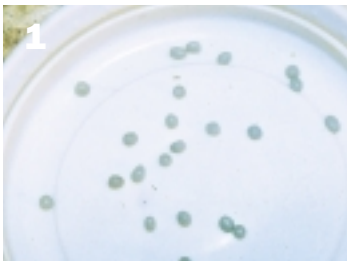
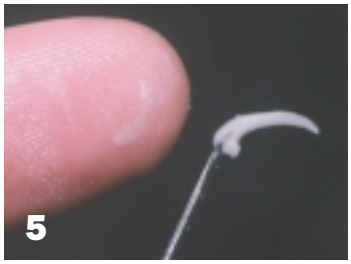
WELCOME BACK to the final article on competition open-mouth whitetail instruction. In the last three articles, we cast and placed the upper and lower palates. We are now ready to perform finishing work on the palates, mold position the tongue, and paint the mouth interior. We are on the final stretch so let's get to it!



1. All the hair-like papillae along the inside interior of the mouth must be rebuilt. To start the process of rebuilding the papillae, we roll tiny balls of Apoxie Sculpt. There are many papillae that need to be rebuilt, so roll a bunch of the Apoxie balls.

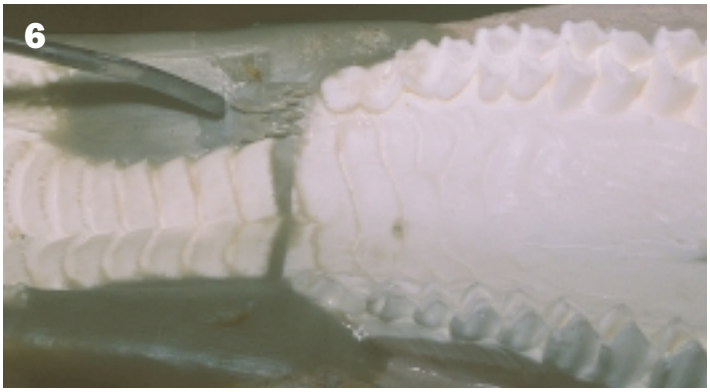
2. Here you can see just how small these balls are. The Apoxie balls must be very small due to the fact that the papillae are very thin and narrow. Actually, this one Apoxie ball will make two papillae.

3. The hair-like papillae are thin with a finely tapered edge. Moisten your hands with water and roll the Apoxie ball against the palm of your hand. The result is an Apoxie coil that is thinly tapered on both ends. By cutting this coil in half we create two identical hair-like papillae.

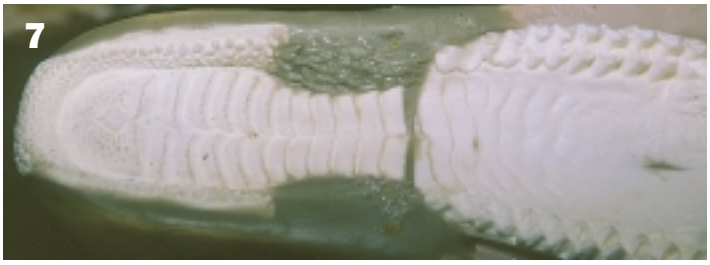


4. Here I have cut the coil in half and created two identical papillae ready for placement.

5. Each papillae is *very* delicate and should not be touched with your hands. Instead, use a pin to pick up, hold, and place each papillae.



6. When placing the papillae, start at the back edge of the papillae area. Once the first row of papillae is secured, secure the next papillae overlapping the first. Sculpture the papillae to flow together and be sure that the thin "hair-like" edge flows towards the back-interior of the mouth.



7. Here you can see one side completely layered with papillae and the second side being started. Complete the second side in the same manner as the first and let the Apoxie cure. The interior mouth sculpting is now completed and we can begin molding the tongue.

8. The first step in molding the tongue is to skin the tongue. This photo shows the tongue skinned and ready for washing. To prepare the tongue, skin and remove the inside muscle of the tongue in the same way that you would remove a sock. It is a delicate procedure, but simple use a scalpel to separate the outer skin of the tongue

from the inner muscle. Separate the tongue skin and muscle all the way around the tongue until you can begin rolling the skin off the muscle, towards the tip. You usually work in half-inch increments, separating and then rolling the skin from the interior muscle. The result will be an inverted tongue skin ready for fleshing.

9. Use a scalpel to flesh and thin the tongue. Don't go crazy and flesh the tongue to the point where you start cutting holes. In this situation, it is better to leave the tongue skin a little thick than it is to make it ultrathin and start cutting holes.

10. Wash the tongue in cold water and Dawn dishwashing liquid. This removes the dirt, oils, and surface materials.

11. Once thoroughly washed, use a towel to dry the inner and outer tongue skin.

12. We will use Apoxie to fill the tongue and hold the tongue in position for molding. Apoxie Sculpt is the perfect material to use for filling and positioning the tongue due to the fact that it has zero shrinkage and excellent sculpting qualities. Mix the Apoxie 50:50 using water as a mixing lubricant.

13. Once the Apoxie is mixed, form the Apoxie into the shape of a tongue.

14. Rub a thin layer of water over the Apoxie Sculpt and begin sliding the tongue skin over the Apoxie. Insert the Apoxie inch-by-inch until it is *fully* inserted to the tip of the tongue. Sometimes there will be water and air trapped in the tip of the tongue. To remove any trapped air and water, simply use a pin to pop little holes in the tip of the tongue. Both the air and water can then escape through these release holes.

Once the tongue is completely filled with Apoxie, we need to place the tongue on the lower jaw and begin moving the tongue into any position that we desire in preparation for molding.

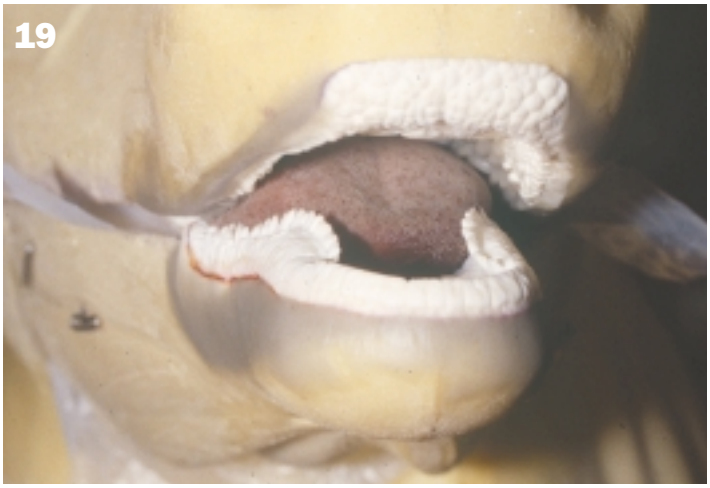
15. Lay a piece of plastic over the lower jaw. This plastic will act as a release material between the tongue and lower jaw.

16. Place the tongue in position over the lower jaw and begin forming and sculpting the tongue with the desired action.

17. This is the time to use paint brushes or sculpting tools to form and position the tongue in any shape you desire. Notice how the tongue automatically begins forming to the shape of the lower jaw and lip line. Since the Apoxie Sculpt is still moveable, the tongue is able to conform to *any* dip or bump along the lower jaw and lip line. The result is a perfect fit!

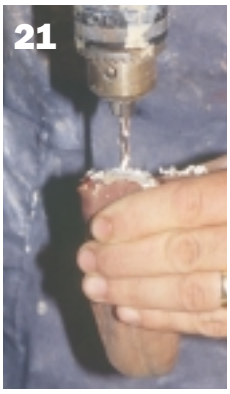
18. Once the tongue has been positioned along the lower jaw, we need to place the lower jaw against the upper palate. Since the Apoxie sculpt is still pliable, the upper surface

of the tongue will form perfectly to the contours of the upper palate. Again, a perfect fit is created with the tongue and mouth interior flowing together naturally.



19. Secure the lower jaw to the upper jaw with pins.

20. Wrap a plastic bag around the head, sealing the tongue from air as much as possible. Air movement along the tongue can cause the tongue to dry and shrink. Such shrinkage would cause the surface of the tongue to distort and move. Drying and shrinkage is eliminated by sealing the entire head with a plastic bag while the Apoxie cures.



21. Begin molding as soon as the Apoxie cures. We will be securing the back of the tongue to the damning material. Therefore, we need to drill a pilot hole through the tongue (starting at the back) for a securing screw.

22. A water bottle with the top cut off will act as damning material. Place the back of the tongue, with the pilot hole, against the bottom of the bottle. Secure a screw through the plastic bottle and into the pilot hole. This will hold the tongue in an upright position with the tongue centered in the plastic bottle.

23. Here you can see the tongue positioned inside the bottle, ready for molding with RTV silicone rubber. The only contact with the water bottle is at the base where we secured the tongue to the bottle with a screw. If the tongue is leaning to one side and touching the bottle, simply push a tip through the side of the bottle and push the tongue to center. Leave the pin in place through the pouring and curing of the RTV rubber. Once the RTV rubber has cured, you will remove the pin before pulling the mold from water bottle.

24. Mix the RTV silicone rubber by weight - 1 part A to 10 parts B (a cheap plastic kitchen scale will do the trick). Pour a long, thin stream with the concentration at the highest point. The RTV rubber will flow down the tongue and fill the water bottle. If you pour a fast stream without concentrating on one point, air bubbles will be trapped and the mold might be ruined. Once the RTV has been completely poured, it is best to place it on a vibrating surface to help release any trapped air bubbles. I use my dehumidifier to place the mold on and vibrate the air bubbles free.

25. Let the RTV cure and then remove the water bottle. The RTV will have different curing times depending on it you are using fast, regular or slow setting RTV. I like to let the RTV cure a little longer than recommended to be sure that everything is full set. If you open the mold before everything is set, the mold will be ruined. In this photo you can see that I am using a scalpel to cut the RTV rubber a way from the base of the tongue. The hole that I am creating will help remove the tongue from the mold and provide a pouring hole when it is time to cast the tongue.

26. The hole at the base of the tongue has been created and now we are beginning our cut along the bottom side of the tongue. This is a release cut that will make it possible to remove the tongue and casting from the RTV mold. Use a zig-zag pattern when making this cut and stop halfway along the bottom of the tongue (that is enough for release).

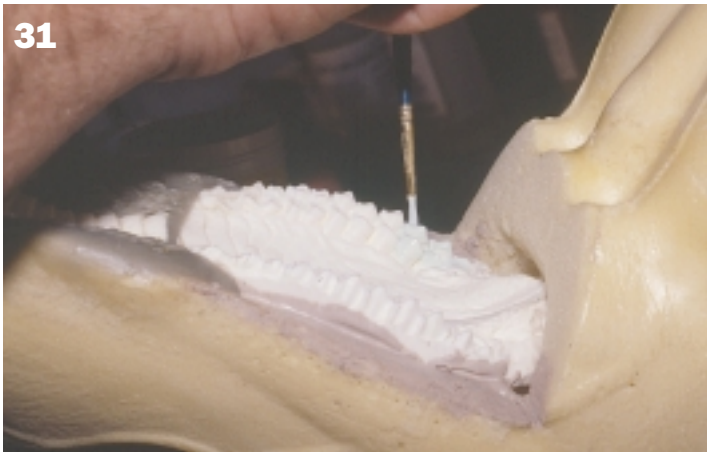
27. Here is the zig-zag seam that has been cut along the bottom of the

tongue. The zig-zag seam assures perfect alignment when the two sides are secured together in preparation for molding.

28. We have sprayed some Polyteck silicon release into the RTV mold and are now ready to pour the casting material, Easyflo 60 Liquid Plastic from Polyteck. But first, the mold is secured with small pins.

29. Mix the Easyflo Liquid Plastic by volume, 1 part A to 1 part B. Notice that the liquid plastic has a reddish, fleshy tone. This tone was created when Paul added a little red paint pigment to the liquid plastic. Only a couple drops of paint pigment are needed to create a light fleshy tint. Once the liquid plastic has cured, the pigment creates a natural fleshy coloration that is easy and forgiving to blend with other colors. You can get this paint pigment at a local paint store. Once the liquid plastic is mixed, pour it into the mold and let cure.

30. The liquid plastic has cured and here is the finished tongue. The flash from the camera lightened the color of the tongue to the point where the pink tint is not visible in this photo. Nevertheless, the pigment has created a nice base color.



31. Coloration is the final step in completing the interior mouth work. The mouth interior must be fully colored prior to placing the tongue and securing the lower jaw. Prior to painting the palates and tongue, we need to protect the teeth using Gary Bowen's Eye Protect. This liquid is painted over the teeth, then solidifies and is peeled off after the palates have been painted. The Eye Protect is a masking material that keeps certain areas free from paint. In this case, the teeth are being protected. Use the Eye Protect on the lower jaw teeth as well.

32. Here is the upper palate prior to painting. The Eye Protect has dried on the teeth and we are ready for painting.

33. A general base coat is applied to the entire surface of the upper palate, papilla and lip-line. In this instance we are using a natural flesh color.

Before we go any farther, I want to make an important point: interior mouth colorations change drastically from deer to deer. Obviously, colors such as neon orange are not possibility, however; a variety of colors (purples, flesh, brown, black, etc.) can be used together in many different combinations. The best advice I can give you is to study mouth colorations of a variety of different deer and develop the coloration you like.

34. Light and dark splotches are a common coloration characteristic on the upper palate of a whitetail deer. To re-create them, we cut out individual templates that will be placed against the palate and act as a mask to create an airbrushed splotch. Here Paul is creating a template for a splotch.

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35. Place the template where you want the splotch and airbrush the area with the desired color.

36. Notice that we have created a splotch on the back and midsection of the palate. Splotches can be in almost any combination of shapes, sizes, and quantities. In this case, the splotch color that we are using is Lifetone Off White with a hint of Deep Violet added. This creates a lighter splotch which we will surround with a darker color.

37. To finish the upper palate, we mixed a color of approximately six parts Lifetone Deep Violet to one part Jet Black. Once that color mix is complete, thin the entire mixture 50:50 with lacquer thinner. Use an airbrush to apply this color around the splotches and throughout the upper palate. Now is the time to color the bottom jaw as you desire.

38. Here we have it! The mouth completely finished and ready for mounting. Everything inside the mouth was originally positioned, cast, and colored. The exceptional casting and molding material available today make lifelike details possible in an originally cast open-mouth whitetail. Yes, you can save a lot of work by just buying a premade interior mouth, however, by mastering molding and casting techniques, you can create lifelike detail that will impress even the most critical judge. Also, molding your own mouth work enables you to re-create any expression and action you desire. The possibilities for realism become endless! At this point, you can become a master of your work and create truly *artistic* pieces!

I hope you have enjoyed this four-part series on the techniques and procedures for creating interior mouth detail of a whitetail deer. Paul and I have tried to be as thorough as possible in helping you understand and master molding and casting techniques. To help you gain an even better understanding of the processes we have discussed, Paul and I have produced a two-video program demonstrating and describing all the intricate details shown in this series. This video program is professionally recorded, edited and reproduced for the most understandable instruction. The two-video set is available for $29.95 and includes three hours of intense instruction. Only a subscription to *Breakthrough* matches that kind of value! You can order your own copy of this video series by calling Whitetail Specialists at 1-800-378-4763 and asking for video #25011: World Champion Whitetail Mouth Casting.

Thanks for taking the time to read our articles and I hope your taxidermy is better for it. See you soon in another issue! ■

PAUL CALES (left) won Best in World Whitetail Deer at the 1997 World Taxidermy Championships®. DAN RINEHART (right) sculpts for Whitetail Specialists, a two-year old taxidermy supply company in Janesville, Wisconsin. He offers weekend training courses and a wholesale fish service. Contact him at 1-800-FOR-DEER.