

Caring for Ivory Objects

by Diane Day, CPF

Characteristics

Ivory is extremely sensitive to environmental conditions. It is technically elephant tusk, but generally taken to include whale, hippo, boar and other animal teeth and tusks. Ivory is composed of layers of organic and inorganic materials laminated together. It can crack, shrink or warp with exposure to changes in humidity or contact with water. Low humidity will cause it to dry out resulting in shrinkage and cracking. High humidity will make it expand and warp.

Ivory can be easily chipped or stained due to its brittle, porous structure. As it ages the organic materials deteriorate and they become more brittle. Brittleness in combination with cracking can make old ivory quite fragile. It can develop radial cracks and also separate into layers parallel to the original surface of the tusk.

Exposure to light will bleach out its coloring over time. However, it can yellow or darken if it is kept in an area without light. High heat can result in color changes, and discolorations can also be caused by the aging of surface coatings or oils. Mold can develop on ivory objects if they are kept in very damp environ-

ments resulting in bad stains. Staining can also result from contact with other materials such as rubber bands and metals.

Small ivory sculptures are not as likely to have as many problems as larger objects. Generally they are made out of the sides of tusks. This area is not part of the main grain pattern and thus not subject to as many stresses. Small objects usually shrink in only one direction and do not have the same tendency to crack as pieces made from the whole tusk or pieces that include the center of the tusk.

Is it really ivory? In the late nineteenth and early twentieth centuries a plastic known as cellulose nitrate was used to imitate ivory. Items commonly made from this material under the trademark of Celluloid, were dresser sets, hair combs, jewelry, desk accessories and sewing kits. Good imitations may be hard to distinguish from the real thing.

Care

Wear clean gloves when handling ivory to avoid leaving fingerprints and stains. Ivory can be surface cleaned by using a clean, soft brush. If the surface is cracking, flaking or

otherwise unstable, a conservator should be consulted. Do not immerse ivory in any liquid or get it wet. Do not apply coatings of any kind. The removal of stains is another job best left to an objects conservator.

It is critical that the temperature and humidity be kept stable if cracking, and other problems are to be prevented. Even exposure to the heat of picture lights or lamps can raise the local temperature and cause the humidity around the object to rapidly fall resulting in physical changes in the ivory. The recommended conditions for display are between 45 to 55 percent humidity and 65°F to 70°F.

When storing or framing ivories it is best not to put them in contact with colored materials because the color could possibly bleed onto the ivory. Do not try to flatten ivory panels that have warped or pressure them into mounting when framing. Ivory is a sensitive material and should always be handled and framed with great care. ■

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