A Device to Weigh Large Animals in the Field

Jimmie McDaniel, *Florida Game and Fresh Water Fish Commission, 620 South Meridian Street, Tallahassee, FL 32301*

Abstract: Directions for construction and attachment of a device for weighing large animals in the field and cost estimations are presented. The device described was developed by the author so that it could be easily transported, mounted and a scale attached whenever a tree, or telephone pole was available.

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Several years ago the Florida Game and Fresh Water Fish Commission initiated a program for collecting biological data on white-tailed deer (*Odocoileus virginianus*). Wildlife management areas had few check stations so that hunter harvest was not effectively monitored. Therefore, Commission personnel would intercept hunters in the field and obtain the needed data. Much of the deer habitat in Florida consists of pine flatwoods and pine uplands; the trees have no low limbs suitable for hanging scales. Often the weights of harvested deer were omitted due to lack of a suitable place to weigh the animals.

There was a need for a convenient way to obtain an accurate weight in these areas. The mobile device described herein was designed to fill this need. The device operates by clamping to trees or poles of varying diameter which support the weight of the scales and animal. It is easy to manufacture, inexpensive and usable in any location where there is a vertical support to which it can be attached and is also operated by 1 person.

The device was constructed and distributed throughout the state to Commission personnel and has been in use for 17 years. Several thousand deer have been weighed in the field for collection of hunt data by the use of this device. The maximum weight limit for the device is 500 pounds. The only weakness found was due to faulty welding.

The design consists of a 0.6 × 30.5-cm(¼ × 12-in) metal plate to which a 0.5-cm($\frac{3}{16}$-in) load chain binder is attached by welding (Fig. 1). On th opposite end of the plate from where the chain binder is attached, 60 cm(2 ft) of 0.5-m($\frac{3}{16}$-in) chain is welded to 1 end of the plate. On the

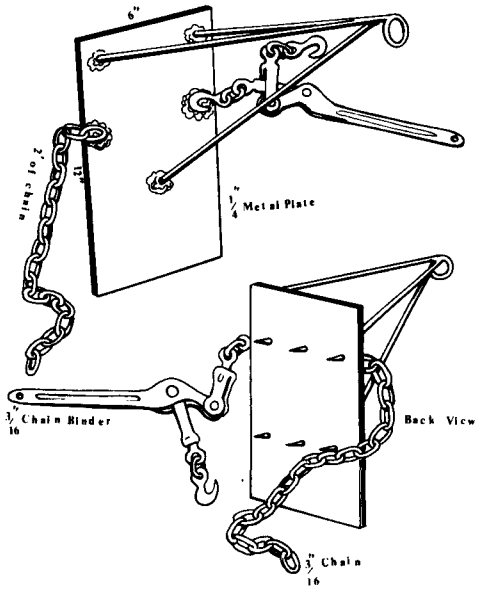

Figure 1. A device designed to weigh animals in the field.

front of the plate, 3 ½″ 1.3-cm(½-in) diameter rods are attached to form a triangle to support the weight of the scales and the body of the animal. The rods are 38 cm(15 in) in length. Two of the rods are welded to the top of the plate and one is welded to the middle of the plate. They join at the tip where a metal ring is welded to serve as a place to hang the scales. Two rows of 2.5-cm(1-in) spikes are welded to the back of the plate using 40 penny nails. There are 3 spikes in each row. These 6 spikes hold the plate firmly against the pole or tree and prevents slipping (Fig. 1). The cost of the device in 1982 was approximately $42.00.

The weighing device described is still in use in Florida after 17 years. It has been field tested and found to be easily transported, durable, and manageable by one person in the field wherever a tree or post is located.