

Mary Morris
Independent Project
ES 399: Senior Capstone
Snake Taxidermy Purpose Statement

Snake taxidermy may seem an odd choice for the final, individual project of my Environmental Studies major, but, in fact, there are a number of reasons I choose this project. First, I was inclined to find a project that was more hands-on than research- and writing-heavy. I've written many papers for the ES department here at St. Olaf, it was time for me to create something! Second, I wanted to do something that would be useful for someone besides me. This project accomplishes both.

As a Naturalist Intern at Wood Lake Nature Center last summer, I began my foray into amateur taxidermy with a mouse rug and an opossum puppet. One of the naturalists there was willing to share his taxidermy knowledge and get me started. While sometimes a bit gross, I do enjoy working with the animals to create a sort of art based on nature. Additionally, I am tentatively planning to enter the environmental education field, where having various, unique skills can give you an advantage. In this respect taxidermy skills could come in handy someday. This project allowed me to learn more about preserving a different kind of animal and explore the procedures and necessary problem-solving on my own.

In addition to helping me learn some new skills, preserving the snake was helpful for the St. Olaf Biology Department. I coordinated with Professor Steve Freedberg and student Emily Geary to add the first snake to the department's collection. I have also written up a procedure for preparing snakes that future students and workers can follow in order to add more of these awesome reptiles to the collection.

Overall this project has been a success! I was able to do the necessary research and learn the skills to preserve a snake specimen using taxidermy. It was exciting and rewarding to work on a hands-on project and come out with a decent result!

Thanks to everyone who helped out with this project!

Snake Preparation Procedure

By Mary Morris

Preparation

1. Remove your snake from the freezer a day or so before you are planning to work on it to allow it to thaw. If you think it will thaw too quickly, place it in the refrigerator.
2. Prepare your work area. Lay down several layers of newspaper and get out the tools you will need.

Gloves

Large scissors

Manicure scissors (small, with curved blades)

Pliers

Tweezers (large and small)

Scalpel

Extra paper towels

Cornmeal

Fleshing tool - a straight, blunt metal edge, such as the side of a spoon

3. When the snake has thawed, measure the snakes weight (g) and length (cm). Record these measurements for later use.

Skinning the Snake

1. Now you are ready to start skinning out the snake. Begin by laying the snake belly-up on your workspace. Use the large scissors to cut up the belly starting at the vent (anus). Cut about halfway up the body of the snake. It is not particularly critical how far up you cut, but don't go much farther than halfway. Try to stay as close to the surface as you can, cutting only the layers of skin.
2. Once you have finished cutting, use your scalpel to cut the skin away from the vent. Then work to free the body from the skin, until you can reach your fingers around the body.
3. Now start working your way to the tail. Don't split or cut this part of the skin. When you have reached the tail, or can go no further, cut the tissue to free the rest of the body from the tail. Remove as much flesh from the tail as possible.
4. When the body is separated from the tail, you can start skinning out the rest of the snake. It is best to use your hands as much as possible here to avoid cutting the skin, but keep your scalpel close in case you run into tough sinews. The skin is fairly tough, so don't worry about pulling on it, but be careful nonetheless. The easiest way to do this is to grasp the body with one hand and the skin with the other and pull in opposite directions. Do this with care, watching, in particular, the area you cut.
5. Continue doing this up through the part of the snake that has not been cut, inverting the skin as you go. Stop before the head is inaccessible. As you free more of the body from the skin, it will likely stick

to the newspaper, making it hard to maneuver. To help with this, sprinkle some cornmeal on the newspaper; it will coat the snake's body and prevent it from sticking.

6. If the snake has fangs, remove them before skinning out the head. Take particular care if the snake is venomous, as the venom is still poisonous after the snake has died. Clip the fangs off with your pliers. If the snake does not have fangs, proceed with skinning out the head, but be cautious of small, sharp teeth when handling it.

7. Using your manicure scissors, start snipping away the skin around the lower jaw. Here small tweezers can be helpful to pull the skin away from the jaw as you continue to clip it away. Do the same for the top jaw, when you have finished the bottom.

8. When you reach the nose area, use your manicure scissors to cut the nose cartilage right in front of the upper jawbone.

9. Now, continue skinning the top of the head. Do this carefully, as the skin is very close to the skull, and it is easy to clip a hole in the skin. Use your manicure scissors with the curved point down (pointing into the skull, not the skin). Be especially cautious around the eyes; they will have a clear eye shield over them which can be cut off after skinning.

10. Finish skinning out the head. Once this is complete, return to the body/neck area and finish skinning this area out. At this point you should be able to completely remove the skin from the body.

11. Now you need to flesh the snake skin. After cleaning up your workspace (dispose of the body, etc.), lay out the skin. Using your fleshing tool, scrap the meat/flesh off the skin; it should be a nice, clean whitish color when it has been fleshed. **Always scrap in the direction of the scales, not against them.** In addition, use your manicure scissors to snip away any remaining muscle or flesh in the area of the head.

Tanning the Skin

1. For this project, use Snaketan, if it is available. If you choose another tanning method/solution follow the instructions for that method.

2. The things you will need for tanning:

Gloves

Snaketan

Paintbrush (1/2")

Plastic surface

3. Rinse the skin out in cold water, and leave it to dry or pat it dry using a towel.

4. Lay the snake skin out where you can leave it for several days. Place it on something plastic or non-stick. Do not use cardboard as the Snaketan will glue your skin to the cardboard as it dries.

5. Paint a thin layer of Snaketan over all areas of the skin. Leave it to absorb the tanning solution. Do not leave the skin in direct sunlight.

6. Do this at least 8 times, or until the skin will not absorb all the Snaketan in 24 hours. Do not apply more than 2 coats in 12 hours.

7. The skin should be soft and pliable. You can also work it a bit each time you check on the skin.

8. Once the skin will no longer absorb the Snaketan in less than 24 hours, apply a small amount of ethanol/denatured alcohol to the skin. It is easiest to use a towel soaked with the alcohol.

9. Let the skin rest for a day or two.

Stuffing the Snake

1. At this point you should have a tanned snakeskin that is dry but flexible. If it is still inside-out, invert it so the scales are on the outside. This may be a little difficult, but this is why it is important that the skin is fully tanned and flexible. It is helpful to use a large pair of tweezers to pull the head back through the inverted section. You will have to slowly work the skin through itself, using a combination of the tweezers and your fingers.

2. The things you will need for stuffing:

Needle (curved is nice, but not necessary)

Non-stretch thread

Stuffing cotton (ripped into small bits)

A long, dowel-like object (I used the handle of a paintbrush)

3. Once the skin is right-side out, sew the mouth and any holes closed. Use a color of thread that blends in with the scale colors in the area of the hole/mouth. Thread the needle, and form a double strand of thread. Tie a knot at the end of the thread and pull through one side of the skin. Now, use a baseball stitch to close the hole/mouth (Fig. 1). Tie off every few stitches to secure the sewing.

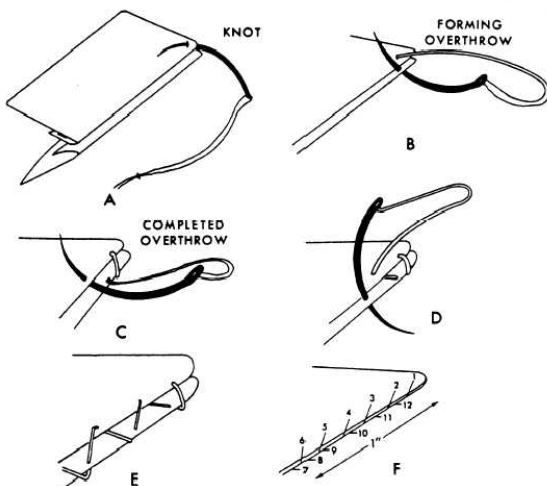


Figure 1. A demonstration of the baseball stitch.

4. Next, start stuffing the cotton up the tubed section of the body into the head. Use the dowel-like object to push small pieces of cotton all the way in. To avoid lumps, don't try to use large pieces or many pieces of cotton at the same time. Make sure the cotton is tightly packed; there is no need to worry about overstuffing the skin. Additionally, try to shape the stuffing with your hands periodically, working out lumps, etc.
5. Continue stuffing the pieces of cotton in until you reach the area of the snake that has been cut. Now start sewing up the belly using the baseball stitch again. Tie the stitches off every 1½ inches, but don't cut the thread. Then use your fingers to stuff the sewed section with cotton. Continue this process until you approach the tail of the snake.
6. At this point, turn your attention to the tail. In a similar manner, stuff the tail with cotton. It can be helpful to use the dowel again if your fingers don't fit in the tail.
7. Once the tail is stuffed, return to the area you have sewed and continue until you have closed the entire belly-cut. Tie off the thread securely to ensure that your stitches will not come out.
8. Now you have a stuffed snake!! Add any final touches, such as making sure the scales are properly arranged, removing scale sheathes that are loose, removing lumps, etc.
9. Make sure to properly tag your snake specimen.

NOTE: These instructions have been modified and are based on instructions written by Evelyn Mills which can be found at <http://www.hidetanning.net/RattlesnakeMounting.html>. They are based on a single project, so feel free to modify and adjust the procedure based on other experience or advice!



