

RBGE Collections Care:

Protection and repair of herbarium sheets staff guidelines



What to look out for and what to do

Most of the specimens in our collection are in good condition. However, a small minority are fragile or damaged and need a protective cover or repair, or have been prepared with non-archival materials which will deteriorate rapidly.

Conservation treatments for herbarium sheets may be

- **preventive** ie they protect but do not modify the herbarium sheet in any way, eg putting a fragile sheet in a four-flap folder for protection or
- **remedial** ie some part of the sheet and/or plant specimen is altered, eg cleaning surface dirt; removing loose material and putting it in a capsule; retaping a stem

Preventive treatments can be carried out by any staff. Remedial treatments should only be carried out by trained staff, with advice from an accredited conservator, and wherever possible should be documented. This is particularly important for

- type specimens
- historical specimens (pre-1840)
- legacy specimens eg important collectors

If a specimen needs remedial conservation please put it in a flimsy, fill out a repair slip and attach it, and put it in the repairs box.

Family:	Area:
Filename:	
Imaged <input type="checkbox"/>	Not Imaged <input type="checkbox"/>
Submitted by:	Date:
Completed by:	

This table explains in detail which specimens need attention, why, and what action staff should take. * See also the separate guidelines for use of four-flap folders.

General Problem	Specific Problem	Why this is a Problem	Preventative/ Remedial
Non-archival materials	Cellophane	Cellophane covering part of a specimen or as a bag containing seed will deteriorate rapidly and make it difficult to get a good digital image of the specimen.	Remedial
	Polythene	Polythene covers make it difficult to image the specimen and can contain plasticisers which deteriorate. The bags with rigid plastic closures can damage the specimen when it's taken out for study.	Remedial
	Sellotape	Sellotape either dries out leaving the specimen loose, or leaves a sticky residue which attracts dirt and can damage other specimens.	Remedial
	Metal Paper clips	These rust and damage the paper they're attached to.	Preventive
Surface Dirt		Dust or soot can obscure label information and surface details on a specimen. It is also abrasive and can speed deterioration of the mount. (NB Staining from chemical treatments eg insecticides may also cause mounts to deteriorate but we aren't able to treat this at present.)	Remedial
Paper Problems	Flimsy or Distorted Sheets	Specimens on very thin mounting paper are easily damaged when handled eg the sheet may 'flip' causing stems to break. Thin mounting card can buckle or warp distorting and damaging the plant specimen.	Preventive
	Bulky Specimens	Very bulky specimens can distort and damage specimens placed on top of them in the species cover, especially if these are on thin mounting paper.	Preventive
	Small Sheets	The edges of a very small herbarium sheet may cause damage to plant material on the specimen underneath it in the species cover.	Preventive
	Brittle Sheets	Mounting paper which is acidic can become very brittle and is easily damaged when handled. Label information may be lost as pieces break off.	Preventive
	Torn Sheets and Labels	Torn herbarium sheets or labels can result in damage to the specimen or loss of label information.	Remedial
Risk of Damage or Loss	Loose attachment or plant material	Plant material which is not attached securely to the herbarium sheet (glue dries out or tapes/stitches come undone) is easily lost. This may seriously reduce the taxonomic value of the specimen. Very fragile flowers may be damaged when other herbarium sheets are placed on top.	Remedial
Insect Damage		Signs of insect damage include grazed flowers, insect droppings or larvae skins. Unchecked, herbarium beetles can destroy plant specimens.	Preventive/ Remedial

What to Do	Conservation Treatment
Put the specimen(s) in a flimsy, fill out a repair slip and attach it, and put in the Repairs box.	Remove the cellophane and replace with an archival tissue flap or protective white paper four-flap folder or grey archival four-flap box.
Put the specimen(s) in a flimsy, fill out a repair slip and attach it, and put in the Repairs box.	Remove the polythene and replace with archival tissue flap or protective white paper four-flap folder or grey archival four-flap box.
Put the specimen(s) in a flimsy, fill out a repair slip and attach it, and put in the Repairs box.	Remove sellotape if this is possible without damaging specimen. Crepe rubber can be used to remove sticky tape residue. (Get professional advice before using solvents.) Resecure the specimen with water-activated gummed archival tape.
Remove the paperclip, and if the capsule is very bulky replace it with a brass archival one (most capsules will stay shut without a paperclip).	
Put the specimen(s) in a flimsy, fill out a repair slip and attach it, and put in the Repairs box.	Use 'smoke sponge' or soft cleaning brushes to remove as much dirt as possible without damaging the specimen. Consider professional conservation for badly affected type, historical or legacy specimens.
Put the specimen(s) in a flimsy, fill out a repair slip and attach it, and put in the Repairs box.	Attach the sheet to a standard size (42 x 26.5cm) archival mounting board using small loops of water-activated archival gummed tape in the corners. Or, for very fragile specimens protect with a white archival four-flap folder with backing board.
Put the bulky specimen in a grey archival card four-flap folder. * four-flap folder or box placed at the bottom of the species folder; or if possible place the bulky specimen at the top of the folder.	
Put the specimen(s) in a flimsy, fill out a repair slip and attach it, and put in the Repairs box.	Attach the sheet to a standard size (42 x 26.5cm) archival mounting board using water-activated archival gummed tape on the reverse. Consider professional conservation for badly affected type, historical or legacy specimens.
Put the herbarium sheet in a white archival paper four-flap folder with a backing sheet for support.*	
Put the specimen(s) in a flimsy, fill out a repair slip and attach it, and put in the Repairs box.	Repair with Japanese tissue and suitable adhesive eg methyl cellulose.
Put the specimen(s) in a flimsy, fill out a repair slip and attach it, and put in the Repairs box. If the pieces of plant material are small put them in a capsule and paperclip it to the sheet.	Resecure loose pieces with methyl cellulose, or water activated archival gummed tape if it's clear where the loose piece(s) came from. Otherwise put the pieces in the capsule (attach a new one if necessary). Use a four-flap white archival paper folder with backing board for eg fragmenting seed heads (Compositae). Cover fragile flowers with an archival tissue flap. Consider professional conservation for badly affected type, historical or legacy specimens.
Contact IPM staff to arrange for treatment of affected specimens.	Freeze all affected specimens at -30 for 5 days. Record cabinet location for future monitoring. Use a museum vac to remove droppings and damaged plant material. Restitch or tape badly affected specimens as necessary. Protect very fragile specimens with a white archival four-flap folder with backing board.

