

MANUAL.

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The Taxidermists' Manual,

GIVING FULL INSTRUCTIONS IN

Mounting and Preserving Birds,

Mammals, Insects, Fishes, Reptiles, Skeletons, Eggs, &c.

THIRD EDITION.

PRICE \$1.

BY S. H. SYLVESTER, TAXIDERMIST.

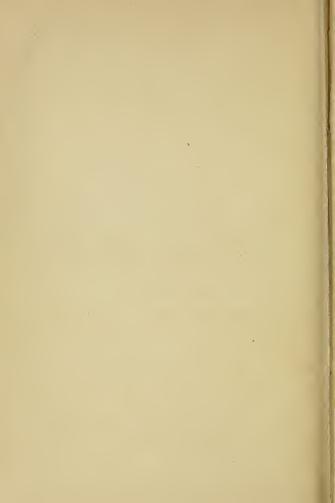
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SUGGESTION.

As common things lose their charm, so is it more particularly in this art. A person having this work should not leave it exposed to the eyes of the curious. The same caution should be used in the practice. Work by yourself that none may know the mysteries of the art, unless they are willing to pay for the information, as you yourself have done.



Taxidermists' Manual.

First Preparation.

Let equal parts of pulverized arsenic and alum be well mixed and kept in a large, tight box, labeled "Poison."

Second Preparation.

To, ½ pt. of 60 per cent. alcohol add an ounce each of arsenic, camphor, alum, and two drs. strychnine. Shake it well and let it stand 12 hours. It is then fit for use. Label "Poison," and keep the bottle well corked.

Arsenical Soap.

Pulverized Camphor,	5 drs.
Pulverized Arsenic, (white,)	1 lb.
White Soap,	1 lb.
Salts Tartar,	$1\frac{1}{2}$ oz.
Prepared Chalk,	1 OZ.

The soap is cut in thin slices, put in a vessel with a little water, over a slow fire, and stirred till melted, when the chalk and salts of tartar are added. The pot is then removed from the fire, the arsenic added, and the whole thoroughly mixed and brought to the consistency of thick paste. The camphor being previously triturated in a mortar, with a little spirits of wine, is finally added, and the paste put into a jelly pot and labelled.

This preparation is preferred by some to No. 1, as it keeps the skins pliable and soft, and either of them will preserve skin for hundreds of years.

Tools and Articles to be used in Skinning and Mounting.

A sharp knife or sealpel; a pair of small, sharp-pointed seissors; a pair of large, sharp-

pointed scissors, with strong blades; a pair of small, sharp-pointed stuffers or forceps, blades to be three inches long, for the heads and necks of small birds and mammals; a pair of sharppointed stuffers or forceps, blades fifteen inches long, for birds and mammals of larger size, made like the curling tongs used by hair-dressers, except the points should be sharper; a pair of small forceps or wire-twisters, four inches long, for bending small wires; a pair of large forceps or twisters, seven inches long, for bending heavy wires; a small hand vice, four inches long, for holding wires while filing, also to aid in stretching the wires to straighten them; a & inch gouge, beveled on the inside, to gouge out a place on the bottom of stools to let in the wires; a set of brad awls; a pair of small wirecutters, one five inches long and the other eight inches long; a large fish-hook, with cord attached, for suspending the bodies while skinning; a common knitting needle, to be used with the thumb in adjusting the feathers; a flat bastard file, four inches long; one eight inches long; three needles, of different sizes, for sewing up rents and incisions in the skins; annealed

wire, No's. 10, 12, 14, 16, 19, 20, 24 and 26,—No. 10, the largest, for eagles, etc., and No. 26, the smallest, for humming birds, etc.; cotton; tow; soft hay; thread; pins, of all sizes; tack nails; putty; sand paper; smalts; paint; glue; artificial leaves, everlasting flowers, mosses, etc., for beautifying perches.

Skinning Birds.

In the first place fill the beak, nostrils, shotholes, and anus with cotton, to prevent soiling with blood. After this, measure the bird from tip of beak to end of tail, and, if you wish to be exact, the girth of the body. Then, taking the bird in your left hand, place the thumb of the right hand under the wings, near the body, and press these back towards the head, in order to dislocate them. Lay the bird on its back, with the head at your left hand. Part the feathers, from the breast bone to the anus. Take the knife or scalpel and cut through the skin, back to the anus and around it, being careful not to cut through the thin membrane between the skin and intestines. Should this be done, however, so as to cause trouble, it would be best to remove the intestines altogether, to prevent the soiling of the plumage.

Now turn the bird and separate the skin from the body, down to the thigh and back to the anus. Taking the leg in the left hand, press up the knee towards the breast bone, in order to expose the joint. Cut off at the first joint from the body, cutting towards yourself. Clean away all the muscle, down to the scaly part or tarsus. Draw the leg back into the skin, to keep it moist for poisoning. Smooth out the feathers, and, that the skin may not again adhere to the body or the plumage be soiled by blood or fat, put cotton or soft paper between them. Then, without turning the bird, separate the skin, etc., as before, and cut off the leg at the corresponding joint, cutting from you. Loosen the skin at the base of the tail, and cut off at the last vertebra, being careful not to sever the lower part of the quills. Now hang up the body by inserting the hook into the lower part of the back or rump. Press and cut the skin from the body down to the wings, being careful in all cases not to stretch it. Separate them next to the body. Clean off all the muscle on them as far as it is possible to

turn the skin, opening the natural seam, or, if the bird be a large one, turn the wing back and make an incision on the under side of the wing, from the elbow to the wrist. Cut out all muscle, without detaching the quill feathers from the opposite side of the bone. Poison with preparation No. 1, and sew up. Continue the inversion of the skin by pushing (not pulling,) it over the neck until the skull is exposed. Then carefully detach the delicate membrane of the ear from the cavity in the skull, without tearing or cutting it. With thumb-nail and knife loosen the skin from the skull until you come to the base of the mandibles, taking great care not to cut the eyelids, always cutting near the skull and upon the eye, without lacerating the ball. Scoop out the eyes and sever the neck and body from the skull at its base, cutting a hole towards the lower mandible large enough to clean out all the brain and remove all muscle and fat. Now expose every part of the skin, while it is yet moist, pulling out the wings and legs. Poison thoroughly with preparation No. 1, making the poison adhere to all parts. If the skin is too dry, moisten with a wet sponge. Now fill the

eye-sockets with cotton and carefully press back the head, placing the thumbs at the base of the skull, and, working the skin back with the ends of the fingers, return wings and legs to their natural position, smoothing all the feathers and replacing the skin on the skull by inserting the knitting needle at the eyes, and lifting it up, that it may fall back to its natural place. If, in the operation of skinning, you have soiled the feathers, use a sponge with warm water till the stains are removed and then dry thoroughly with pulverized Plaster of Paris, keeping the feathers constantly in motion until all the moisture is absorbed. In case the head is so large that the skin of the neck will not slip over it, without too much stretching, as is often the case with Woodpeckers and Ducks, skin down to the base of the skull, cut off, draw the head back, and place the beak in a hole made in your worktable of a shape to hold it firmly. Now make an incision on the top, about an inch from the base of the mandible, down to the base of the skull, being careful not to get it too long, clean as before directed, poison and carefully sew up. If you are not ready to mount the bird, wrap it

in a dry paper or cloth, and keep it covered with moist cloths until ready to finish, which should not be too long delayed, unless you intend to preserve the skin for future mounting. In this case, as in dried skins, the feathers should be adjusted and the neck and body loosely stuffed and laid away to dry, and packing the head and legs as carefully as possible. Dry skins should be soaked or steamed soft, after removing the filling, by the use of cotton soaked in warm water.

The sex of the specimen may be ascertained after skinning by making an incision in the side, near the vertebræ, and exposing the inside surface of the "small of the back." The generative organs will be found tightly bound to this region, nearly opposite the last ribs, and separating it from the intestines. The testicles of the males will be observed as two spheroidal, whitish bodies, varying with the season and the species, from the size of a pin-head to that of a hazel nut. The ovaries of the female, consisting of a flattened mass of spheres, varying in size with the season, will be found in the same region.

Skinning Mammals.

In skinning mammals the same general features are to be observed, except in separating the legs, which should be close to the body. The worst difficulty will be found in skinning the tail. To effect this tie a knot of strong cord over the severed end, fastening firmly to some support. Strip the end out towards the tip, holding the skin back with the fingers until it is forced off. Poison well to the extreme end with No. 1, and if No. 1 will not reach the end, use No. 2. In many cases of animals it would be well to saturate the skin two or three days in No. 2. Tails of Beavers, Opossums, Muskrats, etc., should be cut on the under side. Remove all muscle and cords, poison, stuff, and sew up. To prevent the attack of moths and to kill the eggs of destructive insects on exposed parts of birds or mamals, saturate the skin well with benzine, by pouring or immersion, which will prove a sure destructive. Keep in the case, or near it, in the summer, a solution of spirits of camphor.

Reptiles.

The skinning of Lizards, Frogs, Salaman-

ders, Turtles, and Snakes, will present no difficulties to one used to skinning birds or mammals.

To skin a snake, open its mouth and separate the skull from the vertebræ, detaching all the muscle that adheres to the skin. Tie a strong cord round the stump of the neck thus exposed; holding on to this, strip the skin down to the extremity of the tail. Thus inverted, poison, turn back, and stuff with either sand or sawdust, giving it a natural position and form.

In skinning a Turtle, saw or cut the breastplate from the back, remove all muscle, poison, stuff where it is needed, and sew or glue together, as in your judgement is best; or, without removing the breast-plate, split the skin from the anterior end of it to the symphysis of the lower jaw, and another from the posterior end to the vent or tip of the tail.

Fish.

Skin Fish, as you would a bird or mammal. Make the incision along the right side or belly; remove the skin by cutting the fins at

their base; clean the cavity of the head; cut the eye on the inside, leaving the cornea and pupil, unless you wish to insert a glass one, in which case remove as in a bird; cut a piece of black cloth or paper, of the size of the eye; place it close to the pupil; poison, stuff, sew, etc. A coat of varnish applied to the outside will add much to the looks.

Insects.

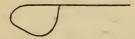
Beetles and all insects can be well preserved in 60 per cent, alcohol, or fourth proof whisky. Kill all moths, etc., by putting them into a wide-mouthed bottle, and immersing it in hot water, or exposing them to the vapor of ether or spts. of ammonia, or better than either, if not hairy, to Solution No. 2.

Mounting Birds.

If the bird you are to mount be a small one, say the size of a robin, take finely-cut tow, or, if large, soft hay, and with your small stuffers fill the space between the lower mandible. Then with a little roll fill the cavity in the skull. Now fill out the neck gently to

the breast, except in Owls which should be filled but little, and in Herons or long-necked birds the filling should be wound round the neck-wire, with soft hay or tow, to give it a perfectly natural appearance. Be careful not to leave bunches or stretch the neck in the least After filling the neck, tie the wing bones about half an inch apart, varying the distance across the body according to the size of the bird. First, tie one wing strongly midway of the bone, then make a loop half an inch from it and tie the other bone to it. Cut off the knobs or large bunches on the ends, and then place tow under the loop, next to the skin, to meet what was put into the neck, to give the back a full and even appearance. Take of your wire No. 19, which is about the No. for a robin and the size of a common knitting-needle, some 8 inches, or long enough to wind well around the perch; sharpen one end and sandpaper smooth. Cut a small hole in the bottom of the foot, and with a twisting motion, push the wire up through on the inside of the leg past the heel, to the end of the bone. Wind the tow round the bone and wire, nearly the

size it was when the muscle was on, beginning at the end of the bone and leaving off at the heel, to give your tow a fastening when you draw the skin back. This should be done immediately, being careful to smooth out all the feathers. Now—and this rule applies in all cases to birds—take of the No. 19 wire a portion longer by one third than the length from tip of beak to tip of tail. Bend it over on one end to the size and shape of the bird's body, thus:



And fasten it firmly. Using this loop as a basis, with soft hay or well-hatcheled tow, form a body precisely the shape of the body you took from the bird, which the beginner should keep to pattern from, and wrap well with thread to keep it in form. It must not be made so hard that the wire will not pass through it with a twisting motion easily. Lay the skin on its back and taking the head and neck in your left hand run the neck wire of the body up through the center of the filling in the neck into the cavity of the skull, and out through the top of the head.

Draw the skin around the breast into its proper place. Pass the leg wires through the body at right angles, where the knees would come if the bird was alive, far enough to be hooked over into the body firmly with the small wire-twisters, and to make it stand firmly on the perch. Bring the legs into their proper places and gently draw the skin to its place over the body, bringing the edges of the skin together. If the bird is not full enough, fill out with fine cut tow to a natural fullness. Pin into the body with small pins, instead of sewing, though large birds should be sewed. Cover over the incision with the feathers. Put a wire through the base of the tail, into the body, to keep it firmly in place, except in ducks.

To spread the tail, pass a small, sharp wire, steel, if handy, through the quills near the base. Make a temporary perch in the form of the letter "T." Sharpen the lower end of the upright and place it in a hole in your work-table, so that after the bird is upon it you can turn it in any direction. Slightly stretch the head up towards the end of the wire and work the wings into their natural place, taking care to have

them both of one length. Now pass a wire through the end into the body at the carpal joint so as to pin it firmly and have it look natural, seeing that none of the feathers are crossed. Bring the head back and give it a life-like position for its kind. Then, taking your knittingneedle, seize every feather that is out of place by the thumb and needle, and draw it into its place.

Having got the bird to look natural, put common pins into the body, about one half their length, to which the winding strings may be fastened. Put three along the back, four along the belly and breast, and two on each side.

The one end of your thread to one of the wing wires, which, in all cases, should be left out at some length to help in winding the bird. First proceed to carefully wind down the wings to their places. After this wind all parts of the bird, from one pin to another, being careful not to ruffle the feathers in doing so and leaving every part to dry, smooth and natural.

It will take about ten days for a small bird to dry so that the feathers will not spring out of place. The bird should be well watched while drying, and if it have crest, wattles, or any like feature that you wish to show prominently, it should often be pulled or pressed into shape, while drying.

To spread the wings, put the wire through the carpal bones or quills of the outer feathers of the wings, passing it along the under side so as to cover the wire by the feathers, and run it into the body. When thoroughly dried the winding may be removed, the pins pulled out and the wing wires cut off.

To put in the eyes, first press in the cotton that is in the socket. Take cotton that you have already soaked in warm water, and fill it into and on the outside of the eye, so as to soak the lid inside and out. This, on a small bird, will take nearly an hour. After it is done take out the wet cotton only, and fill with soft putty that has been colored with lampblack, if the eye is dark colored. Bed the eye in this and adjust the lid, by the use of the knitting-needle, in its natural position. The body-wire, which comes out through the top of the head, and which in all cases should be left until after the eyes are in, for the purpose of steadying the-

head, should then be cut off. The bird can now be placed on a stool or perch, made and ornamented according to the fancy of the mounter.

Mounting Mammals.

First stuff the head and neck to their natural shape or fullness. Then put the wires up through the legs, as in birds, wind with tow; with hay, if they are large. Lay the skin on its back, at full length, and measure a No. 16 wire eight inches longer, say for a gray squirrel, than the body. Make a circle, by bending one end of the wire so that it shall be about an inch in diameter; now form a knob made of soft hay and wound with thread, for the leg wires to be passed through and be firmly fastened, as in birds. Having made the one for the hind legs, make another of the same size and shape for the forward legs, where they should come. Sharpen and sandpaper the end that is to go up through the neck, then pass it with a twisting motion through the center of the filling in the neck, into the cavity, and out through the top of the head. Fasten the leg wires firmly to the knobs.

Having done this, fill underneath and around the body wires and thighs with soft tow or hay, to give a natural fullness and form. With a needle and strong thread begin between the fore legs to sew up, passing the needle on the underside, and sew out so as not to draw the fur or hair in. Fill as you sew. If the case requires it, when it is nearly sewed up, cut a wire of the same No. as was used for the body, sharpen both ends, and pass one end through the knob, between the hind legs, into the tail to its end. Now hook the other end into the knob firmly, that you may control the shape of the tail as you please.

Finish sewing and mount on a stool, either sitting, standing, or running, as your taste prompts. Watch the ears, smellers, mouth, toes, and all parts that require it while drying, and often press them into shape.

Preparing Skeletons.

The best method of preparing skeletons for a cabinet is to cut away, as much as possible, all the fat and muscle and then macerate by allowing it to soak in cold water, running if convenient. Brush and scrape at times until perfectly clean. Bleach by placing in the sun. Small skeletons can be obtained by placing them near an ant's nest, or in water containing tadpoles. Clean off grease that comes out from the bone by a free use of lime water. Mount and wire, if you wish.

Preserving Eggs.

Eggs can be emptied of their contents when fresh, by making a small pin-hole in each end and carefully holding it over water, in order to prevent breaking in case of dropping, and by blowing or sucking out their contents.

If the chick has formed, cut out a small circle on one end and remove it. In all cases carefully wash out with poison No. 2. Replace the piece with glue or paste, using tissue paper if required. Arrange them by placing each variety under glass, in separate places, on pink cotton, with name or number of variety on or by each.

Mounting Insects.

Wingless insects, as Spiders, Scorpions, Centipeds, or Thousand Legs, as well as all kinds of worms, are best preserved in spirits. Butter flies, Beetles, and all of the Moth species, should have a small pin or needle put through the thorax to fasten them to the soft wood or cork back of a frame. Put beneath the glass a small paper roll containing gum camphor, which, by slow evaporation, will prevent the attack of insects. Arrange and classify according to fancy.



General Remarks.

It has been the aim to give in this work the surest, most easy and simple instruction. Although small, the information could not be obtained of a practical taxidermist for less than fifty dollars. If the directions are followed, sure success will be the result.

There are often unforseen obstacles to overcome, for which, of course, no directions can be given. It is left to one's judgement to dispose of them as the case may require.

The writer has had most extensive facilities.

for obtaining a thorough knowledge of the taxidermical art, in all its branches, from one who learned it from Prof. Ogden, at one time taxidermist of the Bostom Museum and the Boston Society of Natural History, and who was acknowledged to have no superior in this country.

To aid one in mounting and learning the specimens and habits of the birds of North America, either the "Manual of Zoology" or the "Elements of Zoology," published by Charles Scribner & Co., 124 Grand Street, New York, are now the best known cheap works, as they contain numerous small cuts and natural positions to mount from.

In getting specimens, strict regard should be paid to the laws, and no bird protected by the same should be killed, unless actually wanted for mounting. In shooting all small birds use the finest shot, and always observe the position before shooting. Note especially the color of the eye. Put cotton in the beak, nostrils, anus, and shot holes, to prevent the flow of blood and the soiling of the plumage. Get full-plumaged birds, and not those that are half-fledged, for they are not perfect specimens.

After shooting, the bird should be placed in a paper tunnel, to prevent the breaking of quills and ruffling of feathers. Birds and mammals should not be skinned until the blood has coagulated, or the muscle and cords relaxed, as the skin is then more easily removed and the blood seldom flows.

Most of the tools, as knife, seissors, wiretwisters, vice, gouge, files, awls, wire-cutters, etc., can be found in any village hard-ware store; putty, paints, varnish, smalts, etc., at any paintshop; tow at cordage factories and rope-walks, arsenic, alum, strychnine, camphor, glue, alcohol, etc., at drug-stores. Stuffers will generally have to be made by the blacksmith, as you order them. Annealed wire, of all sizes, can usually be found at the tin shops or wire factories; if not, get the number you wish and soften by heating and cooling gradually. Artificial eyes of all colors can be obtained of C. F. A. Hinrich, 150 Broadway, N. Y., or at the stores of naturalists; leaves and artificial flowers and colored mosses, for trimming perches, at wholesale miliners.





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ADDRESS S. H. SYLVESTER, TAXIDERMIST,
Middleboro', Mass.







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