



A 1790-era traditional hunter has a number of shot choices that include (left to right): homemade drip shot, "duck" and "swan" shot cast in the reproduction mold pictured, and #4 drop shot that replaced Rupert shot after 1782.

A Charger of Shot

by Dennis Neely

"For traditional black powder hunters, every aspect of their simple pursuits must come under scrutiny in an effort to achieve the highest level of authenticity possible."

Barren branches slapped and rattled. The dead half of a forked cherry squeaked and moaned. In but sixty paces warming blue turned icy gray, ominous, foreboding. Sparrows huddled, silent, almost unseen. My moccasins veered west, seeking refuge from the howling wind in the tall cedars. Wobbly, weary legs trudged through old snow, heavy but not crunchy. On that fourth Friday of 1797, the day's temperament shifted.

Hours before, like a strict schoolmaster, the afternoon thaw demanded my presence in



Rediscovering the old ways, like casting shot in a gang mold, requires careful observation, patience and a willingness to experiment until a proper technique can be mastered.

the classroom of the wilderness. It took little persuasion to slip the mental bonds of the here and now, to engage in a simple pursuit in the Old Northwest Territory.

As I started the journey back, I considered John Tanner and how he switched from round ball to shot when sustenance mattered. I, too, pulled an unspent ball from Old Turkey Feather's breech and listened to the frontier music as a charger of shot cascaded down the trade gun's barrel. I ventured to the prairie's edge, bent on a sustaining meal, a rabbit or squirrel, perhaps.

Short of the cedars, a few paces into the willow switches, a rabbit's brown eye appeared

from behind a thick black trunk, thirty steps hence. As the Northwest gun swung, as the sear clicked loud into the tumbler, bounding gray crested the little knoll, darted left and disappeared. I stood, eased the hammer to half cock and watched the rabbit stop beneath a blown down cedar skeleton, two hills west.

I retraced my path, stalked to the south and arched around the cedar grove, circling west beyond the cottontail's last sighting, just as they do. My lesson for that day was to experiment with a charger of homemade drip shot; I needed food, as well.



If the hypothesis is correct, making drip shot was a wilderness process born of necessity, requiring a few lead balls, a ladle, a campfire and a kettle of water.

For traditional black powder hunters, every aspect of their simple pursuits must come under scrutiny in an effort to achieve the highest level of authenticity possible. Placing game on the table remains a priority, just as it does for modern hunters, but the emphasis traditional hunters assign to each sojourn's historical details carries equal if not greater weight.

Often misunderstood by casual observers, the addictive quest for "period-correct" accuracy is far from "too much trouble," but rather creates a magical portal of understanding that smoothes the mental journey to a bygone era, adds dimension to the words of forgotten souls, and outlines future lessons waiting in the quiet shadows of the

wilderness classroom. Even listening as a charger of shot cascades down a barrel holds unforeseen implications.

"Before 1665 shot (as distinguished from swan and buckshot, which have always been cast in gang molds) was made by the laborious process of cutting sheet lead into cubes and then tumbling them in a barrel to more or less round off the corners," (*Colonial Frontier Guns*, T. M. Hamilton, Pioneer Press, Union City, TN, 1987, pgs 130 -132).

In 1665, Robert Hooke published an article detailing the shot making process of Prince Rupert, a principal backer of the Hudson's Bay Company, and for whom the shot was named.

"It was made by pouring molten lead through a brass colander held over a bucket of water. The molten lead fell through the holes into the water forming slightly oval dimpled shot. Rupert shot is frequently found at Michilimackinac...Some of this shot still has tails, indicating that it was possibly run at the fort," (*Craft Industries at Fort Michilimackinac, 1715-1781*, Lynn L. Morand, Mackinac State Historic Parks, Mackinac Island, MI, 1994, pgs. 40-43).

The production of "drop shot" using "shot towers" began shortly after William Watts patented the process in 1782, in Bristol, England. Modern drop shot approximates its late eighteenth century counterpart and avoids the various hazards inherent in handling and melting lead. But the easiest solution does not always advance knowledge and understanding.

Lead has a relatively low melting point, 621.5 degrees Fahrenheit, but the molten liquid can cause serious burns, and the melting of lead produces highly toxic fumes that are harmful to health. Personal safety outweighs period correctness in any experimentation in the wilderness classroom; therefore anyone attempting to melt or experiment with molten lead must learn, understand and follow modern safety procedures.

For a 1790s, lower Great Lakes hunter, cube shot technology is a century outdated. In addition to being labor intensive, cube shot varies in size, shape and weight, thus producing undependable patterns.

And in today's world, safely duplicating Rupert's process requires specialized chemical

laboratory equipment. The stumbling block is a deadly fluxing element in Rupert's formula that allowed the lead to flow easier, form "ovoid spheres," and left the characteristic dimple.

Brass colanders, patterned after English originals, are available, but users are limited to pouring pure lead. Following Rupert's process, hot coals are placed in the colander to maintain the liquid's temperature, but even then, those choosing this path report difficulty achieving results consistent with excavated samples of Rupert shot.

As Hamilton noted, larger diameter shot sizes were cast in gang molds, sometimes at hearthside at frontier forts like Michilimackinac. Gang molds were often two sided, allowing two runs to be poured, casting twenty or more shot at a time.

Catering to the abundance and popularity of smooth-bored muzzleloaders purchased with peltry, trading posts sold standardized "trade balls," along with shot "sized" by the game pursued: large buck, small buck, white goose, gray goose, beaver, swan, duck, pigeon, etc.

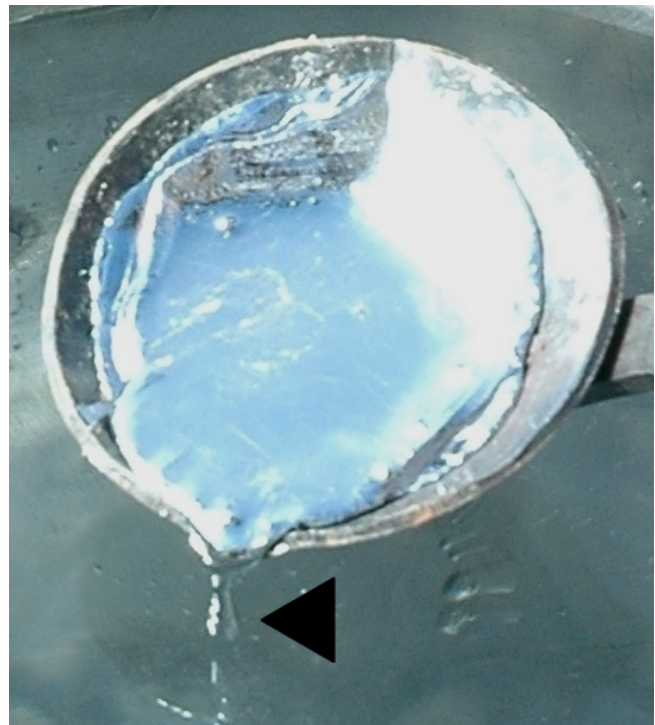
A few years back, I purchased a small, reproduction gang mold that sported cores for one .60 caliber round ball, four .28 inch "swan" shot (American size: No. 2 buckshot) and six .16 inch "duck" shot (No. 1 birdshot) (*The Museum of the Fur Trade Quarterly*, "Shot Sizes—What Do They Mean?" James A. Hanson, Chadron, NE, Spring 2001, pgs.7-13).

With a twenty-gang mold, twelve successful pours are required per pound of swan shot. By comparison, the reproduction mold necessitates 60 successful runs for swan shot and 188 for duck shot. I learned the time needed to cast a pound of duck shot was prohibitive.

Although documentation is sketchy and circumstantial, the absence of shot colanders in eighteenth century frontier inventories, coupled with their sparse appearance among recovered artifacts and the frequent occurrence of "shot with tails" leads some traditional hunters to contend another option existed: "drip shot." They believe early woodsmen remedied any temporary lack of shot by melting trade balls or bar lead and dripping the molten liquid into water, creating tear-drop shaped shot, or "shot with tails."

"After a bit of experimentation with shot making I realized two things very quickly," Nick Barber said. Barber is an experienced traditional hunter who prefers hunting with a 1620-era, 20-gauge matchlock. "First, a hunter in the past didn't take many chance shots as shot was either time consuming to make or expensive; and second, in my journey to learn how to make stuff the simplest solution is usually the best.

"I tried making various contraptions and different techniques to get it right until I just tried pouring lead into water and it worked. It's just a matter of how fast it is poured. The height it is poured from, at least at distances less than ten feet, has little to do with the shot itself. I've taken a lot of game with drip shot, and I've found it to shoot as well as many other loadings," Barber concluded.



Experimentation in the wilderness classroom includes learning to pour the molten lead at a rate that allows single droplets to form (see arrow), duplicating "shot with tails" like that unearthed at Fort Michilimackinac.

Lending careful attention to safety and Barber's instructions, silver strings, globs and "blown" lead foil were re-melted and re-poured. After a few frustrating sessions devoted to defining variables, observing drip formation and learning to control the pouring speed, usable drip shot started to appear in the bottom of the copper

kettle. With practice, melting four trade balls in a folding ladle produced over two ounces of shot with tails, consistent with eighteenth century museum samples.

In addition to discovering what constitutes an authentic interpretation, lessons in the wilderness classroom attempt to verify findings by quantifying a process that can be duplicated by other traditional hunters, yielding similar results that match the historical evidence.

The wind whipped the treetops as I stalked the yellowed cedar skeleton. My wool lined moccasin flexed the trunk, scattering snow, but the rabbit didn't bound away. In the old snow,

tracks were useless. Tree to tree, bush to bush I searched, but to no avail. At nightfall I bid farewell to the fourth Friday of 1797, a charger of shot still waiting in Old Turkey Feather's barrel.

Give traditional black powder hunting a try, be safe, and may God bless you.

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