Figure 1: Temporary protective roof over excavations at Sardis, Turkey.

Resim 1: Sardis kazı alanları üzerindeki geçici koruyucu çatı, Türkiye.
Credit: Glenn Wharton

Spring 1999
This guide contains some general suggestions for the preservation of materials remaining on archaeological sites, either between seasons or permanently, including built structures, the decorative elements in those structures, and the edges of the excavations themselves. In the same way that the conservator of artifacts is responsible for the safety and preservation of movable cultural property, there is an essential role at every archaeological excavation for a site conservator. The site conservator can help the archaeologists and project directors make well-informed decisions about what measures are necessary for the protection of the site from the effects of weather, theft, and vandalism, as well as the wear and tear of traffic, tourists, and local usage.

Archaeologists at well-established excavations, and there are many in Turkey, sometimes fall into bad habits that contribute to the deterioration of their finds. Workers and excavators may routinely walk on walls or exposed mosaics without noticing how much damage they are causing. Simple actions, such as redirecting traffic, providing temporary physical barriers, and the construction of wooden ramps and walkways over structures, can prevent a great deal of damage; it will usually be the site conservator who must remind the excavators to take these actions. At newly established sites, conservators are often in a position to develop good excavation habits from the start, and this is an opportunity not to be missed. Information on preservation procedures for in situ materials and built structures should be included in "First Aid" handouts and training sessions given to archaeologists by conservators.

During the off-season, local residents will naturally return to their customary land-use patterns in and around the excavation area. If a site is in an inhabited area, this may include the use of paths and local roads through the site, use of the site for grazing, or use of the site as a playground by village children. Working with the project director, the site conservator can help to identify the most vulnerable areas and aid in the development of a fencing plan or some other form of protection. Needless to say, good relations and careful diplomacy with local residents can contribute significantly to the off-season protection of a site.

Archaeological excavation, almost by definition, creates a hole in the ground that immediately becomes a natural collection point for both rainwater and solid debris. Many areas of Turkey receive substantial amounts of precipitation, and the runoff of one winter, cascading down the sides and pooling in the bottom of an excavation, can lead to severe erosion and sometimes collapse. Increasingly, reburial is considered necessary to prevent further deterioration.
a viable option for both temporary and long-term stabilization of archaeological deposits. In current practice, reburial often includes the use of geotextiles and related synthetic materials. These materials can help protect delicate deposits, enhance or restrict drainage, stabilize loose soils, and control silt deposition. A wide variety of these products are now available in Turkey (see Field Note Number 3, Conservation and Related Materials: Suppliers and Shopping in Turkey.) In addition to geotextiles, reburial will likely include the use of soil, clean sand, a specialized fill material, or a combination of these materials. The site conservator can help the archaeologist design a reburial system appropriate for the site, based on such factors as available drainage, soil content of the soil, potential for freeze-thaw damage, and the nature of the artifacts themselves.

Temporary protection of archaeological sites may also include tent-like structures or more traditional materials such as corrugated galvanized steel or bitumen papers, and synthetic tarps or sheeting. All temporary covering systems must include sufficient drainage to prevent damage from channeling, erosion, and accumulating water. The site conservator will aid the project director in developing yearly monitoring and maintenance routines for these materials until more permanent solutions are found. At the same time, the site conservator can help to implement a program of more general annual maintenance procedures, such as cutting plant growth and repairing access roads, paths, and fences.

The remains of built structures, present at virtually all archaeological sites in Turkey, often consist of broken and truncated walls, deprived of the roof structures that would have originally protected them. All exposed walls, regardless of the materials from which they were constructed, will eventually begin to deteriorate if left unprotected. Most of these structures will remain exposed well into the future and therefore require permanent protection. Few expeditions can afford to provide new roofing over an entire site; therefore, exposed walls are routinely capped to prevent the penetration of rainwater and plant growth. All too often, the material of choice for wall capping is cement-based mortar. Cement mortar is cheap, fast, and easy to work with, but ultimately it is doomed to failure. Whenever possible, conservators discourage the use of cement in direct contact with ancient materials, recommending instead the use of lime-based mortars. Programs for this type of stabilization should include training for local workers in the use of these mortars for both new work and ongoing maintenance with relatively little supervision; such a program will help to integrate the local community into the preservation of the site.

Many sites have erected permanent shelters over particularly vulnerable finds in the past, and new projects that include protective structures are begun every year. In addition to preparing the finds beneath those structures for public display, the site conservator can play an important role in both project design and the design of the building itself. Protective structures must not only provide protection from the weather and security for the finds but should also be as low maintenance as possible. Architects designing these structures can sometimes lose sight of the reality of long-term maintenance, and if maintenance procedures are not kept simple and cost-effective, they are less likely to be done. The finds within drenaj olanıklarına, toprağın tuza karşı, domina-çoğunlum tahribatı potansiyeline ve korunmaları özelliklerine göre yapar.

Arkeolojik alanların geçici olarak korunmasına dair benzeri elemanları veya oluklu galvanize sağı, bitümenli kağıt, sentetik bandı gibi daha geleneksel malzemeleri yer yer ilebilir. Tüm geçici örtü sistemlerinin kanal oluşumuna, erozyon ve su akışı engelleme etkisi bir drenaj içermeleri gerekir. Ören yeri koruyucu, daha kalıcı çömlekler bulunana dek bu elemanların kontrolü ve karınması konusunda kaza bırakma yardımı edecek. Konservatör otların kesilmesi, yolların, patikaların ve tel örgülerin onarılması gibi daha genel ve yararlı bir bakım programının geliştirilmesini de yardımcı olabilir.

Türkiye'ye de hemen tüm arkeolojik ören yerlerinde bulunan yapı karınları yıkanmış ve parçalanmış duvarlar sahipleri ve kendilerini özgün ve hizmetini kullanmak için kaza alanları alan koruyucu çatı, Sardes, Türkiye.

Credit: Kent Severson

Figure 3: New protective roof over excavations constructed as part of preparations for public display of recent excavations. Sardis, Turkey.

Resim 3: Sardes'te yaptıkça kaza alanlarının halka sergilenmesi için yapılık alınan bir bölümüne ö Joyce D. Laidlaw
permanent structures also require maintenance, and the participation of the site conservator is essential in the planning and execution of these operations. For example, mosaics preserved in situ will invariably need sweeping and perhaps occasional washing; without adequate supervision, this maintenance can be as damaging as exposure to weather or tourist traffic. As part of the documentation relating to conservation treatment of the ancient materials, the conservator should specify the nature and timing of all routine maintenance within protective structures.

Many older sites in Turkey include large-scale reconstructions of excavated architectural remains. During architectural reconstruction or site-enhancement projects, there will often be a specialist in the conservation of architectural materials at the site, or the architects will assume the role of architectural conservator. Once the excavation, documentation, and publication of these projects is finished, they are often left unattended for years, without the benefit of even the most cursory inspection. The site conservator can make a significant impact on the long-term preservation of such reconstructed structures and their decorations through the implementation of a simple inspection program, supervision of the routine and gentle washing of some structures, or implementation of a comprehensive maintenance program.

As primary advocates for the preservation of a wide range of materials, site conservators are often the bearers of bad news for archaeologists and expedition directors. Conservators’ suggestions are sometimes perceived as major distractions from the real purpose of an archaeological expedition: to excavate, document, and publish; however, all aspects of an archaeological site deserve protection, for both the near and distant future. Buildings, walls, and scarpes are large-scale finds, therefore recommendations regarding site-preservation usually imply a major allocation of time and resources. Careful cooperation among the site conservator, archaeologists, and the project director in planning and executing site-preservation measures will maximize the effective use of available resources.

Kent Severson is a private conservator working in Boston, Massachusetts, USA. He has participated in numerous archaeological projects, including those at Sardis, Samothrace, Sagalassos, and Hacımuşar. He is currently conservator for the New York University Aphrodisias Excavations.

Field Notes is a series of essays written by professional conservators and archaeologists. They are intended for archaeologists, conservators, and students as resource guides for the stabilization and preservation of excavated materials and archaeological sites.

Field Notes is jointly supported by the Edward Waldo Forbes Fund of the Freer Gallery of Art, Smithsonian Institution, and the Middle Eastern Culture Center in Japan.

For additional copies of Field Notes, or more information about the series, please contact: Japanese Institute of Anatolian Archaeology Resit Galip Cad. 635, Gaziosmanpaşa, Ankara, TURKEY, Tel: 90-312-437-7007, FAX: 90-312-446-6838.

gerçektenin uzaklaşabilmekle ve sonuçta bakım işlerinin basit ve ekonomik olmasına, bakım işinin hiç yapılmamasını anlamına gelmişildirdi. Kalıcı koruma yapıları altında bulunanları da bakma gereksinimi olabilir, ve öncen yeri koruyucuların varlığı bu tür uyarlamaları planlanması ve yercege getirilmesi için önemlidir. Omeğen in situ durumunda korunan bir mozaik seridinde olarak süpürülmeyle veya belki de olsa yıktırma gereksinini duyar, bilinci bir denetim olmakla birlikte yapılan bu tür bakım işlerimi, hava koşullarının yol açmış bir taşrada da turist trafiğinin neden olduğu yorumlanmasa kadar zara verici hale gelebilir. Koruyucu antik belgelerin koruma işini ile ilgili belgelenmelerin bir parçası olarak, koruma yapıları altında bulunanların yinelenecek bakım işlerinin türünü ve uygulama sağlanma açığını belirtmelidir. Türkiye’de pek çok sayıda eski yerleşime, kazalar sonucu açığa çıkanların mimari kalıntılarının büyüyük boyutlu rekonstrüksiyonlarına sahiptir. Mimari rekonstrüksiyonlar veya örenin ziyaretçiler için çekici/ anlaşılabilir kılmak için hazırlanan projelerde, ya mimari bulunanların korunmasına yönelik bir uzman olacak ya da mimarlar koruyucuların görevini üsteneceklidir. Bu tür projelerdeki kazı, belgeleme ve yaygın çalışmaların tamamlandığı, kazalar alanları ve kalıntılar yıklarak ılgilenilmendiğine, hatta en üstünkörü kontrol denilecek derece ilgilenmemen kendi başlarına bırakılır. Ören yerine koruyucuları basit bir ölçüm programını yürütmelige koyarak, kimi yapılardaki düzenli olarak ve özenle yakalanması danetleyecek, ya da daha kapsamlı bir bakım programı yürütmek bu tür rekonstrüksiyon tamamlanmasını yapmanın ve sistemlerinin uzun vadede korunmasının önemi katkıda bulunabilir.

Geniş bir malzeme grubunun korunmasında savunmak görevini üstlenecek ören yer koruyucuları çoğunun zaman arkeologlar ve kazı başkanları için kolay bir jobunuzu ifade etmez. Koruyucuların önleri kimi zaman arkeolojik kazı projeleri kaçınılmaz, belgeleme ve yorumlamak gibi ana araçlardan uzaklaşan düşünmeler olarak görülenler; oysa arkeolojik ören yerin sağ kiến ve uzun vadede her açıdan korunması hakeder. Yapılar, duvarlar ve ağaç kesimleri büyük ölçüde bulunmaktadır, bu nedenle örenin korunmasını ilgilendiren tüm önlemlerin de geniş zaman ve kaynak gerektirir.