

THE BONE ROOM

Prepping Individual Skulls and Bones using Maceration

Before you begin: These instructions are provided as a service to customers who would like to prepare their own bone specimens. Before doing so, please be aware that many localities have laws protecting native species. These laws may apply to found remains as well as to the live animal. Please check your local laws before proceeding.

What is maceration? Using bacterial action in water to clean bone is called maceration. This is the simplest method for cleaning bone and works best for large, sturdy bones (I.e, mammal skulls and long bones). It is not recommended for very delicate bones such as those found in birds or reptiles, or for skeletons that you would like to keep fully articulated. ALL of the bones will separate, as maceration removes the connective tissue that keeps the skeleton together.

Step 1: Remove any remaining tissue or hide to the best of your ability. This will make the maceration go faster.

Step 2: Fully immerse the bone in a container of water.

Step 3: Leave the container in a warm location where you won't mind the smell (we assure you, it will get quite smelly).

Step 4: Periodically pour the greasy, smelly water out. Generally the toilet is the best way to dispose of the 'used' water, but make sure to filter the water so you don't throw out any tiny bones. Another disposal choice: gardens love the nutrients in the dirty water, though neighbors might not.

Top off with fresh water.

Step 5: When the water remains clear, the bacteria have finished breaking down any remaining tissue.

Step 6: If you wish to whiten or sterilize the bones, transfer them into a container of hydrogen peroxide (drugstore strength is fine). Remove them when they have reached the shade of white that you desire. *See additional notes below for more information*

Step 7: If you are prepping a skull, some teeth may have fallen out during the maceration process. Once the skull is clean and completely dry, you can glue these back into place using a simple white glue (also called PVA glues) such as Elmer's glue or Weldbond (our preferred glue brand).

You're Done!

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Some Additional Notes:

- NEVER USE BLEACH to whiten bones. Chlorine-based bleaches will degrade bone. The chlorine remains behind and continues to eat away at the bone, eventually reducing it to a white powder. Hydrogen peroxide is safer alternative.
- Ammonia is another option for when the bone is remaining a stubborn yellow color (caused by grease build-up within the bone). The ammonia **mixed with water** will help to break up these fat cells and pull them out of the bone. Always mix with water, and always use proper eye and hand protection when handling chemicals!
- Dawn dishwashing liquid or detergent is also a great alternative for cleaning small batches of bones, a chicken wing for instance could be washed and soaked in dawn detergent, and the detergent would help remove the grease. It's also kid-friendly, for anyone looking to teach their youngsters how to clean bones.
- Hydrogen peroxide will also whiten and sterilize the bone. It can be bought at any drugstore. **Always mix with water!**
- Be patient. These things take time, and are very much up to your own discretion as to how you want it to look.
- Lee Post's Bone Builders Notebook is an extensive resource for all things skinning, defleshing, cleaning, and articulating. We highly recommend any of his books, as they cover everything from cleaning a chicken skeleton to a whale skeleton, in depth.

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Laws and Treaties

If something is unclear to you, the best place to start is by doing some research!

- **Migratory Bird Treaty Act:**
<http://www.fws.gov/migratorybirds/regulationspolicies/mbta/mbtintro.html>
- **CITES Home Page:**
www.cites.org
- **CITES Checklist:**
<http://checklist.cites.org/#/en>
- **Marine Mammal Protection Act**
<http://www.nmfs.noaa.gov/pr/laws/mmpa/>
- **Endangered Species Protection Act**
<http://www.fws.gov/endangered/laws-policies/>
- **California Department of Fish and Wildlife**
<https://www.wildlife.ca.gov/>
 - **California Dept. of Fish and Wildlife Q & A**
<http://californiaoutdoorsqas.com/>

