



Ed Jakubowski

ALTERNATIVE AMMO:

Good for hunting; great for conservation.



By Gordon Batcheller

When the first deer dropped in its tracks, I was persuaded. My new copper shotgun slugs worked as advertised.

All hunters strive for one-shot kills, and I was hoping for this outcome during the 2011 firearms deer season. From my conversations with other hunters and firearms experts, I knew that copper bullets and slugs—as well as other solid non-lead ammo—were very advanced projectiles, following years of development by ammunition manufacturers. I was eager to see for myself. With the deer

management permits I had last year (in both N.Y. and Pennsylvania) I repeated this scene three more times. All four deer were either killed instantly, or in the case of one shot with a .308-caliber copper bullet, the adult doe ran about 60 yards before collapsing.

As New York's chief wildlife biologist, I am well aware of studies that show the unforeseen secondary effects of spent lead ammunition on wildlife. In California, for example, endangered condors that feed on the remains of deer shot with lead ammo

may ingest lead fragments and get sick or die. Here in New York, we have documented lead poisoning in several scavenging birds, including bald eagles.

Historically, hunters have led the way to implement sound conservation practices. Now that manufacturers have developed advanced slugs and bullets, I am encouraging New York hunters to take a hard look at this new technology. They will find excellent hunting performance, while preventing secondary exposure to lead in wildlife and people.



At modern muzzle velocities, lead bullets fragment on impact, even when sheathed in copper (left). Birds that scavenge carcasses may be poisoned when they eat these fragments. Hunters don't get as much high-quality, clean venison. In contrast, copper bullets (right) are less likely to fragment.

James Clayton



High-tech copper and similar solid non-lead bullets are available in many popular cartridges and produce near-perfect "mushrooms" when they hit the target.

James Clayton



Shotgun slugs made of copper (right) fold nicely down into "petals" expanding the slug's surface area better than slugs made of lead (left).

By its nature, lead is soft, heavy, and easily molded. Centuries ago, gun makers learned that this metal makes a very good projectile. With the slower velocities of early firearms, lead typically did not fragment. However, at the higher velocities of modern centerfire rifles, lead bullets often break up upon impact, even when sheathed in copper. Lead fragments can scatter up to 18 inches along the path of the bullet, even when it passes completely through a deer. In some cases, this lead can ruin a great deal of meat as it fragments, reducing the hunter's yield of venison and increasing the chances that scavenging wildlife may consume lead and get sick or die. Some of the fragments are too small to be seen, felt or tasted, and are therefore difficult for people to remove or scavengers to avoid. To date, there have been no reported human illnesses related to the consumption of wild game shot with lead ammunition, but lead is a known neurotoxin, and hunters should consider potential exposure risks from the consumption of lead fragments, especially in growing children.

Since copper is harder, modern bullets and slugs made of this material typically remain intact on impact. This means more energy is transferred to the target; in my case, deer. With little or no bullet fragmentation, hunters get more high-quality venison from their deer.

Before embracing a new technology, however, hunters want assurances about performance: Will the bullet or slug be accurate? Will it expand to form a "mushroom" when it hits the intended target? Fortunately, manufacturers of ammunition have designed projectiles that do both. Copper and other solid non-lead bullets and slugs are designed to fold downward from the tip into multiple "petals" that greatly expand the surface area up to two times the original bullet diameter, resulting in a quick, humane kill and more high-quality, uncontaminated meat.

What about the cost? Let's face it, this new ammunition is more expensive than lead. However, *premium* lead ammunition actually costs about the same. As the use of copper and other solid non-lead ammo grows, prices should come down. Some manufacturers already produce a "standard" grade bullet at a lower cost.

Another consideration is product availability. I recently visited a large sporting goods store in eastern New York and asked for copper ammo. The sales clerk could find only one box of 12-gauge copper slugs, while they had hundreds of boxes of lead ammo. Fortunately, there are many options for buying this alternative ammo from specialty shooting supply stores, and there are also many online options. Hunters willing to go the extra mile to find solid non-lead ammo won't have any trouble. There are endless options for reloaders, too, since bullet manufacturers make almost every caliber.

We have updated DEC's website to provide information to New York hunters on the technical properties of non-lead ammo, and list products made by several major manufacturers to help you find what you need for your firearm. Of course, it's important to practice and test the performance of your firearm with new ammo to ensure good results.

For me, solid non-lead ammo is the right choice. It performs exceptionally well in my shotgun and rifle, it has excellent ballistic properties, and it's deadly on deer. By using this ammo instead of lead, I get more clean venison for my family, and I'm doing the right thing for wildlife conservation.

Gordon Batcheller is Chief of DEC's Bureau of Wildlife and is an avid deer hunter.

For more information on alternatives to lead ammunition, visit: www.dec.ny.gov/outdoor/48420.html