

# LOST WAX BRONZE CASTING

**The lost wax technique of hollow bronze casting was developed before the time of Christ and remains basically the same, although improved by modern materials.**

**Admiring a beautiful bronze sculpture brings not just a wonder of the finished form, but also an appreciation for the skilled and lengthy process that brought the original model to life.**

**Here, sculptor Terry Mathews, briefly takes us through the lost wax process of casting which is the method used for the vast majority of the sculptures at Nature in Art .....**

removed and the artist carefully checks and retouches the wax model.

7. Iron nails are pushed through the wax into the core, with the nail heads left well out and a few wax rods are added to act as canals for the molten bronze to run into the details at all extremities.
8. The whole thing is now enclosed in a heavy mould of plaster or other mould material and baked to melt out all the wax.

13. It is now ready for the colouring which is done with a variety of acids and salts in solution applied by brush - sometimes to the cold metal or sometimes to a pre-heated surface. This is called the patina.

14. One or two coats of beeswax are added and the sculpture is then mounted on its base, usually either wood or marble. After an hour or two the piece can be polished with a soft cloth.



1. First the sculptor completes his model in clay, plaster or plasticine on a strong armature or skeleton of metal.
2. Next a two piece rubber mould is made of the model and the model carefully stored for later reference.
3. Now a light coat of coloured wax is painted into the two halves of the rubber mould, which are then put together.
4. Backing wax is poured into the mould to set on the inside of the mould to a thickness of 2 or 3mm. The thickness of this wax is important, as it will later be the thickness of the bronze - too much thickness will give a heavy bronze and if too little the shell of the bronze could collapse.
5. The hollow in the mould is now filled with a core of plaster, which will later be removed.
6. The outer rubber mould is

9. Molten bronze is poured into the canals where it fills all areas previously occupied by wax. The nails hold the core in place.
10. After cooling, the mould is broken to reveal the bronze sculpture, complete with nails and runners which are cut away, the nail holes enlarged and the core picked or blown out or sometimes removed chemically.
11. The sculpture is now beginning to take shape. The holes are welded up with matching bronze and the detail put back where it has been damaged.
12. After a thorough cleaning the base of the bronze is levelled and two or more holes are drilled and tapped to take screws for the base.

The Bull elephant sculpture, above, by Terry Mathews is in the permanent collection of Nature in Art. The life-size leopard in a tree bronze that until recently stood in the roundabout outside the museum, and the running rhino in the side garden are also examples of his work.

Terry is one of a number of artists whose bronze sculptures are currently held at Nature in Art. Others include: Henry Moore, Lyn Chadwick, Jan Sweeney, Geoffrey Dashwood, Ann Campbell, Rob Glen and Jean Spouse. Geoffrey Dashwood is well known for the interesting patinas he applies to his bronzes. The blue/green of the cormorant in the collection and the mottled finish of the monumental owl recently installed at the museum entrance are typical of the amazing patina effects that can be achieved.