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## **Capturing Whitetails for Management and Research**

**by David Hewitt**

With increasing intensity of white-tailed deer management and research in Texas, the need to capture deer has increased. Every year thousands of deer are captured in Texas for management through TTT and DMP permits, and for research to tag, collar, sample, and measure deer. All of these reasons to capture deer require capture techniques that are safe and efficient.

Deer habitat in Texas lends itself well to capturing deer with a net fired from a helicopter. The helicopter net-gun technique, as it is called, far exceeds any other capture technique in the number of deer that can be captured in a day. Experienced helicopter and ground crews can regularly capture and process 75 deer in a day. In optimal conditions, over 100 deer can be processed in a day. But how does it compare to other capture techniques in injuries and mortalities to deer?

To answer this question, Stephen Webb, John Lewis, Mick Hellickson, David Hewitt, and Fred Bryant used 3,350 capture records from the South Texas Buck Capture Project to estimate injury and mortality rates during helicopter captures. The most common problem encountered as a result of capture was broken antlers, which were experienced by 6.1% of the deer captured. Injuries, not including abrasions and minor cuts, were sustained by 1.6% of captured deer. The most common injuries were broken legs.

Mortality caused immediately by capture was 0.6%, which is below mortality rates reported for other capture methods (e.g. box traps 0 - 14%; drop nets and rocket nets 6 - 10%; anesthesia 0 - 33%). Mortality may be delayed several days to several weeks after capture due to capture myopathy, a pathologic condition precipitated by the exertion and stress of capture. To investigate rates of mortality from capture myopathy, the authors monitored deer that were captured using a helicopter and then fitted with radio-transmitters.

Of 100 deer monitored, only one died within two months of capture, possibly from capture myopathy. Again, this mortality rate is equal to or less than that of other capture methods. Rapid capture and processing of deer are necessary to minimize mortality from capture myopathy. Deer in this study were not pursued by the helicopter for more than 8 minutes and processing took less than 10 minutes.

The helicopter net-gun technique to capture white-tailed deer is a valuable tool in deer research and management. Not only can large numbers of deer be captured safely, but specific ages and sexes of deer, even individual deer, can be targeted. The technique works even when natural food sources are abundant, a situation that can ruin trapping efforts that rely on baiting. Because of this efficiency and flexibility, managers and scientists in Texas are often the envy of white-tailed deer biologists from elsewhere in the species' range.

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## **References**

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