



Three Man Thermal Team (T.T.T.)



An Advanced Technique for Control of Overabundant or Nuisance Wildlife

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Introduction

With white-tailed deer (*Odocoileus virginianus*) herds at unprecedented levels through much of the eastern United States, many suburban and urban communities have sought some workable solution to the many associated problems. Fairfax County, Virginia adopted an integrated approach which has included direct herd reduction through managed public hunts and sharpshooting.

The sharpshooting program is conducted under the Fairfax County Police Department (FCPD) and utilizes trained police snipers from the Department's Special Weapons and Tactics (SWAT) unit. FCPD has a variety of specialized equipment which lends itself well to an urban deer control program. Thermal imaging equipment in several configurations has played a key roll in the success of this program. This poster describes the Three Man Thermal Team (T.T.T.) technique developed by the FCPD as a tool for urban deer management. This technique would prove beneficial in a number of wildlife control applications.

Background

Fairfax County, Virginia encompasses 103,341 hectares (399 square miles) and lies to the southwest of Washington, D.C. With scattered urban centers of its own, Fairfax County is home to over one million residents. Since 1998, Fairfax County has implemented the Fairfax County Integrated Deer Management Program. The program has utilized S.W.A.T. snipers and equipment in a variety of applications. The development of T.T.T. has evolved into a highly effective technique which has captured the imagination of both wildlife control and law enforcement professionals.

Methods

The Three Man Thermal Team is composed of a thermal imager (TI) operator, a spotlight operator and a sniper. This team walks in single file slowly and quietly. The TI operator chooses the route for the team by shifting left or right as he walks. The spotlight operator keeps a hand on the shoulder of the TI operator to warn him of obstacles and controls the speed of the team by hand signals. The sniper follows in the third position with the rifle pointed safely to the side.

The most versatile TI unit in the program is the Palm IR 250D (formerly Raytheon Thermal-Eye™ 250D) Digital. This hand-held unit is light weight (approximately 3 pounds) and is simple to operate. It operates in the 7 to 14 micron spectrum and is rated to detect a person at 2400 feet.

When the TI operator spots a herd of deer, he will move the team laterally into a clear shooting lane. He will then activate the laser pointer which provides a visible line for the other team members. They can then index their respective positions in relation to this line. When the sniper is set in position, the light operator will turn on the light just long enough for the shot to be taken. The light is then turned off while the TI operator locates a second target. The process is repeated until any remaining deer move away. The team will then advance until those deer are located and the process then repeats itself.



THERMAL IMAGERS WITH RADIO SHACK™ LASER POINTER ATTACHED WITH CAMOUFLAGED TAPE

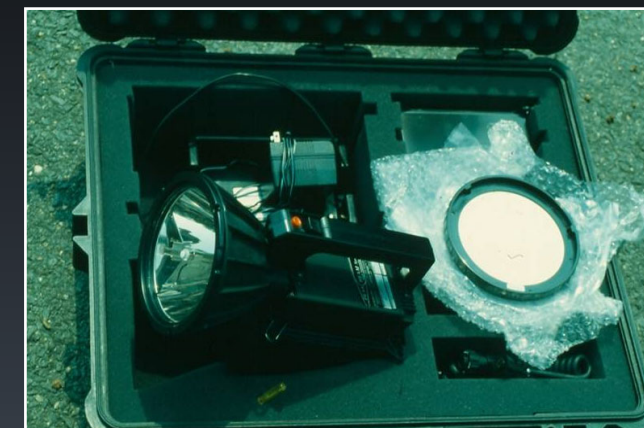


LEFT & BELOW LEFT: Radio Shack™ sells a laser pointer which is flat and measures approximately 25 mm x 60 mm. This is attached to the side of a hand-held thermal imager using camouflaged duct tape. When the TI operator spots deer through the imager, the laser can be switched on. The emitted light produces a dotted red line effect through the understory. The sharpshooter and the spotlight operator can then index off this line and be properly positioned before a light is every turned on. This adaptation has remained as a permanent accessory to the thermal imager for its other applications in law enforcement.

RIGHT: The use of hand-held spotlights for finding deer at night is one universally accepted method. There are limitations with this method when employed in forest habitats. The branches of understory trees and shrubs reflect a large amount of light back toward the shooter (splash back). This reduces the effective range of the light but also can interfere with the sharpshooter's ability to see. Some special law enforcement teams utilize a MaxaBeam™ Searchlight. This is a 6 million candle power hand-held spotlight with a focusable beam. The light beam can be adjusted from a 40° wide angle to a pinpoint by use of a power-assisted switch. With its 75 watt Xenon lamp, this light can define a clear route through thick brush which a sharpshooter could utilize. Splash back light is minimal with the MaxaBeam™ focused to a pinpoint.



THREE MAN THERMAL TEAM (T.T.T.)



MAXABEAM™ HAND-HELD SPOTLIGHT



TI operator spots deer through the hand-held thermal imager, and emits a laserlight producing a dotted red line effect through the understory. The sharpshooter and spotlight operator can then index off this line and be properly positioned before spotlight comes on.



Results

The procedure described above has proven to be quite effective in the removal of an entire deer herd. It can also be used to selectively remove specific individual animals, particular age classes or particular sexes. The T.T.T. method can be most effective during inclement weather that would render other methods useless. Rain or fog can actually enhance the productivity of this method. The Team can move more quietly under these conditions yet, the TI is not hampered by the poor visibility.

Discussion

The T.T.T. method can be applied to a multitude of nuisance wildlife or control applications. While the primary use in Fairfax County is for the control of an overabundant white-tail deer population, it is easy to adapt this method to other uses. This method can be adapted for more covert operations by fitting the rifle with a night vision or thermal scope and replacing the spotlight with an infrared illuminator.

Conclusion

The additional challenges of urban deer control require additional management techniques. The use of TI technology for culling operations will provide faster target location and confirmation. Recovery of culled deer is especially important in urban programs. Another important use, however, is in ensuring public safety by making certain that operational areas are free of unauthorized people. Adaptive strategies and innovative technologies are two key elements of a successful urban deer control program. Deer are very adaptive and control methods and technologies must keep pace. The urban wildlife manager would be wise to explore some of the available technologies presently in use by law enforcement agencies and the military.