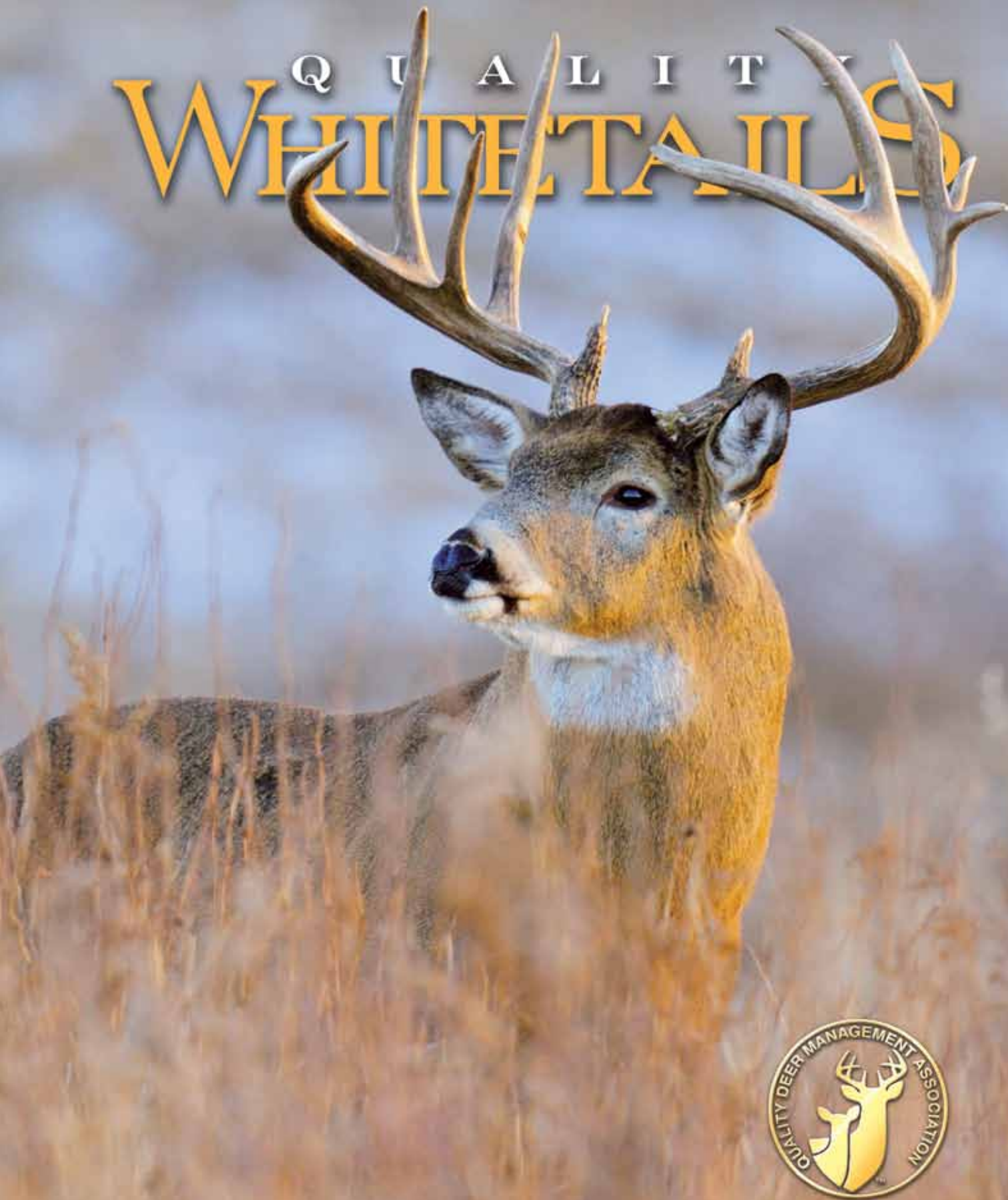


# QUALITY WHITETAILES



FEBRUARY-MARCH 2011



# Moving Mountains

**The 800-acre tract in the Potts Mountain range of Virginia was steep, rocky, and blanketed with mature hardwood forests holding a less-than-healthy deer population.**

**Six years later, the same tract is a QDM showcase.**

**By Dave Edwards**

In 2004, Josh Duncan, wildlife manager of Potts Creek Outfitters near Paint Bank, Virginia, contacted Westervelt Wildlife Services seeking guidance in developing a deer management plan to achieve their goals of offering quality archery deer hunting with a decent chance at a mature buck. After some detailed discussions regarding their goals and existing habitat, I flew up to meet Josh at the property to assess the deer herd, habitat, and overall management of the property.

The property consisted of 800 acres of rough, mountainous terrain essentially surrounded by National Forest. Other than a couple of dead-end roads, the property had no improvements – it was as raw and rugged as a property can be. The topography was very steep and rocky. With the exception of a small grassy valley, the rest of the property consisted of mature hardwoods. Josh and I spent the day hiking up and down mountains, assessing the deer habitat on the property. When I could catch my breath long enough to look around, I saw gorgeous forests that resembled old growth hardwoods you often see in National Parks while driving through the mountains along the Blue Ridge Parkway. While the mature oak forest was full of acorns at the time, it didn't take me long to figure out that the primary limiting factors of the property were adequate, high-quality food and cover for deer. The deer herd was dependent on the acorn crop, and there was no cover other than a few tree tops from fallen hardwoods. The mature hardwoods were wide open and park-like.

Hidden between the Potts Mountain and Peters Mountain

ranges, the views at the Potts Creek property were breathtaking. Potts Creek Outfitters got its name from the crystal clear Potts Creek mountain stream that flows through the town of Paint Bank and continues through the Potts Creek Outfitters property. The stream is full of rainbow and brown trout. The area looked like a post card in every direction. But despite all the scenic beauty, I was honest with Josh: Potts Creek Outfitters faced a long, uphill climb if they were serious about having quality deer habitat and hunting on this site. Undeterred, Josh was ready to put together a plan.

## **The Potts Creek Plan**

Based on our discussions, reviews of topographical maps and aerial photos, and the findings of the property assessment, Josh and I worked together to create a property development and habitat management plan to address limiting factors. These plans were "Phase I" and consisted of activities to lay the foundation for the overall management program. Among other recommendations, the following were significant Phase I strategies:

**Step 1:** Build and create a network of roads throughout the property to allow access for management.

In order to effectively manage a property, you must be able to get equipment such as tractors, sprayers, lime trucks, and logging equipment into areas that need work. Building roads would not be a small task given the very steep and rocky terrain of the

mountains at Potts Creek. In many places, the terrain appeared too steep to walk, much less work a dozer. However, it was something that had to be done if we wanted to achieve our goals.

**Step 2:** Strategically install wildlife clearcuts, 5 to 15 acres in size, throughout the property to open the canopy and produce quality natural food and cover for deer as well as create “structure” for bowhunting opportunities.

Installing these small clearcuts would address the most limiting factors – food and cover. The cuts were also strategically designed and located to create structure to increase bowhunting opportunities. As it was, hunting the Potts Creek property was like fishing a flat-bottomed lake with no structure. There were no topographic features that appeared to attract and concentrate deer in specific locations. Installing the small clearcuts would be like creating brushpiles in the lake.

**Step 3:** Install food plots to provide additional high-quality, year-round food sources.

Several benches along ridges and relatively flat spots in “hollows” were identified and included in the timber harvest plan to create a network of food plots across the property. Once the timber was cut, the real work began, as the areas needed to be stumped and worked with a dozer to remove logging debris, large boulders and rocks, and to level the fields as much as possible. As this was being done, windrows of stumps and other debris were strategically placed along the edges of each field to create funnel points that would enhance bowhunting opportunities.

**Step 4:** Assess the status of the deer herd through trail-camera surveys and apply harvest strategies accordingly to improve

herd health and achieve goals.

Based on available information from past hunting, Josh’s observations of deer, and observations during the property assessment, we knew the deer herd exceeded the existing carrying capacity of the land. The herd clearly struggled in years of poor mast production. Trail-camera surveys would help us assess the herd’s condition and determine goals to get it in shape.

### The Results

Josh and the Potts Creek Outfitters crew wasted no time and aggressively implemented the plan. Although I still don’t know how they got it done in one year considering the difficulties presented by the mountainous terrain, the Potts Creek crew established roads throughout the property to allow access for management activities, installed wildlife clearcuts throughout the property, and created food plots.

I can remember having no idea how the timber harvest would be achieved on the steep mountainsides. All I knew was I didn’t want to be the one driving the skidder. But in 2005, several wildlife clearcuts of various shapes were installed across the 800 acres of mountainous habitat. Individual cuts ranged from 5 to 15 acres in size and totaled 100 acres (13 percent of the property). Due to the steep terrain, the logging crew actually used chainsaws to cut each tree, then used experienced skidder operators (a professional term for “adrenaline junkies”) to pull the timber off the mountains – quite a feat! Not only did the timber harvest generate revenue for Potts Creek, but it created the foundation for creating quality food and cover for deer on the property and gave the property much needed diversity.

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Though scenic, the mature hardwood forests (left) offered almost no cover and little except acorns in the way of food. Road construction, followed by strategic, small clearcuts (below) in select sites around the property, addressed the immediate need for increased forage, browse and cover. Plants like pokeweed and blackberries erupted in the new clearcuts.



Between a short growing season, relatively cool climate in the mountains, and heavy browsing pressure by deer on the new plant growth, the clearcuts did not regenerate rapidly during the first growing season. However, after a couple years and an aggressive deer harvest to regain control of the deer herd, the clearcut areas have become core attractions for deer, providing an abundance of quality browse and great cover. Fawning and escape cover, nearly nonexistent before, is now adequate and supports many deer. The clearcuts improved wild turkey habitat as well by providing quality nesting and escape cover. While years with high mast production are certainly good years for deer, the herd is no longer mast-dependent as it had been. Even in years of poor acorn production, adequate forage and browse is available in the regenerating clearcuts and food plots.

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From a hunting standpoint, the wildlife clearcuts have become focal points. Many stands on the property are either along the edge of cuts or along trails leading to or from these areas, as they have become the primary bedding areas for deer.

For most of us, the idea of “creating food plots” sounds easy enough, right? Try clearing food plots with a dozer in an area filled with rocks half the size of a Volkswagen – then try planting them! Although most large rocks were pushed out of food plots, the ground is still very rocky. Unlike many of us, Potts Creek managers can’t just drop the disks and start plowing. They would break off every disk in one pass! Their planting strategy relies on no-till methods. Herbicides are used to clean the planting surface, lime and fertilizer are applied (by ATV in more remote plots), and seed is either broadcast or drilled where possible. Through applications of lime, they have raised pH levels in food plots from the high 4’s to a range of 6.5 to 7.0.

Even in these adverse and challenging conditions, Potts Creek Outfitters is able to maintain year-round quality food plots including exceptional perennial plots of chicory and clovers. Unlike in the past when the deer herd was at the mercy of fluctuating acorn crops, deer now have access to year-round high quality food sources in food plots and wildlife clearcuts.

In 2004, trail-cameras were used to assess the deer herd. The results were not surprising – the deer herd was in relatively poor condition. The population was very high, fawn recruitment was less than desirable, the adult sex ratio was out of balance, and very few mature bucks existed. In fact, the oldest buck photographed on the entire 800 acres was a single 2½-year-old. Josh and his crew initiated a program that included aggressive doe harvest and protecting young bucks.

Before the management program was initiated – when deer density was very high and the habitat was poor – the deer herd exhibited many characteristics commonly observed in overpopulated herds: overbrowsed habitat, poor body weights, low fawn survival, few mature bucks, small antlers, high mortality and dispersal rates, and a prolonged breeding season. Because of the aggressive approach taken, success came quickly. Within a couple of years of initiating all improvements, the habitat and herd response was incredible. Josh and his team began seeing higher quality deer, both bucks and does, than ever before. Although the herd was in better shape, the bucks were still relatively young. Only time was required.

By 2007, herd health had significantly improved, and many bucks were making it into the 3½- and 4½-year-old age



At Potts Creek, very little available land was flat enough for food plots, and those acres were very rocky with thin soils. Tillage is out of the question at most of the sites. The answer was no-till planting after amendments of lime, fertilizer and weed control using herbicides. Currently, thriving warm-season annuals and cool-season annuals and perennials are growing in soils with a pH ranging from 6.5 to 7.0.

classes. At this point, Potts Creek Outfitters held their first archery hunts for guests, with great success. Mature buck harvest has increased each year as the deer herd has improved and more bucks have reached older age classes. The original management goal was to harvest 3½-year-old and older bucks in the 120-inch range. Given the characteristics and location of the property, this seemed to be a very logical and realistic goal. Through an aggressive approach to addressing the limiting factors of the property (and a lot of blood, sweat, tears, and good ol' hard work), the land now supports multiple bucks that exceed the 140-inch mark.

As the plan was being implemented, Josh and I constantly communicated about what was happening on the property. I have made annual visits to check on the progress and make additional recommendations to achieve

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### About This Article

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Though a strict bowhunting-only operation, Potts Creek Outfitters has still managed to meet aggressive doe harvest goals to balance the population. Buck age structure has also increased rapidly with all yearlings and 2½-year-olds being protected from harvest. Currently, multiple bucks of 5½ years or older are using the property.

their goals. Once the foundation was in place, fine tuning began. An old apple orchard on the property was revitalized through pruning, and other fruit trees were installed around food plots. Mineral licks were also established. Timber Stand Improvement (removing undesirable trees around quality trees, like oaks, to reduce competition for resources) was implemented on 70 acres bordering food plots, and strategies to manage hunting pressure have been applied.

By 2008 – just four years – the Potts Creek Outfitters team had created a white-tailed deer and turkey paradise in what once was 800 acres of undeveloped, mature mountain habitat.

**Moving Forward**

Building a whitetail paradise on such raw, rough and steep land was a challenge to say the least. While the Potts Creek team celebrated successes along the way and knew the program was coming together and working, they also knew their work was not over once it was built. For a deer manager, your work is never done. There are always things to do to maintain and improve quality habitat. To maintain their successful deer program, the Potts Creek team continues to monitor the habitat and deer herd, apply management as needed, and add improvements.

Because the wildlife clearcuts are such a big part of their success and have added much-needed food, cover, and diversity to the property, plans are currently underway to implement additional cuts in the near future. While the initial clearcuts have been providing quality food and cover for the past four to five years, they are beginning to regenerate and will eventually revert

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into young hardwood forest. By installing new clearcuts over time, managers will maintain the property in a diversity of forest age classes, which ensures high-quality habitat for a diversity of wildlife species.


Over time, food plots created during the initial phase of development are becoming easier to manage due to the buildup of organic matter, balanced pH levels, and improved access. While Josh's dream of dropping disks in the ground and plowing will never come true on such rocky ground, he has significantly

improved their no-till food plot strategies and is consistently growing high-quality crops for deer and turkey. Each year, Josh is learning what works and what doesn't, and he is learning which crops grow best in specific food plots across the property.

With deer population management, bowhunters at Potts Creek have done an exceptional job regaining control of a once overpopulated and unhealthy deer herd. Currently, the herd features a balanced buck age structure, high fawn recruitment, excellent antler quality relative to age

class, and a balanced adult sex ratio which makes for some very exciting hunting during the rut. Although it is hard to believe, they have done this exclusively with bowhunting. In fact, because their habitat quality is high compared to the surrounding National Forest, hunters at Potts Creek must apply aggressive harvest pressure to do each year to compensate for immigration of deer from surrounding lands. Despite aggressive doe harvests, much of the harvest still consists of older does, suggesting they did not grow up on the Potts Creek property. Although having to harvest an unusually high number of does each year can be frustrating for the average landowner/hunter, Potts Creek's customers are more than happy to take does with their bows, which has worked out well.

Buck age structure and antler quality at Potts Creek has significantly increased since the program was initiated six years ago. Although Potts Creek's goal is to harvest bucks once they reach 3½, harvesting these bucks with archery equipment is a challenge, and many of them survive to older ages. In 2004, the best buck photographed on the property was a 2½-year-old 6-pointer with a small rack. Today, there are multiple bucks 5½ and older sporting 140 inches of antler or more.

The success story at Potts Creek is proof that QDM can work anywhere in the whitetail's range. Despite constraints and challenges presented by the rugged mountain habitat, the Potts Creek team not only moved mountains to create a whitetail and bowhunting paradise, they have turned heads with the quality of bucks they have produced. Besides developing a sound plan based on the Four Cornerstones of QDM, and addressing the most significant limiting factors of the property first, much of their success can be attributed to their patience and their commitment to the plan. Revitalizing a deer population and improving habitat takes time. Congratulations to the Potts Creek team, particularly Josh Duncan, for their well-deserved success. 

**About the Author:** *Dave Edwards is a certified wildlife biologist and manager of Westervelt Wildlife Services. He is a QDMA member and a former winner of QDMA's Al Brothers Professional Deer Manager of the Year Award.*