

Innovative Method of Dry Preservation of Animal, Bird Models in Lieu of Taxidermy

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ABSTRACT

Taxidermy is an art to preserve the biological specimens with their skin in dry form which is quite expensive. The present study involves a technique which needs less time and cheapest chemicals as sodium chloride, thymol, 5% formol saline; simple items like needle, thread, flexible wires and containers. The technique is explained in detail in the text. The final product of the animal demonstrates all the anatomical features including the fur with desired posture.

Keywords: Biological specimen, taxidermy, skinning, dehiding, dry preservation

INTRODUCTION

Biological specimens like rats, mice, guinea pigs, rabbits, cats, dog puppies and exotic birds can be preserved along with their skin in dry form in lieu of taxidermy. The art of taxidermy involves skinning or dehiding. This technique is quite expensive and time consuming. For an animal, special molds are prepared to ensure proper fit of skin to a final shape. A large amount of skill and artistic ability is needed to give life like appearance which needs expertise. It also involves dangerous chemicals, acids etc, for tanning purpose. The other technique was simple injection of formalin to the animal and allowing it to dry naturally. But this is not suitable for educational craft or home use where life like appearance is derived.

Various authors have used taxidermy and other methods to preserve in dry form. But the present innovative method involves less time, cheapest chemicals and containers. Hence the present study has been undertaken.

MATERIALS AND METHODS

Tom cat died in the college premise which was procured for the dry preservation. The skin was cut on the ventral surface and eviscerated immediately keeping the skin, fur, feathers intact on the body. Then it was washed thoroughly with running water till blood stains were removed. Later the inner surface of the body cavity was rubbed with five parts of sodium chloride with one part of thymol and left overnight. This acted as antifungal preservative. Next day the specimen was immersed in 5% formol saline for 1 month. Later the specimen was removed, drained and placed to a desired posture which was possible as the specimen was still wet. The abdominal openings were sutured. Before suture dry absorbent cotton was placed inside the thoraco abdominal cavity to bring the shape of belly. Finally the specimen was mounted and allowed to dry (Fig 1).

Ten feet long King Cobra died at zoo in Bannerghatta National Park, Bengaluru, India. This was eviscerated by

incising ventral abdominal wall longitudinally. The body with skin and skeleton was washed thoroughly. Later the specimen was placed in 10% formol saline for 6 months. Then the snake was removed and the empty abdominal cavity was stuffed with absorbent wet cotton with sodium chloride and thymol crystal. Interrupted sutures were applied all through the length. Then the snake was placed on a table with a presentable posture by using flexible wires and allowed to dry (Fig 2).



Figure 1: Dry specimen of the Cat



Figure 2: Dry specimen of king cobra

RESULT

The above method involves cheap chemicals; equipments and the time required were also minimum. The specimens prepared by this innovative method demonstrate all the anatomical features with desired posture. Not only the skin, the fur of the animal specimens and feathers of exotic birds remain intact without any fungal and ectoparasites (Fig 1, 2).

DISCUSSION

Although taxidermy gives better anatomical grounding, it involves lot of processes. The taxidermist and the curator have to realize the form and lives of beauty with good anatomical background and knowledge. The word taxidermy was derived from the Greek word 'taxis' meaning fixing and derma means skin. It involves record keeping i.e. the measurement of tail, body length, sex, mounting position with sketch on paper. Next step involves skinning. The skin is completely removed and preserved with carbon tetrachloride, alcohol and sodium arsenite paste. The third step involves mounting. Paper body with the help of plaster of paris mold is prepared along with the help of nails and wires and finally a temporary base is prepared with the help of skin. The finishing is done with colored glasses, eyes, etc. the taxidermal technique helps in preservation of shape, color, attitude and expression of body itself as seen in live condition. But the entire procedure involves patience, chemicals and much practice. Some of the procedures are patented.

Jackson and Rankin (1973) [1] patented their technique under US patent No. 3780452 dated 25.12.1973 under the title "Method for mounting and preserving animals without evisceration". They did not eviscerate except washing and sealing of wound opening. They injected formalin 10% with formalin neutralizer, mould inhibitor, odorant and setting agent which is periodically repeated until the animal assumes proper form and became sufficient hard and stiff to support itself. The formalin neutralizer has to be imported from Carolina Biological supply, Burlington, N.C, USA. Similarly odorant called "Purepac" also to be imported from Purepac Company, Elizabeth, N.J, USA. The technique involves injection of formalin, formalin neutralizer and setting agents which contain plaster of Paris, NaCl and water. For skin preparation Alum Solution has to be rubbed to maintain its texture. Once again the

setting agent is injected into the abdomen and finally sutured.

Ocello (1995) ^[2] used the following procedure which was patented under US Patent No. 5431952 involving many imported chemicals like silicone elastomer, and 1,1,1, trichloroethane and well set laboratory to carry out the operation.

Browne (1869) ^[3] was the first taxidermist to describe different methods of skinning and mounting of birds. He also described the regional anatomy in relation to mounting the specimen of pigeon.

Metcalf (1981) ^[4] described fixing, preserving skin, anatomy of birds and mammals recording various data of birds and mammals.

Hormann (1931) ^[5] described various steps in collection of birds, killing live birds, care of specimens tools, preservation paste, skinning and he focused on removal of fat. For mounting he used wires for body, legs, tail and created artificial body.

But the disadvantages of the above methods were importing chemicals and also time consuming. Thus it is uneconomical for developing countries carrying negative

impact on the present novel method of preservation.

CONCLUSION

The present novel technique has many advantages over other methods. It is simple, cost effective and gives all the details of anatomy. This adds educational craft and museum use where life like appearance is desired.

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