found in the course of survey? Many projects employ a grab-sample collection strategy which removes a representative sample of the material from the field. There are variants of this such as the timed sample which only allows a limited amount of time to collect at any one place, or a selective sample where only the more diagnostic artifacts are removed. There are advantages to these kinds of strategies such as the opportunity for numerous researchers to analyze and study the material at a laboratory. And conjectures about the use of the landscape can be continually tested by referring to the actual objects themselves. On the other hand, removing artifacts from their primary context is destructive to the archaeological record; material removed cannot be put back. And it is questionable how much additional information is gained by collecting artifacts. Moreover, processing artifacts is time consuming and artifact storage requires a considerable amount of space (some Mediterranean surveys recover hundreds of thousands of artifacts). Finally, some researchers now have the resources to analyze the pottery, lithics, and other artifacts in situ. Digital cameras, for example, which take images that are immediately viewable, provide surveyors with quality photos of artifacts before they even leave the field. For these reasons, some projects have recognized the benefits of using a survey strategy that does not necessitate collecting artifacts.

The EKAS project employs a non-collection strategy based on a "ChronoType" system. A ChronoType is defined as a type of object that has both distinct physical attributes (e.g., decoration, color, fabric, temper, thickness) and a specific temporal association (e.g., Classical Greek, Late Roman). The categorization of the ChronoTypes is both open ended and hierarchical. On the one end are body sherds (e.g., Coarse Red body sherds) with few distinct attributes that are only very loosely connected with a temporal period of production (e.g., the ancient world rather than modern times). On the other end are sherds with very distinctive physical characteristics and a tightly defined period of production (e.g., Late Geometric IIIC amphora). The ChronoType system classifies all artifacts by their most recognizably distinct attributes.

In the EKAS project, artifacts are counted with handheld "clickers." Crew members use these tally counters to facilitate counting for dominant artifacts such as pottery and tiles; participants click once for each artifact. Rarer artifacts, such as lithics and marble revetment, are recorded mentally. Every potsherd representing a distinct ChronoType is flagged. Once a ChronoType has been flagged, no other

field walker needs to flag another of the same kind of artifact for that Discovery Unit, although additional artifacts of the same ChronoType will be counted with the tally counter. For example, a common ChronoType found during survey in the Eastern Korinthia is the combed-ware body sherd, dating to the Late Roman period. Once one of these sherds has been seen and flagged in a Discovery Unit, it is no longer necessary to flag another. This system allows walkers to flag distinctive artifacts and avoid duplicates; it also saves time for the processing team, who will come through later and analyze the flagged artifacts in the Discovery Unit. After walkers finish their tracts across the DU, they report tally count totals to the team leader. The number of potsherds, lithics, and other types of artifacts are recorded for each person's tract. If there is still more area to survey, walkers will again pace off ten meters and walk back across the Discovery Unit.

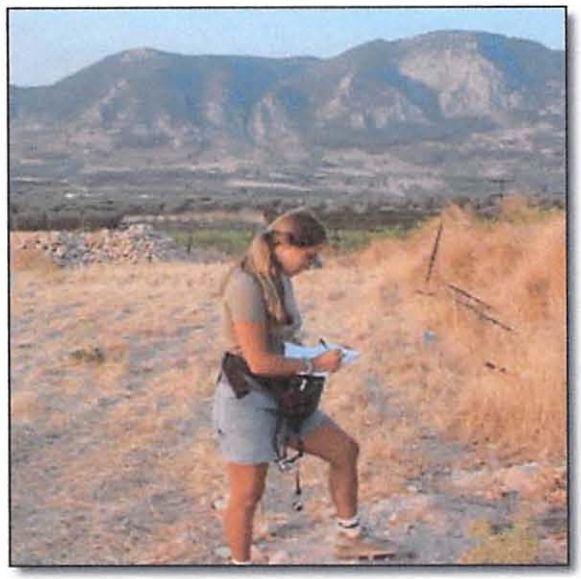


Figure 7.6 : Recording Field Notes

In every survey project, it is necessary to record additional information about survey conditions, such as procedures, field conditions, artifact patterning, weather, and even the morale of the team. Especially important are notes on ground cover (Figure 7.6). The density of stones and vegetation that distract the field walker's visual attention is called background disturbance. The visibility of the ground to the walker is also an important condition to record. The types of debris on the surface and the crop planted that year affect the surface exposed to the field walker. The land may be so covered with vegetation that survey is not possible. Other times, a freshly plowed field with little or no plant coverage renders an ideal survey situation. The percentage of ground visible is usually estimated and varies from field to field. In the Eastern Korinthia project, the team leader keeps a written narrative of the survey process and field walkers complete four pages of forms for every Discovery Unit. This includes such information as the date, the names of the walkers, the location of the survey area, walker direction and bearing, artifact counts and notes, land cover, visibility, soil conditions, the current utilization of the land, features, and evidence for modern activities. While this type of data recording takes additional time, it is nonetheless significant in determining whether the artifacts collected are sufficiently representative of the material present in the field. If vegetation cover totally obscures the surface, it may be necessary to re-survey the field at a later time when the area is more visible.

In survey projects employing a collection strategy, artifacts are taken back to a laboratory and analyzed. Because EKAS is a non-collection project, all processing and analysis takes place in the field. After the survey team has finished a Discovery Unit, the Object Processing Team comes in and analyzes flagged artifacts. Potsherds and lithics are measured, sketched, and described; photographs are taken with a digital camera; artifacts are designated to an appropriate ChronoType. The survey teams and the processing team use walkie-talkies to communicate in the field, and observations of the latter can aid

the surveyors in determining what artifacts to flag. The diagnostic artifacts identified by the Object Processing Team can provide specific information about chronology and human activities in ancient times.

Intensive Survey

Figure 7.7 : Intensive Examination

Many projects undergo a second phase of survey that will explore more intensively an area discovered in the first phase. In EKAS, after a team has finished a Discovery Unit, the team leader may recommend a closer, more intensive examination of the area at a later point on the basis of the high concentrations of artifacts or unusual kinds of artifacts present (Figure 7.7). This survey area, called a LOCA (Localized Cultural Anomaly), requires different strategies and procedures that will delineate the site boundaries and define the chronology and functions of the site. Strategies might include, but are not limited to, further geomorphological study, intensive collection within a grid, excavation, sketching plans of relevant features, or geophysical survey. The particular strategy depends on the nature of the LOCA and the specific research questions. In 1999, an apparently important site (with identified material from prehistoric to Roman times) was gridded into 10x10 m units. In the center of each of these units, participants collected artifacts from an area constituting 10% of the unit. The artifactual material was collected for later description and analysis. The data gathered from the LOCAs can be studied in terms of chronology and space, informing researchers about the use of the site through time.

Computers and GIS

Figure 7.8 : Computer Work

Archaeologists in EKAS use computer technology to record and manage the data collected during survey (Figure 7.8). Several interrelated databases exist and one of the main priorities of the project is to transform all data to digital format. All paper forms filled out during survey (Discovery Unit forms, Geomorphological Unit forms, and artifact analysis forms) are keyed into databases and are made accessible to project participants through the internet. Geographical information is also organized and managed through computer programs called Geographical Information Systems (GIS) which convert spatial data into mathematical and graphical format. In EKAS, researchers "digitize" their topographic maps (1:5000 scale) and aerial photographs before survey actually begins. Once graphical representations of actual maps exist and survey begins for the season, project participants must locate

all Discovery Units in real geographical space. While surveying, they use Global Positioning System (GPS) units to determine their location relative to satellites overhead, or get an approximate location by relating visible markers such as roads and streams on 1:5000 topographic maps and aerial photographs to the actual road and streams. In either case, the boundaries of the Discovery Unit are sketched onto maps in the field and then later digitized into GIS programs. Moreover, other types of information collected during survey is also keyed. When these data have been entered, archaeologists can begin to ask complex questions about the relationships of variables such as land slope, Discovery Units, artifact densities, soil, and environment. For example, EKAS researchers can test the relationship between slope and the high density of Late Roman amphora sherds. Were there consistently more Late Roman artifacts at higher elevations? Or, location and function of sites can be related to the distance to the nearest water source, the coast, settlements, or even cities (e.g., ancient Korinth). Like several transparencies stacked one on the other, GIS allows one to simultaneously view and interpret layers of data in light of spatial information.

THETFORD FOREST ARCHAEOLOGY SITE: http://spamandchips.net/archaeology/walk.htm

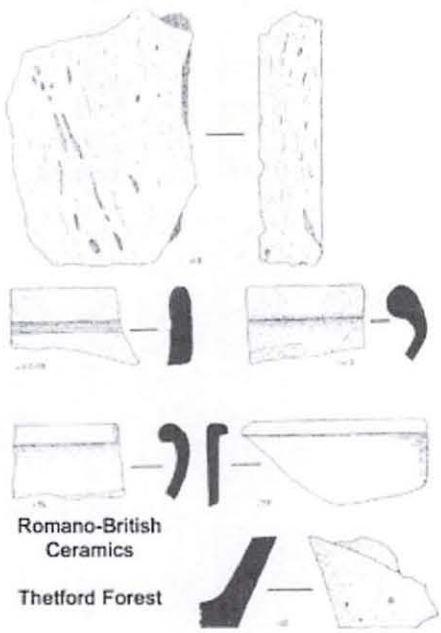
Surface collection survey - a method

Whereas excavation produces high quality information from a small area, surface-collection produces more quantitative evidence over a larger area such as a landscape (especially when combined with other field methods such as excavation, earthwork survey, aerial photography, geophysical survey, cartography, documentary research, vernacular survey and metal detection survey). The intensity of a survey depends on what kind of research is being carried out.

The most frequent aim of a survey is to find and record archaeological sites. Clusters of finds - such as sherds of broken pottery, on the surface of disturbed and exposed soils (e.g. the plough soil of arable fields), often indicate the presence of archaeological sites in the subsoil. In some cases, these clusters are the only surviving evidence of past settlement and activities. Fieldwalkers search cultivated fields in search of this evidence, and submit new entries to the public record each year, adding to our knowledge of past times.

Not all fieldwalk surveys are carried out merely to find new sites. Intense surveys can provide more indepth knowledge of already recorded sites, or can be used to evaluate the past uses of a landscape. Which method is employed depends on the aims of each survey, the level of disturbed soil exposure, and the number of people involved in the exercise.

However, field-walking can only be of archaeological value if it is carried out properly.



Permission of the landowner should always be obtained.

A clear set of aims and methodology should be drafted - including a justification for removing artefacts from their topsoil context.

All finds should be properly recorded with find spots onto a secure public record (here in England & Wales, the finds and survey results should be recorded on to the sites & monuments record, usually kept by local government archaeologists). Finds from England & Wales can also be recorded to the Portable Antiquities Scheme - details of PAS Finds Liason Officers can be found on the PAS website. Recorded findspots in the UK should use the Ordnance Survey NGR (National Grid Reference) system to plot their location

Whenever possible, survey results should be published so that the new information is disseminated across a wide audience. Many local archaeological societies publish journals and newsletters. Amateurs can also consider e-publishing of reports, such as I have done here with this website.

Ideally, finds should also be placed in a public depository after the project has been completed (although I would advocate the temporary lending of some finds to local schools, etc).

There are several different methods of field-walking:

Grid-walking. This usually involves a group of surveyors searching 100% of a fields surface. The field is divided into squares, or grids, carefully measured out. Finds are compared between different grid squares. This is the most thorough form, and is often carried out by large numbers of people such as local archaeological societies.

Linear-walking. This involves searching a smaller percentage of a field. Transects, or lines are measured and mapped out. A surveyor walks along these lines that are spaced out at regular intervals. Finds are compared between transects. The transects can be divided into shorter lengths called stints. This is the method of the Thetford Forest Survey.

Reconnaisance-walking. Simply walking over areas of disturbed soils (e.g. ploughed fields) without any method. Reconnaissance is best restricted to the initial surveying of an area.

Responsibility

If you want to take up fieldwalking, then I would urge that you consider the responsibility of removing finds. There are clearly cases, development, rescue archaeology, heavily cultivated fields, land drainage, etc, where finds are being destroyed by modern activities, and in those cases, removal of artifacts is easier to justify. However, I would urge that you always consider the responsibility of removing finds even from the surface. What is your justification? What do you hope to learn? How will you record the removal for the future - will that record be secure? Removal without considering and weighing out those decisions is not archaeology - it is egg-collecting.