



Conserve O Gram

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Dusting Guidelines For Stone Objects And Interior Architectural Features

Dust is everywhere. If ignored, it will aesthetically disfigure and may even physically damage objects. However, if you establish and adhere to a routine maintenance plan, dusting can become a simple and effective task. With regular dusting, dirt build-up can be avoided, costly cleaning programs can be spaced further apart, and the components of dust that cause allergic reactions or attract insects can be greatly reduced. Furthermore, a dusting regimen is a way to ensure regular examination of objects for changes in their condition.

This *Conserve O Gram* is specifically written for the care of large stone objects and interior architectural features, including statuary and pedestals, sculptures, plaques, furniture, fireplace mantles, door and window architraves, balustrades, and kitchen and bathroom fixtures. (It can also be used for similar objects in plaster, terra cotta, and concrete.) Stone floors are not addressed here.

There are many kinds of stone, and normally it is not necessary to identify the type of stone that you are dusting. Be aware that soft stones (such as marble, limestone, alabaster, and soapstone) can be easily scratched by improper dusting procedures. Highly porous stones (such as sandstone, limestone, and tuff) will entrap dust that will be difficult to remove.

What is Dust?

Dust is not a single material. It is composed of fine particles of loose surface soil (sand and organic debris), sawdust, pollen, combustion by-products, textile fibers, hairs, flakes of dead skin, dust mites, insect bodies, and food particles. It varies seasonally and even daily from place-to-place. Dust with a volcanic or fly

ash component or that which is blown off of a dirt road, desert, or beach is quite abrasive and can scratch objects if pressure is applied during its removal. If the dust in your building has an abrasive component, you should consult with a conservator to create a proper and safe dusting protocol. (For information on volcanic dust, see *Conserve O Gram* 3/5.) Soot (from fires and puff-backs) is exceptionally tenacious and if dusting alone is not effective in its elimination, you will need a conservator's assistance in creating an effective removal plan.

Why Dust?

Dusting stone objects serves several functions:

- It eliminates a substance that is visually unattractive and obscures an object's color, surface features, and form.
- Dusting removes a material that can cause allergic reactions, attract and hold moisture, and attract small insects that feed on its organic components.
- It allows staff the opportunity to become familiar with an object's appearance, so that any change in condition can be easily detected and immediately addressed.

Preventive Maintenance

The accumulation of dust on an object cannot be avoided; however, it may be possible to lessen the actual amount of dust in a room and in so doing, lessen the rate of accumulation on an object. Precious or valuable stone objects should be kept away from open windows, doors, or air registers. Weather-stripping around windows and entrance mats on either side of a door will help prevent outside dirt and dust from coming inside. Regular floor vacuuming and

cleaning will reduce the amount of dust in a building, and the installation and maintenance of heating, ventilating, and air-conditioning (HVAC) filters will reduce the amount of airborne dust.

If the building is open only on a seasonal basis, statuary and carved architectural features should be covered, if possible, during the months of closing. Covers should be clean and of a non-abrasive material; old clean cotton sheets work well.

Evaluate the Object

Conduct a thorough examination and evaluation of the object prior to dusting. Carefully examine any applied surface decoration, as well as surface concretions on archeological artifacts. If surfaces are in good condition, then you can proceed with dusting. If there are signs of flaking, powdering, or otherwise loose material or attachments, or you are unsure of its condition, then the object should be examined by a conservator before dusting.

If it seems that dusting does not restore clean surfaces, it may be time for aqueous or solvent cleaning by a conservator. A conservator should also be called if there is any change in condition, including flaking, powdering, cracking, vandalism, or any form of severe environmental change.

Dusting Protocol

Always dust from the top to the bottom of an object to prevent dust from falling on clean surfaces. Take utmost care in dusting to ensure that an object will not be broken or otherwise damaged. Remove rings, watches, and bracelets that may inadvertently cause surface scratches. If you have to touch the object, wear clean white cotton gloves to keep surfaces free of skin acids and oils. Good lighting is essential to see conditions and work progress.

Vacuum Cleaner Dusting

Use a vacuum cleaner so that dust can be collected and taken away from the building for disposal. A good vacuum cleaner collects dust efficiently and effectively and is equipped with a filtration system that prevents collected dust from blowing back out into the air. A vacuum cleaner with a high efficiency particulate air (HEPA) filter will reduce exhaust material to an even greater extent. The vacuum cleaner should be outfitted with a clean brush attachment and a plastic nozzle. (For information on choosing a vacuum cleaner, see *Conserve O Gram 1/6* and *Tools of the Trade*).

Depending upon the size of the object, many different brushes can be used in conjunction with a vacuum cleaner for dusting. All brushes should be clean, and either natural or synthetic bristles may be used. The softness or stiffness of a brush needed will depend upon the delicacy of the carving, the type of stone, and the nature and extent of the dust. In order to avoid scratching a surface with the ferrule



Figure 1. Assortment of brushes, from l. to r.: new paint brush, large new stencil brush, large stencil brush after heavy use, stencil brush after heavy use, stencil brush after light use.

Photo by the author

(the metal piece that holds the hairs to the handle), cover the base (where the metal meets the hairs) with fabric tape. Stone will destroy brush bristles quite quickly and therefore only inexpensive brushes should be used for dusting.

On architectural features or large flat surfaces,

the upholstery brush attachment on the vacuum cleaner is the most effective way to remove dust. Systematically move over the feature or object to ensure that dust is removed from all areas. Make sure you are using a new clean brush dedicated to this specific purpose and kept separate from the other vacuuming supplies. Do not use this brush for stone floors, as it will pick up gritty particles that can scratch other stone surfaces later.

For sculptures and intricately carved stone surfaces, the vacuum cleaner nozzle can be used to suck up dust that has been loosened with a hand-held brush. Hold the vacuum cleaner nozzle about one inch from the surface and use the brush to sweep the dust into the suction of the nozzle. Again, systematically move over the object according to a pre-determined plan to ensure complete removal of dust.



Figure 2. Vacuum cleaner dusting with a stencil brush.

Photo by the author

Dust can be quite old and securely packed in deep recesses or corners and impossible to remove with just the suction of a vacuum cleaner and a brush. Bamboo skewers are quite useful for disturbing and prodding dust loose in these areas. Bamboo skewers will not scratch stone surfaces but may scratch gilt or painted finishes. Removing dust from recesses and corners will greatly enhance the appearance of an object.

Brushes, including vacuum cleaner brushes, should be cleaned on a periodic basis using a mild detergent and water followed by a thorough rinse. Make sure brushes are completely dry before reusing.

Dust Cloth Dusting

Dust cloths are useful, especially on large, flat, stable surfaces; vacuum cleaners, brushes, and bamboo skewers will still be necessary for corners. Use dust cloths of plain soft cotton fabric, as it is more absorbent than synthetic fabric. Use a clean cloth to lightly pass over an object's surface, turning and folding the cloth to ensure that clean material is used for each pass. Dirty cloths will not be as efficient as clean cloths and old dust may contain gritty materials that can scratch stone. Keep dust cloths well laundered, making sure that all detergent is thoroughly rinsed out.

There are numerous commercial dust cloths that have been treated with compounds that attract dust. Although conservators have recommended some of these cloths for use with other types of materials (see *Conserve O Grams* 7/5 and 8/1), it is much more cost effective to use plain cotton cloths. Do not use commercial aerosol sprays promoted to increase dusting efficiency. These sprays often contain oils that can darken or stain stone and will leave surfaces with an electrostatic charge that will, in fact, attract dust. Lamb's wool dusters should also be avoided for these same reasons.

In especially dry environments, you may find that dust simply moves around and will not adhere to the dust cloth. In this case, and if you can be absolutely certain that the stone object has not been treated with water-soluble materials (inpaint or glazes), you can use a spray bottle filled with clean water to slightly moisten the cloth. Again, a vacuum cleaner, brush, and bamboo skewers will be necessary for the corners.

Feather Duster Dusting

Feather dusters can get rid of dust quickly and are commonly recommended for cleaning

programs. However, their use is discouraged because they send dust back into the air and do not actually remove it from the building.

Personal Protective Equipment

If a vacuum cleaner with a HEPA filter is used appropriately, a respirator may not be necessary for dusting. However, if using a dust cloth or a brush in conjunction with a vacuum cleaner, or if hazardous particulates are present, a respirator is likely to be necessary. If using a respirator, follow all OSHA guidelines. (See *Conserve O Gram* 2/13.)

Maintenance Plan

Keeping stone objects and interior architectural features dust-free will only be possible if a regular maintenance plan is established and diligently carried out. There is no rule regarding the frequency of dusting. The rate of dust accumulation depends upon many factors and each museum, building, or collection will have its own dusting schedule.

Staff should be trained in dusting procedures and in recognizing changes in stone condition. Dusting large stone objects can be a strenuous activity; plan on frequent breaks or many short dusting periods. Keep dusting supplies well stocked and clean. With a good dusting regimen, large-scale and often complicated cleaning programs can be kept to a minimum over the years.

Bibliography

Fisher, Charles E., et al., eds. *Caring for Your Historic House*. New York: Harry N. Abrams, Inc., 1998.

Mendelson, Cheryl. *Home Comforts; The Art and Science of Keeping House*. New York: Scribner, 1999.

Sandwith, Hermonine, and Sheila Stainton. *The National Trust Manual of Housekeeping*. Harmondsworth, Middlesex, England: Penguin Books Ltd., and the National Trust, 1984.

Schultz, Arthur W., et al., eds. *Caring for Your Collections*. New York: Harry N. Abrams, Inc., 1992.

Supplies

A wide variety of brushes are available from art supply, hardware, and paint stores. Bamboo skewers, used for grilling, are available in grocery stores.

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