

# Care and conservation of archaeological materials

Collections of objects housed in museums and in private ownership are normally referred to as 'archaeological' if they have been found buried in the ground or recovered from under water. They can be of any age, from Stone or Bronze-Age axes to Egyptian ceramics and figurines; Greek or Roman antiquities to cannon-shot and other objects from historic shipwrecks. Community Archaeology and the popular hobby of metal-detecting are also producing collections of metal and other 'finds', and mainstream archaeological excavations and investigations produce thousands of artefacts of many material types every year. Archaeological objects are collected for different reasons, e.g. for their intrinsic interest, age, beauty or value, or because they are clues to the past and have relevance to the place where they were made, used or found. All these objects have some value within society and deserve to be treated with the level of care necessary to conserve them in as unaltered a way as possible. This helps realise their potential to inform, educate and please, both now and in the future.

## Objects that have been buried react in a different way

Hardly anything that has lain buried in the ground or on the seabed will have survived unaltered in some way – a combination of physical, chemical and biological factors will have been at work. Organic objects will rot, metals and glass corrode, and salts may build up inside ceramics, stone and other porous materials. An object that appears in good condition may in fact be very fragile; delicate decorated surfaces may be obscured by hard corrosion or concretions; and the 'chemistry' within the object can often cause continued deterioration if not checked in some way.

Archaeological conservators are expert in understanding processes of deterioration and decay in a wide variety of materials, they can help identify and analyse most artefacts and materials.

## Effects of previous treatments

Your object may have been 'treated' in the past – this can be a direct cause of new problems. Using inappropriate chemical cleaners can strip off too much dirt and corrosion, destroying the original surface of the object in the process. Unless it is used in a controlled way and carefully removed after use, a cleaning material can go on acting on an object far into the future. Similarly, the application of oils, waxes and lacquers can do more harm than good by attracting dirt and airborne pollutants to an object's surface, and by sealing in other chemically-active by-products.

Seek advice from a conservator before attempting any 'treatment' of your artefact. Old treatments may not be visible and can give rise to unpredictable and damaging results.

## Handling, packaging, environment

Poor handling and inappropriate packaging present the most common threats to objects, often causing breakage and other physical damage. However, by far the greatest threat is long-term neglect. If unchecked, the effects of a combination of poor environment, inadequate physical protection and chemically unstable packaging materials gradually take their toll. The resulting damage may go unnoticed over a long period of time.

Give your objects the best chance of surviving these threats by following good conservation and collection care practices and seeking professional advice.



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Roman copper alloy figurine of Mercury, Colchester

## Find a conservator by using the conservation register

The Register is free to use; it provides detailed information on conservation-restoration practices based in the UK and Ireland including contact details, referenced examples of previous work and the qualifications of members of staff. It is searchable by specialist skill and geographical location and each business has been required to meet rigorous criteria which include professional accreditation of the lead conservator of the business; the information is regularly updated..

[www.conservationregister.com](http://www.conservationregister.com)



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## What you can do to 'stop the rot'

Most of the actions you need to take to protect your valued objects are comparatively simple, but require a little bit of knowledge. A conservator can give you advice and there are a number of publications and web-based sources that will give you simple instructions (e.g. the Portable Antiquities Scheme, [www.finds.org.uk/conservation](http://www.finds.org.uk/conservation) and 'First Aid for Finds (1998)' available from the Icon website, [http://www.icon.org.uk/index.php?option=com\\_content&task=view&id=1546&Itemid=0](http://www.icon.org.uk/index.php?option=com_content&task=view&id=1546&Itemid=0)). One of the most important steps towards collections care is to assess the condition of your objects as fully as possible, through examination and observation, and to keep a check on them on a regular basis. This will alert you to changes in their condition so you can take corrective action. Here are some basic do's and don'ts.

- Keep direct handling of objects to a minimum, and when you do handle them, hold them over a table with a soft covering to avoid loss or breakage.
- Use only archival quality 'acid-free' containers and packaging materials. Provide padding to stop objects moving about and to separate items within the same container.
- Provide a stable storage environment for metal objects by keeping them in airtight 'dry' boxes with renewable silica gel sachets and humidity indicator cards. (See <http://finds.org.uk/documents/file/drybox-leaflet.pdf>).
- Avoid attempting to clean corrosion or concretions from archaeological artefacts. Archaeological conservators are trained to have the knowledge, skills and equipment to do this effectively without harming the object. You may, inadvertently, be removing important information.
- It is best not to apply waxes or lacquers to any object unless you have taken professional advice beforehand. Incorrect application can do more harm than good.
- If attempting to clean dirt from antiquities such as ceramics, marble and stone, test-clean a small area first with warm water and a cotton bud – is there softening or loss from the surface? If it is safe to proceed, a little mild non-ionic detergent may be used. Swab cleaned areas with small amounts of fresh water and allow to dry slowly and naturally. Do not immerse an object in water.
- The condition you find your antiquity in is an important part of its history and value. Do not try to 'restore' your objects to their former complete state by, for example, filling gaps and holes invisibly, or supplying missing parts recycled from other objects. This is at best misleading and, at worst, dishonest.
- Keep records of any treatments that you apply to your objects, along with images, measurements, identifying features and, of course, information about where and when you found or acquired the object.
- If you are lucky enough to find, or otherwise acquire, freshly excavated archaeological material within the UK or Ireland, you are strongly advised (or required by law) to report your artefact(s) to the relevant authorities. Contact either your local Finds Liaison Officer (listed at <http://finds.org.uk/contacts>) or local authority archaeologist.

## Consulting a conservator

Accredited archaeological conservators are highly trained and experienced professionals with the skills and knowledge to assess the needs of any particular artefact or collection and carry out a conservation strategy within a strict code of practice and to a high standard. If you are responsible for the care of an important collection or treasured antiquity, you will find the input of a conservator invaluable in assessing, investigating and treating your artefacts – and providing the necessary levels of care to protect, preserve and enhance the collection.

- A conservator can produce a 'conservation plan'. This will provide you with a condition survey, advice on packaging and storage requirements, the priorities for any urgent remedial work needed to individual objects and identification of longer-term action required. Conservation plans are also invaluable as the basis for a request for grant-aid.
- If you want to display your collections, or want to know what research and technical analyses can be undertaken to enhance the information you have about your objects, a conservator can help you do this.
- To gain the maximum amount of information from objects that are still in an 'as found' condition, your conservator will provide you with access to specialist skills and facilities such as X-radiography (a low-cost preliminary to corrosion removal and stabilisation of iron objects) and further analysis.
- Old collections which have been kept in poor conditions can also benefit from a conservator's input: remedial treatments can prevent further damage and improve the appearance of collections. For example, previous restoration to ceramics and other materials may benefit from being reversed and being renewed using more appropriate materials and techniques. Conservation costs for accidental breakages and other damage may well be covered by your insurance.

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