

## **New Equipment and Tools for Wildlife Damage Managers**

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**ABSTRACT** For many years, wildlife control operators had to design and manufacture their own equipment to respond to the variety of issues they confronted in the management of wildlife damage. Today, wildlife control operators can leave the workbench and simply purchase products created by manufacturers. This transition from local to national manufacturing demonstrates that the wildlife control industry has entered a new phase of maturity. This paper presents a sampling of some significant and unusual products that have recently become available for wildlife damage management.

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For many years, wildlife control operators (WCOs) had to design and create their own equipment to respond to the variety of issues they confronted in the management of wildlife damage. Today, WCOs can leave the workbench and simply purchase products created by manufacturers. This transition from local and individual manufacturing to national and professional manufacturing demonstrates that the wildlife control industry has entered a new phase of maturity. This paper presents a sampling of some significant and unusual products that have become available for wildlife damage management. This survey of equipment extends only to those that have been developed within the past 5 years or have been cost-effective to use in that period of time or both. My goal is to inform wildlife damage management professionals about these products rather than to evaluate the products' relative value. The following survey is in no way complete. I have endeavored to focus on products that academics and regulators may not have been aware of. Prices reflect the time of writing, between Fall of 2008 to October 2009.

The importance of this information is two-fold. First, it highlights how adaptive the industry has been in creating solutions to various problems that are experienced by

consumers suffering from wildlife damage. Second, it underscores the need for policymakers and legislators to exercise caution when writing regulations affecting wildlife damage management (Vantassel et al. in press). Too often, regulations are written with the best of intentions, but result in consequences that oppose the regulation's original purpose. For example, Nebraska has a statute that prohibits the use of explosives to capture wildlife<sup>1</sup>. One may assume that the law was written to prevent explosive devices for historic practices such as fishing with dynamite, and predates devices such as propane-oxygen exploders for toxicant-free control of burrowing animals. State bans on snares have had similar unintended consequences where policymakers have prohibited their use out of concern over their lethal impact. Yet, the wording of these bans was so general that new techniques (nonlethal snaring) and new products (e.g., Collarum<sup>®</sup>) are prohibited even as well, even though they exemplify nonlethal uses of snare technology (Erickson 2007).

<sup>1</sup> Nebraska Revised Statute 37-531: wild animals; explosive traps; poison gas; unlawful use; penalty. The only exception is for the use of explosive devices used to capture or kill predators such as was done with M-44's before they began to use springs to fire the devices.

The products discussed here have been organized into four main categories: bird control, one-way doors, aesthetics, and training. Readers can learn more about these products online.

## **BIRD CONTROL PRODUCTS**

**Aerosolized Methyl Anthranilate (MA)** (HalloChem Pharma Co. Ltd., Chonqing, China), sold under trade names Fog Force™ and Reje-X-it,® is one of the most remarkable success stories in the area of bird repellents. Methyl anthranilate has been used to treat grass and crops to repel birds for some time, but it appears that aerosolized MA may be even more effective at repelling birds than applying the repellent in liquid form to surfaces. Birds encountering an effective dose dispersed as MA fog acts directly on their mucous membranes and trigeminal nerves. Methyl anthranilate is relatively expensive (\$189.00/gal). Nevertheless, when compared with the costs of installing bird netting in a “big box” store, the price of using MA is negligible, particularly given its reported effectiveness and ease of use. Methyl anthranilate also passes the safety test because it is used as a flavoring agent for certain processed foods.

Methyl anthranilate can be aerosolized by a thermal fogger, mechanical (cold) fogger, or haze generators. Thermal foggers are technically not new as they have been used with insecticides for decades to control insects. These devices may be used to disperse MA, usually for the initial dispersal of bird flocks, as they can put out a large volume of chemical in a short period of time. For example, the IGEBA TF-35 (IGEBA®, Weltnau, Germany), properly modified, creates a fog of 5–15 micron droplets. It is portable and ideal for rapid eviction of birds from roosts. At \$2,100, the fogger is not inexpensive. Fortunately, costs related to the use of MA are fairly low as 6 fluid ounces will control an acre.

Mechanical foggers (also called low-volume foggers) and haze foggers provide several advantages over thermal foggers for the control of birds. First, their ability to break up MA into small droplets, and the use of timers allowing control over product dispersal, result in reduced operating costs. Second, because MA is an oil-based repellent, care must be taken to prevent accumulation of oils on walkways where people could slip and fall; mechanical foggers and haze foggers significantly reduce this hazard.

**Bird Barricade™** (Nixalite of America Inc., East Moline, IL) just came on the market in 2009. It uses high pressure to force the MA through an atomizer head. Droplet size can reach as large as 25 microns, and items within 3 feet of the device may become moist. It offers users variable volume settings and timing options. It will disperse a gallon of MA in 2–4 weeks depending on settings, and retails for \$3,000.

**Bird Buffer®** (Nixalite of America Inc., East Moline, IL) utilizes technology that disperses the MA as a haze (5–10 microns). Small droplet size can be especially important when bird control needs to be done in sensitive areas such as airplane hangers or where excessive oiling of equipment with MA cannot be tolerated. According to the manufacturer, Bird Buffer will only use 1 gallon of MA every 4 weeks. Bird Buffer retails for \$9,400.

**Bird Hazer II®** (BirdTec™, Inc., Hershey, MI) is a product similar to Bird Buffer except that it can disperse MA at between 2–10 microns. The manufacturer says that one of these devices can keep birds out of an area as large as 1 million cubic/feet of air. Contact manufacturer for prices.

**OvoControl®** (Innolytics, LLC, Rancho Santa Fe, CA) is an EPA registered chemosterilant (active ingredient Nicarbazine) that inhibits fertilization of bird eggs. Innolytics LLC, and the United States Department of Agriculture, Animal Plant and Health Inspection Service, Wildlife Services (WS), National Wildlife Research Center (NWRC) developed the product jointly. It has two registered formulations; OvoControl G for resident Canada geese (*Branta canadensis*) and resident ducks and OvoControl P for pigeons. The chemical boasts a number of key advantages such as reversibility, relatively safety for non-targets, minimal risk of secondary poisoning, and high public acceptance. OvoControl G costs about \$0.28 per day per goose and should be applied 2–3 weeks prior to nesting and continue for 6–7 more weeks. OvoControl P is less expensive at \$0.08 per day per pigeon, but must be used almost year-round due to the pigeons' lengthy reproductive window. OvoControl P label also allows the product to be used with automatic dispensers, thereby reducing labor costs. The company says that it has petitioned the EPA for permission to use automatic dispensers with OvoControl G.

**KABA® Tape** (KABA Corp., Merrimack, NH)

A number of key advances have been made in electric-shock repellent products for birds, and it has become more practical for a variety of ledge and surface applications. Access to electrical outlets is no longer needed for installation as solar-powered panels with rechargeable battery backups provide more than enough power to handle hundreds of feet of electrical line. KABA Tape is the brainchild of Mark Ravenelle, and it essentially consists of an industrial thickness adhesive tape on which two metal wires are secured. Installation is incredibly simple as the tape will adhere to a wide variety of surfaces, including clay tile, bare

and painted metals, glass, stucco, and asphalt shingles. Surfaces should be cleaned with 1 part rubbing alcohol and 1 part water and wiped with a clean cloth (rough surfaces like stucco and asphalt shingles may require the addition of polyurethane sealant for additional adhesive support). A paper backing is then removed to expose the adhesive tape prior to application. Since there is only one type of connector for the entire system, installers only need to carry two tools, scissors and crimping pliers. The product's extremely low profile coupled with its ability to attach to uneven surfaces makes it popular for use in protecting business signs. KABA Tape costs \$3.00 per foot.

**Starling Stopper™** (Starling Stopper Manufacturing, Nashville, TN)

Starling (*Sturnis vulgaris*) nests with young that are either too deep to reach or which are located in winding exhaust vents pose a significant challenge to WCOs. WCOs needed a way to secure the vent while simultaneously removing the young. Starling Stopper is PVC pipe with a one-way door on one end and a screen on the other. The one-way door end is inserted into the vent and then turned so that the wider lip of the screen end is positioned at the bottom. The idea is that the young will seek their mother by crawling to the screen, pass through the one-way door and become trapped. The adults can then stand on the outside of the screen and feed the young until the WCO returns to remove the device and secure the vent. Young must be 1½ weeks of age in order to ensure that they are mature enough to be capable of moving to the trap. The Starling Stopper retails for \$44.00 and is reusable.

**One-Way Doors**

WCOs have made significant advances in resolving structural wildlife damage

complaints through eviction. One-way doors, devices that allow animals to exit but not reenter, stand at the forefront of this development. While commonly used for bats, it has only been in recent years that exclusion technology has become more mainstream for the control of wildlife such as raccoons (*Procyon lotor*), squirrels, skunks, and birds. Typically, these devices are made from ½-inch by 1-inch mesh 16-gauge wire and include “wings” to allow for easier installation over the animal’s exit, and a wide variety of sizes and features (e.g. spring-loaded doors) are available to choose from. Most one-way doors are straight-line exclusion devices, but 90 degree turns are available. What follows is a listing of various one-way doors and relevant features manufactured by Fields Development & Supply, LLC, Groveport, OH.

**Exit Nose Cone** Non-spring-loaded door, inline exclusion. Cost \$21.00

**Wall Hugger Nose Cone** Spring-loaded door, 90 degree turn exclusion. Cost \$21.00.

**Gutter Nose Cone** Spring-loaded door, inline exclusion, but bent to allow for ease of placement with the gutter obstruction. Cost \$21.00.

**Model E400** Spring-loaded door, straight-line exclusion attached to trap. Cost \$47.15.

### AESTHETICS

Many products have been developed that address the customer need for visually-pleasing devices. WCOs need items that are not only visually pleasing, but also reduce the risk of property damage while maintaining work efficiency. The following items are a small sample of items that serve one or more of these purposes.

#### **Stainless Steel Dryer Vent Covers** (Fields Development & Supply, LLC)

Plastic vent covers have been available for some time. However, sometimes animal pressure or owner preference calls for a

screening system that is harder for wildlife to destroy. This dryer vent cover is made from 16 gauge 304 stainless steel welded wire in a ½-inch weave. A clean-out door allows for removal of lint build up to reduce the risk of fire. Cost of the cover is \$36.00.

#### **Squirrel Trap Gutter Hooks** (Fields Development & Supply, LLC)

Targeted squirrel control requires placement of traps as close as possible to nest entrances. However, securing traps to roofs can be difficult and may potentially cause damage. With the development of smaller traps for squirrels, WCOs can now lay traps directly on gutters. With the gutter hook, the trap can be secured and stabilized on the gutter in one easy motion. Product comes in assorted sizes and features with prices ranging from \$3.85 to \$5.75.

#### **Mountain Lion Lure**

Tim Julien, owner of A&T Wildlife (Indianapolis, IN) and past president of the National Wildlife Control Operators Association, has developed a lure called “Big Cat” to aid those looking to capture or control mountain lions or both. The lure reached the market in 2005 after years of development. Julien says it is the smell of mountain lions in a jar. Lure has been used in training mountain lion dogs, trapping, and scientific track stations. It does attract gray fox and bobcat. \$20.00 will get you 4 ounces.

#### **WCS Net Blaster™** (Wildlife Control Supplies, Inc., East Granby, CT)

The pneumatic netgun was invented by WS biologist Dan McMurtry. Martin Engineering, of Neponset, Illinois, brought the prototype into commercial production. The rationale for the device was simple. Wildlife technicians needed a way to launch a net that did not run afoul of various firearm and explosive regulations. While



regulations related to the use of explosive powder have been around for decades, these regulations have become even more stringent since the terrorist attacks of 11 September 2001. By using compressed air to launch the net, users do not have to worry about discharging firearms or explosive material nor do they need to be concerned with the need to store explosive materials.

Using compressed air also avoided a number of safety issues inherent with explosively launched nets. For example, explosives can sometimes be discharged in the presence of static electricity or even by cell phone use. Therefore, explosive netting could not be used around power lines. Furthermore, some locales, such as ethanol plants, were too volatile to allow the discharge of an explosive device. Finally, sometimes rockets separate from the netting thereby becoming a missile. These devices can be used a wide variety of animals including, turkey, geese and other waterfowl, and big game, as it can project nets up to 40–60ft. The WCS Net Blaster costs \$5,000 and does not include the net or air compressor.

### **Trap Docks**

Trap Docks (Wildlife Control Supplies, Inc., East Granby, CT) are galvanized steel boxes designed to secure and protect squirrel traps. It has long been known that covering cage traps significantly reduces morbidity and mortality among trapped animals. Trap Docks have an extended front lip that protrudes beyond the front of the cage trap and pre-drilled holes for easy securing to walls or horizontal surfaces. One screw is all that is needed to secure the device to a roof. Traps can be easily removed and replaced without having to remove the dock. Trap docks cost \$35.00 each.

### **TRAINING OPPORTUNITIES**

Perhaps the area in which wildlife damage

management has seen the most dramatic developments is in the area of training. In earlier times, WCOs were self-taught or apprenticed themselves to a WCO to learn the ropes. Today, aside from the training conferences, WCOs can access a wide variety of training through video or industry related bulletin board sites. Video sharing websites such as YouTube, LLC (San Bruno, CA) now have postings by WCOs on important topics such as removing animals from walls, removing guano, calling wildlife, and trapping wildlife.

Information of a more technical nature can be found through various bulletin board sites. The Wildlife Pro Network (<http://www.wildlifepro.net/>) is freely open to anyone working in the industry. National Wildlife Control Operators Association (<http://www.nwcoa.info>) training is available to members as well. The discussions on these sites are especially specific and at times can be quite blunt. Users will obtain information on worker safety, product reviews, technical questions, and business-related issues such as marketing, employees, writing up contracts etc.

It should be apparent that the wildlife control industry has become much more mature and disciplined. New products and training opportunities demonstrate that the industry exhibits an innovative knack for solving problems related to wildlife damage. Wildlife agency personnel should be encouraged by these signs. Furthermore, they should work hard to maintain communication with the industry before initiating any regulatory reform as poor wording of regulations has done much to harm innovation.

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#### **DISCLAIMER**

The Internet Center for Wildlife Damage Management and the University of Nebraska-Lincoln does not endorse any product or technique. The mentioning of any material does not imply endorsement nor should the lack of mention of a product be construed as constituting a condemnation. We encourage readers to research the

benefits and weaknesses of any of these products before deciding to use them and to determine whether their use is both appropriate and legal in their particular setting.

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