

A SIMPLE TECHNIQUE FOR REMOVING MANDIBLES OF DEER WITHOUT TROPHY DEFACEMENT¹

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The development of a technique for estimating the age of white-tailed deer by mandibular tooth replacement and wear as described by Severinghaus (1949) has provided a means for determining age ratios during hunting seasons. Additional research has been conducted with mule deer by Low and Cowan (1963). Both of these techniques require that the teeth of one or both mandibles be carefully examined.

Extensive collection of these specimens requires a large staff of trained individuals and field age determinations usually are made under the most trying conditions. Ryel, *et al.* (1961) have noted that working conditions at checking stations contribute to errors in age determinations. The ideal situation therefore would be to collect jawbones in the field and then determine the animal's age under laboratory conditions where all teeth can be carefully examined under good light. To avoid inconsistency, one experienced man should be designated to perform this task.

The major problem inherent in the past has been the inability to properly inspect the teeth. This usually is accomplished by requesting permission from the hunter to slit the cheek and thereby expose the teeth for examination. Where female deer are concerned, most requests are approved, however, few hunters will agree that age determination is as important as their trophy bucks remaining in perfect condition for subsequent mounting. Due to hunter reluctance for relinquishing adult bucks, accurate age determinations have been difficult to acquire in this most important age group.

Need for a simple method to remove the mandibles has become increasingly evident. Several methods have been utilized in the past but each of these was undesirable from the standpoint of the taxidermist. To the authors' knowledge, the present literature does not afford an effective method for removing the mandibles without some damage to the deer head. A definite need therefore was recognized and this technique has been developed to provide (1) a rapid means of mandible

¹ From the Southeastern Cooperative Wildlife Disease Study, Department of Pathology and Parasitology, School of Veterinary Medicine, University of Georgia, and the North Carolina Wildlife Resources Commission. The former organization is the first regional diagnostic and research service established in the United States for the specific purpose of investigating diseases of wild mammals. The project is supported by the Southeastern Association of Game and Fish Commissioners and the U. S. Fish and Wildlife Service (Region 4). The participating states include Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia and West Virginia.

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removal without defacement, and (2) a method simple enough to be used by non-technical checking station attendants.

MATERIALS AND METHODS

The following materials were used for perfecting this technique:

Purchased: (1) Pruning shears, True Temper Rocket #A103
(2) Eight-inch bastard file

Constructed: (1) Jaw opener-extractor. This "L" shaped tool was fabricated from 3/8" cold rolled steel 46" long. The 12" side has a 2" space between the rods while the space on the 13" side tapers from 3" to 1" at the tip (Fig. 1).

Extraction is initiated by placing the antlers or back of head on a flat surface before inserting the small end of the jaw opener between the incisors and premolars. The instrument then is rotated 90° to open the jaw. While the head is held in this position, the closed pruning shears are inserted through the jaw opener. The shears then are opened and the cutter bar is placed posterior to the molars on the outside of the jaw which provides something for the blade to cut against. The handles of the pruning shears are moved to a plane parallel to the roof of the animal's mouth, establishing the proper angle to cut the jaw bone (Fig. 2). After making certain the blade is in proper position, the handles of the instrument are pressed together severing both bone and attached muscles. The shears are removed after which the jaw is manipulated with one hand while the small end of the jaw opener-extractor is inserted through the cut to a position below the jaw bone (Fig. 3). After this manipulation, one foot is placed on the deer's neck and a steady pull is applied to the tool causing it to slide along the under side of the jaw bone detaching all muscles as it moves forward. The jaw bone will separate between the incisors and can be lifted out with the fingers. If both sides of the jaw are needed, the bone cutters are reversed after which the same general procedure is followed. The only exception is that the remaining jaw bone must be held partially closed to avoid splitting the skin as the mandible is removed.

DISCUSSION

Every effort was made to keep the cost of equipment at an absolute minimum. This has been accomplished by selecting instruments that can be purchased at a local hardware store or fabricated in a small shop. For this reason, the total expense for equipment was less than \$10.00.

It should be pointed out that some difficulty may be encountered while attempting to place the cutter bar in proper position. With a minimum of experience, this can be accomplished by arranging the handle of the cutter bar in a position whereas pressure can be applied from directly above. This will puncture the thin muscle at the rear of the cheek and allow the cutter bar to be moved into proper position. If the pruning shears are "razor sharp" the bone and attached muscles will be easily cut. A small bastard file can be used to keep the blade in proper cutting condition.

Since this technique was perfected to obtain age information from mature bucks which subsequently would be mounted for display, a deer head with jaws removed in this manner was taken to a well-known local taxidermist for inspection. After carefully examining the head, he indicated that he felt this method would be fully accepted by other professionals working in this field (Silvey, 1964).

SUMMARY

A simple technique has been developed for removing the mandibles of deer without detracting from its trophy value. This method, approved by professional taxidermists, offers an excellent opportunity for biologists to obtain accurate age data from trophy bucks. In the past, information of this type has been practically unavailable due to hunters' understandable reluctance to allow their trophies to be defaced.

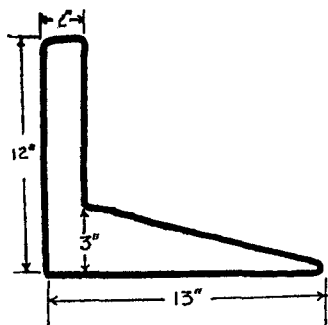
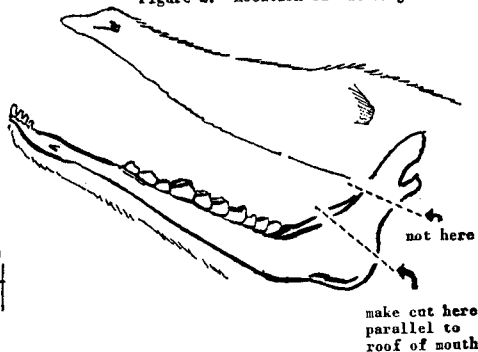


Figure 1. Jawbreaker-extractor.

Figure 2. Location of cut on jawbone.



make cut here
parallel to
roof of mouth

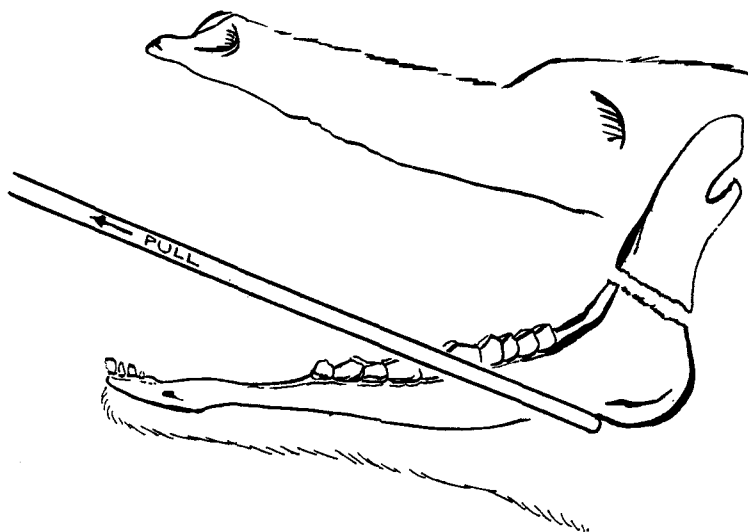


Figure 3. Removal of jawbone using small end of jawbreaker-extractor.

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**PRELIMINARY REPORT OF TELEMETRIC STUDY OF DEER
MOVEMENTS AND BEHAVIOR ON THE EGLIN FIELD
RESERVATION IN NORTHWESTERN FLORIDA**

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OCTOBER 18-21, 1964

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INTRODUCTION

A fundamental concept of ecology and animal behavior is that most species of animals have characteristic patterns of movement and activity. In general, it is to an animal's advantage in the evolutionary process of natural selection, to establish a movement pattern which is repetitious enough to provide familiarity with a particular unit of habitat. As a result, it is able to obtain the basic necessities of life such as food, water, and protection with efficiency and minimum energy expenditure.

Knowledge of home range and daily movement is extremely important for good deer herd management. One of the most commonly used deer population census methods in Florida is the track count technique developed by Tyson (1952). The reliability of this method is based on an accurate estimate of the daily movement of deer in the area in which the census is made. There has been doubt as to whether