

# UC Agriculture & Natural Resources

## Proceedings of the Vertebrate Pest Conference

### Title

Three-Man Thermal Team (T.T.T.): An Advanced Technique for Control of Overabundant or Nuisance Wildlife

### Permalink

<https://escholarship.org/uc/item/0b99f5s1>

### Journal

Proceedings of the Vertebrate Pest Conference, 22(22)

### ISSN

0507-6773

### Author

Hodnett, Earl L.

### Publication Date

2006

### DOI

10.5070/V422110317

## Three-Man Thermal Team (T.T.T.): An Advanced Technique for Control of Overabundant or Nuisance Wildlife

Earl L. Hodnett

Fairfax County Police Department, Fairfax, Virginia

**ABSTRACT:** The Three Man Thermal Team (T.T.T.) is a technique developed within the Fairfax County Virginia Integrated Deer Management Plan in cooperation with the Fairfax County Police Department's Special Weapons and Tactics (SWAT) unit for control of overabundant white-tailed deer populations within a suburban/urban setting. The technique utilizes a combination of specialized equipment including a hand-held thermal imager, a laser pointer, a 6-million-candlepower MaxaBeam™ searchlight with focusable beam, and a suppressed rifle. T.T.T. allows targeted animals to be located in total darkness. With the use of a night vision or thermal scope in lieu of the light, the entire operation can be conducted in darkness. While this technique was specifically designed for deer, it can be easily adapted for other species.

**KEY WORDS:** *Odocoileus virginianus*, shooting, thermal imaging, urban wildlife management, white-tailed deer

Proc. 22<sup>nd</sup> Vertebr. Pest Conf. (R. M. Timm and J. M. O'Brien, Eds.)  
Published at Univ. of Calif., Davis. 2006. Pp. 532-533.

### 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 that 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 that lends itself well to an urban deer control program. Thermal imaging equipment in several configurations has played a key role 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 1 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 that 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 (Figure 1).



Figure 1. A Three-Man Thermal Team includes a TI operator, a MaxaBeam™ operator, and a sharpshooter. The Team is shown here in search formation.

The most versatile TI unit in the program is the Palm IR 250D (formerly Raytheon Thermal-Eye™ 250D) Digital. This hand-held unit is lightweight (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 a distance of 2,400 feet. This TI unit is retro-fitted with a small flat laser point sold by Radio Shack®. The laser

allows silent communication between the TI operator and the other team members. Activation of the laser directs the other team members to the location of the target.

The spotlight of choice is the MaxaBeam™. This is a 6-million-candlepower 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 that a sharpshooter can utilize. Splash-back light is minimal with the MaxaBeam™ focused to a narrow beam (Hodnett 2003).

Suppressed weapons utilized by the Team range from .22 caliber to the .375 H&H magnum “Suburban”. Urban deer control demands versatility and adaptability; this holds true for ammunition as well. Bullet design, weight, and velocity must all be properly selected to match the situation. If there is concern about noise, a sub-sonic round is likely in order, although slower bullets will have a shorter effective range.

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 (Figure 2), 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.

## RESULTS

The procedure described above has proven to be quite effective in the removal of an entire deer herd. With practice 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



Figure 2. The Team shown in shooting formation.

important use, however, is in ensuring public safety by making certain that operational areas are free of unauthorized people, pets, infrastructure, or other down-range concerns. 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.

## LITERATURE CITED

HODNETT, E. L. 2003. Urban deer control – applicable technologies. Proc. Wildl. Damage Manage. Conf. 10:30-36.