

- Remember to check the contents of boxes periodically (at least annually) for signs of damage.
- Try to raise boxes off the floor, for example on pallets, as this will protect against water damage should leaks occur.

Cleaning

- To remove dust from the top edge of a book, hold the volume firmly shut and brush the edge gently from spine to fore-edge using a soft brush.
- Leather 'dressings' are not generally recommended - these can easily cause a book to become sticky, will attract dirt and may stain. The best way to prevent leather from drying out is to control the environment.

Repairing books

If the binding of a book is broken or pages are falling out, keep them all together by tying the book with linen tape. Do not make repairs to tears with ordinary adhesive tapes or gummed paper as they will be impossible to remove without causing damage and will stain the paper and make it brittle. Unfortunately, well-meaning amateur repairs have the potential to do more harm than good. Similarly, re-binding can reduce the value of a book, both historically through loss of important bibliographic information, and financially.

If your book gets wet, stand it on clean, white, absorbent paper with the pages fanned out to dry. If a number of books get wet, contact a conservator immediately as freezing may be an option.

CONSULTING A CONSERVATOR

There is much that individual owners and custodians can do to protect books and prevent damage from occurring, though when damage has already happened it is best to consult an accredited conservator. Conservators can help in a number of ways, including:

- **Carrying out condition surveys of individual items or a collection, including prioritising and recommending treatment and preventive care.**
- **Treatment of tears, replacement of loose pages, re-sewing and re-binding damaged structures.**
- **Designing and making special mounts and cradles for fragile books which you want to display or consult regularly.**
- **Making tailored storage boxes for special items.**

Find a conservator by using the Conservation Register.

The Register is free to use. It provides detailed information on conservation-restoration businesses 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 listed has been required to meet rigorous criteria which include professional accreditation. The information is regularly updated.

www.conservationregister.com

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This article offers general guidance and is not intended to be a substitute for the professional advice of an accredited conservator. The views expressed are those of the author or authors, and do not necessarily represent the views of the Institute of Conservation. The Institute of Conservation would like to acknowledge use of the MGC publication 'Ours for Keeps' in the preparation of this text. The Institute of Conservation and its partners accept no liability for any loss or damage which may arise if this guidance is followed.

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Care and conservation of books



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THE INSTITUTE OF CONSERVATION

The wide range of books found in collections can include modern paperbacks, cloth-bound hardbacks, leather bindings or even vellum-covered books. Books come in all shapes and sizes and may be rare or ephemeral. Some are in everyday use, whilst others may seldom be looked at. They may have considerable personal or financial value to you as owner, collector or curator.

Books are made from a variety of materials, most of which are natural products. The paper, boards and thread of a book are all composed of cellulose, a plant material. The covers can be made from a wider variety, including skin products (leather, vellum or parchment), textiles or plastic. Some of these materials are of good, durable quality but others have inherent weaknesses and tend to degrade, especially if their storage or display conditions are poor or if they have been used a lot.

WHAT CAN GO WRONG?

Damage is related to four main factors: what the book is made of, how and where it has been stored, the construction of the book, and the degree of use the book has been subject to.

Specialist book conservators know about the manufacture and construction of books of all periods and materials. As well as carrying out treatments on individual books, they can help you identify which items are at risk, and advise you on the best ways of protecting your collection and retaining its value for the future.

These are the kind of problems you can detect yourself:

- Poor-quality paper may become brittle and yellow. This is usually due to impurities in the cellulose, but it can be made worse by poor storage conditions.
- Dust collecting on the top edges of books may lead to discolouration and encourage mould growth.
- Paper and other organic materials (such as leather) react to changes in the moisture content of surrounding air. The edges of the pages may cockle if the surrounding environment is too damp and conversely, books can also become stiff and brittle if the environment is too dry. A fluctuating environment will stress the structure of a book and cause damage, for example tears and splits at the joints where the book covers join the spine.
- Damp and mould provide a favourable environment for insects which eat cellulose: certain insects can bore right through books.

- Large books such as family bibles are often poorly made, and so heavy that their boards can split away from the book at the joints.
- Where pages become loose, they are easily creased, torn and dog-eared.
- Leather bindings can become sticky and will attract dirt if oils and leather dressings have been over-applied.
- Leather can also become dry and crumbly. 'Red rot' (where the leather deteriorates to a fine red dust) results from the way the leather was tanned. Books affected by this condition can be boxed or wrapped in acid-free paper to prevent marking of surrounding volumes.

WHAT YOU CAN DO

Good handling and storage are the best ways to avoid damage. Books are complicated mechanical objects and the way in which they are opened and closed, and manipulated during use influences how long they last.

Handling

- Always open a book carefully, without forcing, since the materials it is made from may have become weak over time. Some old books may not open much beyond 90°. Placing books face down on a flat surface will break the binding.
- The paper may be weak or damaged, so turn the pages carefully to avoid tearing. Be aware that dirt and oil from your skin can damage and stain paper. Gloves are sometimes recommended for handling bindings, particularly textile bindings or those with metal clasps, however, gloves can reduce your sensitivity to delicate papers so it is advisable to use clean, dry hands instead for turning pages.
- Take care when removing and replacing books from shelves. Headbands are particularly prone to damage as they can be pulled off when removing a book.

Storage

- A cool, dry and stable environment is ideal. Temperatures of 16–19°C and a relative humidity of 45–60% are recommended. If it is difficult to achieve this within the home, try to achieve a stable environment with a relative humidity of less than 60%; above this, mould and insects can flourish. This normally means keeping books away from direct heat sources such as radiators, sources of moisture such as damp external walls, and avoiding

storage in attics, garages or basements where temperature and humidity fluctuate, where pests may be a problem and where leaks and floods are relatively common.

- Try to protect books from direct light, especially daylight which can be particularly damaging. Light damage is irreversible.
- Store books neatly, upright on bookshelves and do not allow them to lean sideways and become distorted. If possible, books should not come into contact with unsealed wood which can release organic acid vapours. Line shelves with conservation board (acid-free) to avoid this problem.
- Make sure that there is good air circulation, for example avoid pushing books to the back of a shelf. This will reduce the risk of condensation and mould developing.
- Try to store books of a similar size next to each other so that the volumes are properly supported. Use book ends for support if necessary. Large books are best stored horizontally.
- Avoid the temptation to pack the shelves tightly as this will make the books vulnerable to damage when you are removing and replacing them from the shelves.

A conservator can advise on appropriate environmental conditions for your collection and provide information on archival-quality storage materials.

Packing books away

- If you need to pack books away, make sure that they are clean and dry, and avoid wrapping them in common household plastics such as bin liners, plastic bags or cling film. These emit harmful gases as they degrade.
- You can pack books in sturdy cardboard boxes, but be aware that poor-quality papers and card tend to have a high acid content which will cause damage such as paper darkening and becoming brittle if in close contact with books. Valuable books should be stored in archival boxes made from acid-free materials.
- Small and medium books can be packed standing upright or lying flat, but never pack books with the front edge (fore-edge) down as this can damage the structure of the book and loosen the binding. If you need to see what is in a box easily, write a list of the box contents and stick it to the outside of the box. Large books should be packed flat.
- Do not pack the boxes too full, or stack boxes so that they are liable to crush those beneath.