Ann Elizabeth

THE NEW MUSEUM REGISTRATION METHODS

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OVERVIEW

A good condition report is an accurate and informative account of an object's state of preservation at a moment in time. It provides a verbal and/or visual description of the nature, location, and extent of each defect in a clear, consistent manner. A condition report written by a registrar, curator, or collections manager (as discussed in this chapter) is not the same as a condition report written by a conservator; the former aids collections management whereas the latter is a tool for planning and performing object treatment.

A condition report can:

- Establish the exact condition of an object at the time of a loan or upon its return
- Benchmark the type and/or rate of deterioration
- Differentiate identical objects from one another
- Document an object's condition history, providing past evidence for future problems
- Set priorities for conservation care and treatment
- Suggest a default monetary value on an object in lieu of an actual value for insurance purposes
- Make future handlers aware of seen and unseen problems

TOOLS

A variety of tools are helpful in conducting object examinations.

Documentation

- Soft lead pencils (pens can leave a permanent mark)
- Writing paper
- Examination forms
- Computer
- Camera

Measurement

- Cloth tape measure, without metal caps (caution: some tapes can stretch)
- Calipers
- Clear plastic flexible ruler

Handling/Support

- Clean white cotton gloves
- Nitrile gloves
- Acid-free, lignin-free board
- Buffered and unbuffered acid-free, lignin-free tissue paper
- Padded muslin rolls
- Padded blocks
- Flat-bed dolly

Illumination

- Flashlight
- Pen or crevice light
- Portable incandescent lights, such as a mechanic's drop light
- Ultraviolet light

Magnification

- 10x hand lens
- Jeweler's loupe
- 55x microscope
- Head-mounted magnifier

Miscellaneous

- Hand mirror
- Dental mirror
- Magnet (to identify ferrous metals)

Acknowledgments: Special thanks go to the following authors of Basic Condition Reporting: A Handbook (3d ed.)*—Sharon Bennett, Paisley S. Cato, Mary Giles, Patti A. Hager, Helen B. Ingalls, Elise V. LeCompte, Allyn Lord, Douglas MacCash, Martha Tonissen Mayberry, Anne E. Motley, and Stacey Savatsky. Thanks also to Richard D. Buck, Margaret Holben Ellis, and to Rachel Vargas and the Straus Center for Conservation, Harvard University Art Museums, for glossary terms.*

- Natural hair brushes in a variety of shapes and stiffness
- Probes (dentist's tools)
- Tweezers
- Forceps
- Blow-ball

EXAMINATION

Examine objects in a clean, secure, well-lit work area where eating, drinking, and smoking are prohibited. For small and medium-sized objects, pad a sturdy table or desk with polyethylene foam. For large objects, a padded flat-bed dolly may be useful. Cover the examination surface with clean, white, acid-free paper to help detect signs of flaking, infestation, etc.

Use cotton or nitrile gloves to handle objects. Nitrile gloves are especially important when handling ethnographic and natural history specimens, since many of them were treated with fumigants and chemicals in the past. Nitrile gloves are also smoother and less likely to disrupt loosely adhered paints. Follow all appropriate handling guidelines, making sure each part is properly supported; large, awkward, or fragile objects may require several handlers. Be aware of an object's visible faults, such as cracks or tears, and potential weaknesses, such as weak handles or brittle veneer. (See chapter on Handling.)

Make sure lighting is adequate to the task. **General lighting**, which illuminates the object overall, **raking light**, which illuminates at an angle, and **transmitted light**, which illuminates from the reverse, can reveal a variety of surface and subsurface irregularities. Other types of light, which should be used judiciously, include ultraviolet (UV), for detecting adhesive residues, paints, resins, etc., and x-radiography (X-ray), for detecting subsurface cracks, losses, etc. Avoid light damage by reducing long-term exposure, filtering UV from general lighting, minimizing intense exposure, and reducing heat buildup. (See chapter on Preventive Care.)

To understand and identify an object's defects and weaknesses, it is important to determine its composition. Objects can be made of organic materials (e.g., bone, cotton, hair) and/or inorganic materials (e.g., gold, clay, flint). These materials may be in their original form, such as marble, or may have been modified, such as brass (an alloy of copper and zinc). Objects made from a combination of materials may suffer from a variety of problems, such as weak joints, dissimilar rates of expansion and contraction, or chemical incompatibility.

Inherent faults or other types of damage also affect an object's condition. An **inherent fault**, also known as an inherent vice, is a weakness in the construction of an object or an incompatibility of the materials that constitute it, such as a thin handle on a heavy teapot or metallic salts added to 19th-century silks. Pests and mold, which feed on organic materials or deposits, cause **biological damage** as they weaken an object's structure or create problems such as riddled wood or discoloration. **Physical damage**, caused by mechanical stress, includes abrasions, losses, tearing, etc. **Chemical damage** is the result of a reaction between a material and an energy source (heat, light) or a chemical (water). It is evidenced by corrosion, tarnish, fading, etc.

Always distinguish between historic and "modern" damage or repair. Other condition-related factors to keep in mind:

- One type of damage may encourage another (e.g., embrittlement can lead to tearing).
- Some objects have important evidence of a past function (e.g., stains on a ritual blade, dried residue in a medicine bottle).
- Burial may affect an object's condition (e.g., salts efflorescing on pottery).

Whenever possible, examine objects by category (e.g., hats, bird mounts, paintings) and/or by types of materials (e.g., stone, paper, wool); grouping will promote consistency, thoughtful observations, and accuracy. Determine an appropriate examination pattern and follow it each time (e.g., top to bottom, proper left to proper right, front to back, exterior to interior).

DOCUMENTATION

An object's condition can be documented by text (physical description), sketch (rough representation), and/or video, photographic, or computer image (exact representation). A combination of these methods provides a complete account of an object's condition at a moment in time. Textual documentation can take the form of a narrative or a checklist.

A condition report should include:

- Identifying numbers (accession, loan, field, catalog)
- Object composition
- Types of damage
- Extent of damage
- Location of damage
- Previous repairs (historic and modern)
- Dates of and/or reason for damage (if known)
- Examiner's name
- Date of examination

A photograph should include:

- Identifying numbers
- Scale
- Date of photograph

Whether an object's condition is recorded on paper, computer database, or film, make sure that documentary materials are archivally sound and that the completed documentation is stored in a physically secure and environmentally stable area. Black-and-white film is more stable than color, although modern color film is more stable than its predecessors. Process film according to American National Standards Guidelines. Always duplicate and archive data in a separate, secure location.

When writing a condition report, consider the nature, location, and extent of damage. To ensure accuracy and minimize handling, completely discuss one type of damage on one portion of the object before moving on. Keep all reference materials (e.g., glossaries, locational nomenclature) on file for future reference; use terms consistently.

TL	TC	TR
CL	C	CR
BL	BC	BR

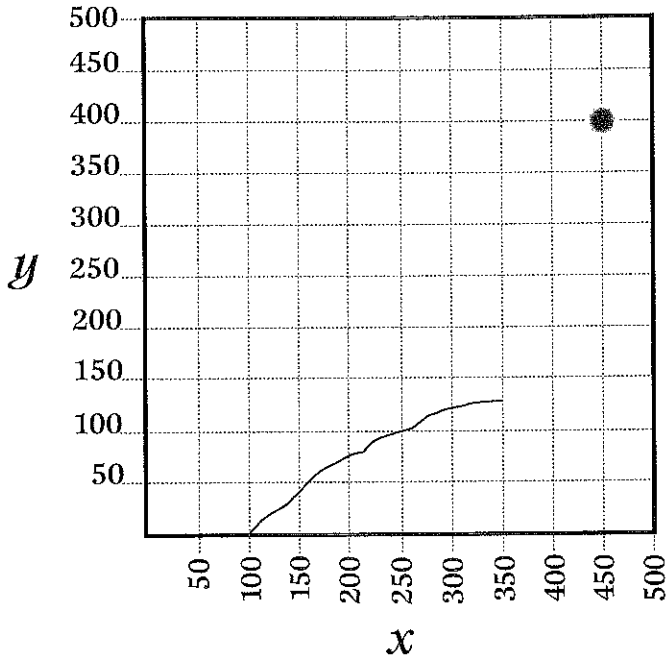
A zone system provides a generalized method for locating damage on two-dimensional objects.

Type of Damage

What is the nature of the damage? If the examiner is trained in conservation, it may be possible to determine whether it is biological, physical, or chemical in nature or the result of an inherent fault; if cause is not apparent, leave etiological statements to the conservator. Describe damage in terms of texture, color, shape, odor, and/or other physical properties, as appropriate. A glossary, whether established or constructed, can be used to assign a descriptive term to a specific condition. Speculative assessments should be indicated with a question mark.

Location

Where is the damage located? Whenever possible, use a recognized nomenclature to indicate the exact position of damage (e.g., proper left, viewer's right) or describe the damaged part of the object (e.g., hammer: face, neck, handle, grip, cheek). Sources include museum nomenclatures, collectors organizations and publications, product manufacturers, and reference texts. (See chapter on Data Management.) The object itself may suggest locational names (e.g., the "shirt" or "face" areas on a figure in a painting, or "to the right of the handle at the base").



stain: center at (450,400mm)
tear: from (100,0mm) to (350,125mm)

The matrix system is a more precise system for plotting damage on two-dimensional objects.

A **zone** system provides a generalized method for locating damage on two-dimensional objects. Each zone or square is labeled, such as TR (top right) or C (center), and the damage is placed within a zone. The **matrix** system, also for two-dimensional objects, is more precise, as the damage is plotted in millimeters on the *x* and *y* coordinates. The *x* coordinate represents the bottom edge of the object; the *y* coordinate represents the left edge. A stain near the top right corner of a document might be plotted as 450mm along the *x* (bottom) axis and 400 mm along the *y* (left) axis; this is represented as (450,400mm). Sketches, photos, or Mylar® overlays on photos offer locational guidance for three-dimensional objects.

Indicate whether measurements are taken metrically or in inches. Whenever possible, lay the measuring device alongside the object to avoid touching it. Other ways to describe location include:

- Direction (horizontal, vertical, diagonal)
- Object side (obverse/reverse, interior/exterior, proper left/proper right, verso/recto)
- Range (scattered, overall)

Extent

What is the extent of the damage? Proceed from the general to the specific (e.g., object yellowed overall, especially in BR corner). Some damage can be readily measured, such as a tear or a loss. Damage that cannot be conventionally measured, such as foxing or yellowing, can be described in the following standardized degrees of severity: "negligible," "slight," "moderate," "marked," and "extreme." Recognized condition standards have been established for a variety of objects (e.g., coins, stamps).

CONDITION REPORTING GLOSSARY

The following are some of the many terms used to describe conditions.

GENERAL TERMS

Abrasion: A wearing away of the surface caused by scraping, rubbing, grinding, or friction; often superficial.

Accretion: Any external material deposited on a surface, most often from burial conditions on objects or accidental deposits on paintings (splashes, drips, flyspecks, etc.) (cf. **inclusion**).

Adhesive residue: May be from glue, paste, pressure-sensitive tapes.

Bleeding: The suffusion of a color into adjacent materials, often caused by water or other solvents.

Bubbly areas: A type of deterioration found in cellulose nitrate and acetate.

Chip: A defect in the surface caused by material that has been broken away.

Corrosion: The chemical alteration of a metal surface caused by agents in the environment or by reagents applied purposely. Corrosion may affect an object's color and texture without altering the form (bronze disease) or it may add to the form, producing hard nodules or crusts (rust). Bimetallic (or galvanic) corrosion results from incompatible metal contact.

Crack: A surface fracture or fissure across or through a material, either straight-line or branching in form; no loss is implied. A crack may be described as **blind** when it stops part way; as **hairline** when it is a tiny fissure; and as **open** when it is a large fissure.

Crease: A line of crushed or broken fibers, generally made by folding. A **dog-ear** is a diagonal crease across the corner of a paper, parchment, etc.

Crocking: Rubbing off of color, resulting in the loss of dyestuff but not loss of fiber.

Delamination: A separation of layers; splitting.

Dent: A defect in the surface caused by a blow; a simple concavity.

Discoloration: A partial or overall change in color caused by aging, light, and/or chemical agents. **Yellowing** and **darkening** can occur, along with **bleaching**, the lightening of color, and **fading**, a loss of color and/or a change in hue.

Disjoin: A partial or complete separation of a join between two members of an object, as distinguished from a crack, tear, check, or split.

Distortion: A warping or misshaping of the original shape; **shrinkage** may occur.

Dry rot: Decay of seasoned timber caused by fungi that consume the cellulose of wood, leaving a soft skeleton that is readily reduced to powder.

Efflorescence: Powdery or crystalline crusts on the surface of stone, plaster, ceramics, etc., formed when transmigrating water reacts with an object's chemical makeup or extraneous deposits from burial.

Embrittlement: A loss of flexibility causing the material (e.g., paper, parchment, leather) to break or disintegrate when bent or curled.

Gouge: A defect in the surface where material has been scooped out.

Fraying: Raveled or worn spot indicated by the separation of threads, especially on the edge of a fabric.

Inclusion: Particle accidentally bonded to the surface of an object during manufacture (e.g., ceramic, plastic, cast metal, paper).

Iridescence: Color effect in glass due to the partial decomposition of the surface and the formation of innumerable thin scales, resulting in an uneven, flaky surface.

Loss: Missing area or hole.

Mildew: See **mold**

Missing element: Loss of an integral component of, or an addition to, the material or appendage (e.g., handle, tassel).

Mold: Biological in nature, mold or mildew can be in the form of **foxing**; of colored, furry, or web-like surface excrescences; and/or of musty odor.

Odor: Smell of sulfur, camphor, vinegar, etc.; produced by the degradation of cellulose nitrate or acetate products. Strong odor indicates severe degradation.

Oozing: See **sweating**

Patina: A colored surface layer, either applied or naturally occurring.

Pest damage: Surface loss, tunneling, holes, fly specks, etc., obviously caused by insects or other pests.

Pitting: Small, irregular, shallow pinhole-size losses scattered over the surface of metal caused by acid conditions or resulting from the casting process.

Powdering: Stone surface that is crumbling or pulverized.

Red rot: Powdery red substance found upon vegetable-tanned objects resulting from a chemical reaction with pollutants in the air.

Scratch: Linear surface loss due to abrasion with a sharp point.

Sheen: A polish produced by handling, often occurring on frequently touched locations.

Silvering: Shiny or mirror-like discoloration in the shadow areas of a photographic image caused by the aging of excessive residual silver compounds.

Spalling: Shallow losses or flaking from the surface of stone or ceramic.

Soil: A general term denoting any material that dirties, sullies, or smirches an object. **Dust** is loose soil generally distributed on surfaces; **grime** is soil tenaciously held on surfaces; a **smear** and a **fingerprint** are types of local grime. A **spatter** or **run** is the result of dried droplets or splashes of foreign material.

Stain: A color change as a result of soiling, adhesives, pest residue, food, oils, etc. A **diffuse** stain is without a distinct boundary; a **discrete** stain has a distinct boundary; a **liquid** stain has a discrete boundary or **tide-line** that is darker than the general area of the stain; a **centered** stain has a darker or more intensely colored center within its general area. In **metallic staining**, adjacent materials are discolored as a result of metal corrosion.

Sugaring: Erosion of the surface of marble creating a very granulated or "sugary" surface appearance.

Sweating: A clear or yellow oily liquid found on the surface of a deteriorated cellulose nitrate or acetate object.

Tarnish: A dullness or blackening of a bright metal surface.

Tear: A break in fabric, paper, or other sheet material as a result of tension or torsion.

Wear: Surface erosion, usually at edges, due to repeated handling.

Weeping: On glass, a reaction between water and formic acid.

PAINTING TERMS

Painting Layers

Ground: Layer(s) of material applied to prepare a surface for painting; usually a pigment in a binding medium.

Paint layer: Layer(s) of colored pigment and binder used to make the design.

Varnish: A clear resinous film applied over the paint layer for protection and to saturate the colors.

Painting Supports: Panel, Fabric, Board

Cradle: On a panel, a system of wood or metal ribs fastened parallel to the grain, with perpendicular sliding members; used in an attempt to prevent warping.

Lining: The addition of a new layer of material to the reverse of the original, using one of a number of adhesives such as wax-resin, glue, paste, or synthetic resins.

Strainer: A fixed-joint, non-expandable, wooden frame auxiliary support for fabric.

Stretcher: An auxiliary wooden-frame support for fabric that has one of several types of expandable joints to permit dimensional enlargement.

Stretcher keys: Wooden wedges used in the slots of the joints of some stretchers to expand them mechanically.

Tacking edge: The edge of a fabric painting support that is turned over and attached to the stretcher or strainer, usually with tacks or staples.

Problems with Paintings

Blanching: Irregular, obtrusive, pale or milky areas in paint or varnish; not a superficial defect like **bloom** but a scattering of light from microporosities or granulation in aged films.

Blister: A separation between layers appearing as an enclosed, bubbled area.

Bloom: A whitish, cloudy appearance in the varnish layer caused by exposure to moisture or resulting from wax-based media. Sometimes called **efflorescence**.

Buckling: Waves or large bulges in a canvas from non-uniform tension around the stretcher or strainer.

Chalking: Loss of a paint or emulsion layer by powdering off.

Check: Splitting of wood along the grain, from the edge of a board or panel for a part of its length. Checking is usually in response to repeated dimensional change brought on by fluctuations of temperature and humidity (cf. **split**).

Cleavage: A separation between the paint layers and the support producing **tenting** (gable-like ridges) or **cupping** (concave flakes); caused by the contraction of the support, forcing the paint layer up off the surface.

Crackle: A network of fine cracks found in a variety of objects including paintings, lacquers, inlays, and ceramics. The **crevice** has a narrow aperture and often penetrates more than one layer; the **rift** has a relatively wide aperture and penetrates only a single layer. A **traction crackle** has an "alligatored" pattern of complex branching, with wide, disfiguring apertures. **Mechanical cracks** resulting from a blow can cause a radiating crackle pattern (bulls-eye or spider web) or the bending or creasing of a canvas (e.g., along the inner edges of stretcher bars).

Crazing: A fine system of crackling in a varnish layer, usually found in aged films in their final stages of drying and embrittlement.

Cupping: See **cleavage**

Dishing: A defect in the stretcher caused by the torque of a drawn fabric. If the stretcher members are twisted out of a common plane, a shallow dihedral angle is formed at the corners. **Dishing** is a common cause of corner wrinkles in stretched canvases (cf. **draw**).

Draw: A local distortion at the corner of a painting, marked by diagonal **cockling** from the corner toward the center of the mount (cf. **dishing**).

Fill: The material used to replace areas of loss; fill is then inpainted.

Flaking: Lifting and sometimes loss of flat areas of the surface layer.

Impasto: Thickly applied paint, often with pronounced brushwork; generally a trouble spot because of cleavage or flattening during lining.

Inpainting: New areas of paint to restore design or color continuity; restricted to areas of loss.

Overpainting: Areas of repainting over existing original surface.

Split: A rupture running along the grain of a piece of wood from end to end, usually caused by exterior mechanical stress (cf. **check**).

Stretcher crease: A crease or line of **cracks** in the ground and paint layers of a painting on fabric, following the inside edges of stretcher members or the edges of cross-members; caused by the flexing of the fabric against the edges of these members.

Tenting: See **cleavage**

Warp: In a panel, the planar deformation of the support caused by changes in relative humidity.

Wrinkling: Small ridges and furrows of crawling paint or varnish caused by improper methods or materials

PAPER TERMS

Buckling: A soft, concave/convex random distortion.

Cockling: A soft, concave/convex distortion characterized by parallel, repeated ripples, usually either horizontal or vertical.

Crease: A line of crushed or broken paper fibers, the residue of a fold.

Dimpling: A local distortion, usually in the corner, marked by a distinctly concave area; usually caused by local adhesion of the support to the secondary support.

Draw: A local distortion at the corner, marked by diagonal cockling from the corner toward the center of the mount.

Drumming: A type of matting where the support is adhered on all edges to the window mat, causing problems if the relative humidity becomes too low.

Fold: A turning over of the support so that the front or back surface is in contact with itself; the line of flexing may or may not be creased.

Foxing: Small yellow, brown, or reddish-brown spots on paper; caused by mold or oxidation of iron particles in the paper.

Wrinkling: An angular, crushed distortion.

PHOTOGRAPHY TERMS

Ferrotyping: Glossy patches found on the surface of photos; resulting from lengthy contact with a smooth-surfaced storage enclosure, such as polyester or glass.

Frilling: Separation and lifting of the photographic emulsion from the edges of the support.

THE SAMPLER MUSEUM

CONDITION REPORT FOR COLLECTION PAINTINGS/DRAWINGS/PRINTS

Acc.#_____

Examiner _____ Date _____

Title _____

Artist _____

Medium _____ Date _____

Stretcher/panel Size H_____W_____in.

Sheet Size H_____W_____in.

Image Size H_____W_____in.

Frame/mat Size H_____W_____in.

Sig./Date(where) _____

Marks/Labels(where) _____

Conservation Priority 1 2 3 4 5

Curatorial Priority 1 2 3 4 5

Priority Key

Conservation Priority
1 = Object in jeopardy
2 = Not exhibitable as is
3 = Needs minor repair or cleaning
4 = Needs further evaluation
5 = Needs no work

Curatorial Priority
1 = Needed immediately for exhibit or loan
2 = Needed in future for exhibit or loan
3 = May have some need at some time
4 = Minimal use
5 = Potential deaccesion

Description	***Defects***	***Remarks***
Frame Framed ___ Backed ___ Glass ___ Plexi ___ Unframed ___	Broken ___ Disjoins ___ Glazing touches artwork ___ Paint loss ___ Hanging devices insecure ___ Accretions ___ Abrasions ___ Other ___	
Auxiliary Support Stretcher ___ Keys Intact ___ Strainer ___ Secured/nails ___ Secured/plates ___ Cradle ___ Matted ___	Keys missing ___ Checks ___ Infestation ___ Adhered to backing ___ Acidic materials ___	
Support Fabric ___ Lined ___ Wax Lined ___ Wood ___ Masonite ___ Paper ___ Illust. board ___ Other ___	Brittle ___ Tear ___ Hole ___ Dent ___ Bulge ___ Sagging ___ Draws ___ Infestation ___ Fungi ___	

Sample condition report, side 1.

Description	*Defects*	*Remarks*
Framed ____ Oil ____ Watercolor ____ Tempera ____ Pastel ____ Gouache ____ Charcoal ____ Pencil ____ Ink ____ Mixed media ____ Other ____	Crackle ____ Cleavage ____ Cracking ____ Buckling ____ Flaking ____ Powdering ____ Loss ____ Blistering ____ Accretions ____ Abrasions ____ Soiled ____	
Varnish Varnished ____ Unvarnished ____	Crackle ____ Bloom ____ Scratched ____ Cracking ____ Crazing ____ Grime ____ Accretions ____	

Action Taken upon Receipt:

Is further work needed? ____yes ____no
Describe: ____new mat ____new frame ____repair frame ____other (itemize)

Is professional attention indicated? ____yes ____no

Conservation Record

Date	Conservator	Treatment Given

Marks and Inscriptions:

Face

Reverse

Sample condition report, side 2.