odern camouflage patterns have become more L realistically-effective than ever before, with new printing technology and digitally-enhanced elements created by the likes of Realtree, Mossy Oak, Mothwing, Backland Outdoors and others, providing the real illusion of depth. Many modern patterns are so realistic it appears that you might actually walk right into them. This gives them definite shelf appeal and assures steady sales. But these obvious attributes aside, printed camouflage has one decided disadvantage: No matter how far the illusions of the camouflage craft are taken, they are still printed on a two-dimensional medium.

In the perfect settings and backgrounds strategically chosen by skilled photographers for ads and press releases, flat camouflage has the ability to blend remarkably well. In far-than-ideal conditions it can stick out like a beach ball on a leaving putting green, the bowhunter painfully exposed to the sharp eyes of wary game. Repeated washings can leave the sharpest HD patterns faded and lacking their cloaking edge, particularly if you choose natural fabrics or polycotton blends over the more durable synthetics. For bowhunters who are looking for the ultimate stealth during the most demanding bowhunts there's something better.

Three-dimensional camouflage, a.k.a. "leafy," "Shaggie," or ghillie suits, allow the bowhunter to take his cover with him, actually create cover when there is none. One buddy's moniker of "body blind" just might prove most apt. Fashioned by sewing rows of laser-cut leaves or scrap cloth, jute rope and burlap strips to a camouflage clothing base, 3-D camouflage breaks up the telltale human outline better than flat camo is able. All those leaves or shaggie pieces create a ragged, irregular outline more difficult for the eve to place or focus on. Those ragged pieces throw shadows of their own, scatter light reflections and flutter naturally in a breeze like



the vegetation around them. Instead of a flat-surfaced lump they create a multi-dimensional "bush" that blends in thick vegetation or an open field of grass equally well.

Modern 3-D camouflage has other advantages as well. The suits are most often based on airy netting materials that allow a breeze through during warm early or spring seasons to keep the wearer cooler and more comfortable. That same netting can actually act as a deterrent, even a barrier, to pesky biting insects such as mosquitoes or black flies. In fact, several of the options to be discussed below are designed specifically with that use in mind. Finally, 3-D camo acts as an instant, ready-for-action suit against lastminute hunts before or after work, worn over shorts and a T-shirt during warm seasons, over heavilyinsulated duds when it's cold or scent-containment clothing before climbing into a whitetail stand. Slip on a 3-D suit over even a tuxedo (unlikely but feasible) and your customers are instantly bowhunt ready. I recall those year's when 3-D was new to the scene. Donning a leafy suit before an evening hunt often resulted in pointing and giggling from other hunters. Climbing into my first Rancho Safari Shaggie suit sent my Labrador retrievers into fits of barking and growling. This is no longer the case. Camo clothing



enhanced by 3-D has proven deadly effective and the pointing and giggling – even the barking and growling — have been replaced by acceptance and understanding.

Predator hunting convinced me most pointedly of the effectiveness of 3-D camouflage. Calling covotes is not only great fun, but keeps me in good stead with local ranchers (who are then more open to granting hunting permission for deer and javelina). The term "wily" covote is certainly accurate. There's nothing craftier than a mature coyote, though creating the morbid cries of a wounded bunny tips the odds decidedly in the hunter's favor. Wearing 3-D camo meant I had covotes trotting into point-blank range, even one who rounded a bush and actually jumped over my outstretched legs.

Discovering 3-D camo meant my annual "run-n-gun" mountain bowhunts for spring turkey proved vastly more productive. Even when in plain sight and under 25 yards I was more often than not able to draw my bow without turning a responding gobbler inside out. Those gobblers would certainly give me a hard look, but unable to place me as a threat would stand and take it like a man when I released a deadly arrow. Suburban whitetail who spend more time looking into trees than at the ground around them no longer peg me each time they approach my stands. I slipped into some big herds of elk to pluck herd bulls from a throng of watchful cows. In short, 3-D camouflage increased my bowhunting success; allowing me to get closer to game, near the biggest, spookiest animals. Today when I'm bowhunting the most demanding game, I'll be wearing 3-D of some brand or design.

Leafy Options

Leafy suits prove the most popular option for quick 3-D coverage. They are extremely lightweight, made to put on over the lightest warm-weather wear or heaviest insulated attire. The best are based on lightweight mesh shells that let a breeze through but keep most insects at bay, as they are formed by long, repeated rows of laser-cut nylon leaves attached vertically by a single line of stitching. They also allow customers to pack them in small spaces, even a daypack pocket, until ready for use.

Lately some of the large discount chains are offering 3-D leafy suits sewn on solid nylon shells, which not only prove hot – like wearing a nylon windbreaker – but much noisier than mesh-shelled products. This isn't conducive to bowhunting stealth. Depending on the brand, and even the printing process transferring camouflage patterns to leaf fabric, even the best brands can prove stiff and a tad noisy, but most soften up after a couple of washings to become bowhunting silent.

Underbrush by Shelter-Pro has been in the 3-D clothing game for more than a decade, becoming a standby in 3-D hunting attire. Underbrush leafy suits not only help bowhunters blend into their environment but are extremely durable. The 3-D Field-Lite 3-piece Suit (including jacket, pants and head cover) now include Whisper Leaf Technology, a much softer material that eliminates any noise. The background mesh is now camouflaged as well to match leafy material for improved concealment benefits, unlike solid but neutral background mesh seen in beginning suits. A new design allows each "leaf" to stand out more prominently for a greater 3-D effect, and there are also 75 percent more of them than before.

Jacket sleeves and pant-leg openings include elastic cuffs, a patented Visor Pro Head Cover concealing and shading the eye area. It can be worn without a cap. The jacket includes a fully zippered front, drawstring waist and two front cargo



Whitewater Outdoors' 3D Realleaf Coverall allows the bowhunter to remain ready for action. It is a suit that can be worn over any attire to provide instant deployment of the ultimate camouflage.

pockets. The pants sport an elastic waistband. A 3-D Leafy Parka is also offered. They are offered in S/M, L/XL and 2XL/3XL sizes. Standard camo patterns include Mossy Oak's Break-Up and Obsession, though the company says other patterns may be available.

Natural Gear, the "Science of Camouflage" people, also offer a lightweight 3-D Suit that includes a jacket with attached hood, pants and face mask. Bowhunters will find that the flat fabric on the chest and inside of sleeves gives them piece of mind that string interference will not ruin a shot at game. The hood includes a drawstring cord for full adjustability, the cuffs snap for a snug fit, and the jacket is cut long to assure total coverage. Sizes include S/M, L/XL and 2XL/3XL. Camouflage patterns include original Natural and newer SCII (Science of Camouflage 2nd Generation). A 3-D Youth Suit is also offered with the same features, but



ASAT camouflage is one of the most effective patterns out there. Add it to a leafy, 3-D suit and its cloaking qualities are made that much better, perfect for the most demanding bowhunts.

sized S/M to fit ages 10 to 12 and L/XL to fit ages 14 to 16.

ASAT Camouflage's Vanish Pro 3-D Leafy System is a lightweight camouflage over-system designed to wear over scent-control garments, rain gear or bulky insulated clothing. The polyester fabric is leaf cut and chain stitched to the mesh liner also printed in ASAT Camouflage for added concealment and disguise. The 3-D System includes jacket, pants and headnet. The pants include 22-inch leg zippers to go over boots quickly without the need to remove them. The collarless, full-zip jacket includes elastic cuffs. The VisorPro Face Mask has rear cable lock adjustment to assure an uncluttered field of view. They are offered in sizes M through 4XL, and in original ASAT and ASAT Snow camo patterns.

TrueTimber Camo uses Milliken leafy material to produce a suit shelled with military-grade mesh to be extremely durable. Milliken's exclusive intrigue leafy technology



Robinson Outdoors' 3D Realleaf XLT wear keeps the bowhunter covered on many levels. Three-dimensional leaves give the bowhunter a concealment edge, while the ScentBlocker 30 SPF activated carbon provides a scent-containment advantage.

includes an ultra-soft rip-stop material to be quiet and lifelike. This process enables the suit to scatter up to 33 per-

cent more light than conventional leafy suits for a greater 3-D effect. TrueTimber's suit sports a hooded button-up jacket with elastic cuffs including thumb holes to exclude the need for gloves, pants and a facemask. Devin Sweeney, TrueTimber's Brand Manager, says the suit is extremely durable and gets better the more you use it, since snagging briars and brush create even more wrinkle to make them stand up even more. Suits are available in sizes S/M, L/XL and 2XL/3XL, and in TrueTimber's MixedPine, Conceal and Flooded Timber patterns.

Whitewater Strategic Hunting Apparel offers several 3-D options to keep your customers covered in a variety of bowhunting situations via their Realtree Pro-Series line. All include a patented 3D Realleaf design that assures leaves stand up to better shatter the human outline. The 3D Realleaf Coverall makes it easy to suit up before a hunt, no matter what your customer chooses to wear beneath it. The Coverall includes a camo-printed mesh base perfect for warm-weather hunts. The one-piece coverall includes an attached hood and removable leafy facemask, full front snap closure, two pass-through front pockets, side leg zippers to go over boots without removing them, included snap-on mesh gloves, elastic wrist cuffs and a grommeted rear license loop. They are offered in sizes S/M, L/XL and 2XL/3XL.

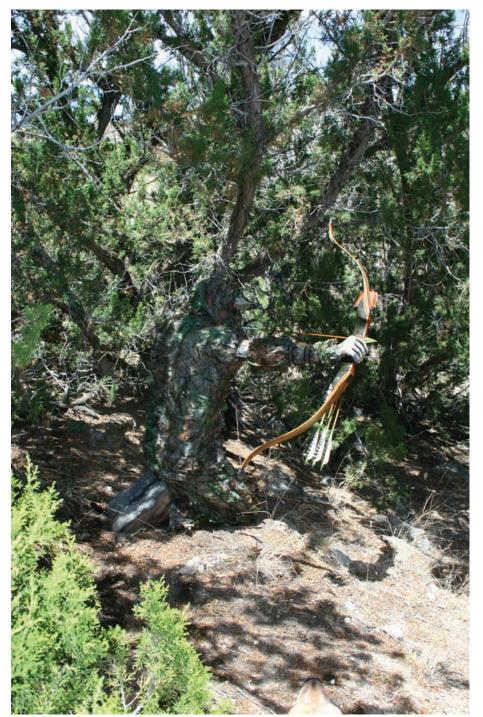
The 3D Realleaf Jacket and Pant include a solid-fabric base and lining perfect for fall hunts when mornings prove chilly. The bomber-style jacket includes a full front zipper, two large slash pockets, adjustable wrist cuff, elasticized waist and grommeted rear license loop. The pants are a pull-on design with elastic draw-cord waist, include two slash pockets and two cargo pockets, plus zippered legs for quick dressing even with boots on. They are available in M to 2XL sizes.

The 3D Realleaf Turkey Vest is just as useful to keep gear organized on stand as it is during a spring turkey hunt. The front of the vest closes with Fastex buckles and is simply loaded with pockets; 10 on the outside and seven on the inside. It includes a back pad and extra-thick padded seat for comfort, blood-proof game bag, and rear grommeted license holder. Look for it in sizes M/L and XL/2XL.

Whitewater's Realtree Pro-Series also includes a wide variety of 3-D Realleaf accessories. Included are 3-D Realleaf Gaiter, Glove, Ball Cap, Boonie hat, Boonie With Mask and Headcover. All Realtree Pro-Series options are camouflaged with Realtree's new AP HD pattern.

Mossy Oak Performance Apparel 3-D option offers the unique advantage of moisture management and ventilation. The Diffusion Pullover and Pant include a multitude of break-up leaves, but these are sewn to Mossy Oak's proven VaporTec material to keep customers feeling dry and comfortable when working up a sweat or bowhunting in warm weather. The Anorak-style pullover has quarter-front zipper, VaporTec material in underarm areas and side seams for wicking and less bulk. The attached hood is also lined in VaporTec. The kangaroo pouch zipper-front pocket accepts both the Diffusion pullover and pant, allowing it to be stored compactly, while two front hand pockets are also included. Diffusion pants include an elastic waistband with drawcord, VaporTec inner leg panels for comfort and silence, lower leg slits to allow putting them on over boots, upper hip-side and front zipper slits for inner pants access, and adjustable snap tabs on leg bottoms. They are offered in M/L and XL/2XL sizes and Obsession camouflage. A Diffusion balaclava is also offered for complete coverage.

The scent-obsessive customer is not left out of the 3-D loop, since Robinson Outdoors is offering ScentBlocker 3D Realleaf XLT scentcontainment options. Jacket and pants include XLT (Xtreme Lightweight Technology) construction, utilizing (Scent Protection Factor) SPF 40 activated carbon fused between super-soft outer fabric and embossed inner lining to create the lightest, most comfortable carbon technology ScentBlocker offers. The



TrueTimber Camo's 3-D leafy suit includes ultra-soft rip-stop leaf material to be bowhunting quiet, sewn onto military-grade mesh that is extremely durable. The suit includes a hooded, button-up jacket with elastic cuffs and thumb holes that help extend the sleeve for use as gloves, plus pants and a facemask.

3D Realleaf XLT Jacket and Pant include four-direction stretch comfort, BodyLock collar, wrist cuffs and waist to keep human scent locked in, stand-up collar, full front zipper and two side slash pockets; among other features. They are offered in Mossy Oak Break-Up and sizes S through 3XL. A 3D Realleaf XLT head cover, gloves and ball cap are also offered.

Shaggie & Ghillie Systems

Products like Rancho Safari's Shaggie System suits and more classic ghillie outfits offer the ultimate in camouflage concealment. These are styles chosen by military snipers to avoid detection during rigorous training sessions, and during lifethreatening missions in the real world where hostile enemies shoot



Camo Unlimited's Jackal Ghillie Suits include a bugproof liner for comfortable bowhunting during early seasons and scent-free, mildew-resistant material that is also bowhunting quiet.

back. Longer hanks of material provide further break up than leafy suits, concealment that customers take with them when cover is thin or nonexistent.

An obvious concern expressed by many bowhunters is string interference during the shot. This is a legitimate worry, as the material in ghillie-type suits is much more substantial than that of leafy suits. Jerry Gentellalli, owner of Rancho Safari and originator of Shaggie System suits, advises to simply take a pair of scissors and remove any offending material. There is plenty of material to wear an arm guard (and even a bicep gaiter) — even if a customer doesn't normally employ one against string slap, to insure the bow-arm sleeve remains under control.

against a bungled shot

without ruining the

effectiveness of the suit.

Still. I have found it best

Rancho Safari's Shaggie System suits have proven most popular with bowhunters because they are designed by a bowhunter specifically for bowhunting. These are not military or varmint-hunting suits like so many out there; though Gentellalli sells plenty of them to military special-ops units. The arms include quick-release, adjustable



During author Patrick Meitin's Osceola turkey hunt in Florida temperatures and humidity levels soared while mosquitoes swarmed. Shannon Outdoors' Big Leaf Bug Buster Plus solved both problems, keeping him cool and bite free.

compression straps to keep extra material and sleeves under control and away from the bow string. Original Shaggie include scrapes of cotton material, hemp rope and burlap strips; Ultra-Light suits have lighter mesh-material hanks in addition to standard hemp rope and burlap. Both options include an industrial camouflage netting base that allows cooling breezes through but proves rugged enough that I once packed the boned meat of a deer inside the netting and slung it over my shoulder. Many camouflage options are available, including camo schemes from Mossy Oak, Realtree, Gentellalli's own JeriFlage (in woodland and desert) and straight burlap/hemp for prairie grass or marsh settings.

Jackets are offered in long (kneelength) or short (waist-length) and include full front zipper, Velcro tabs and draw-string/barrel-lock waist adjustment. Collared or attachedhood versions are also available. Pants or gaiters are chosen according to the jacket option (long or short). To complete the outfit several head-cover and hat options are offered. Shaggie daypack, bow-limb and fletching covers are also available.

(*Editor's Note:* Rancho Safari is still getting reestablished after last year's brush fires destroyed the operation. ArrowTrade was told the company plans to be able to ship product again by mid-September.)

Camo Unlimited Jackal Ghillie Suits offer a body cover system with true foliage-like camouflage. The Jackal suit is lightweight, built on a comfortable, bug-proof liner with 100 percent waterproof/fire-resistant materials. They include quiet, rustle-free materials plus are treated with rot and mold retardant for years of hard use. The button-front jackets include adjustable cuffs and detachable hood, while the trousers sport suspenders, draw-string waist and adjustable ankles. They are available in Woodland, Desert and All-Terrain Digital camo schemes.

Bushrag Camouflage Systems offer ultimate concealment through classic ghillie-suit design. Several options are available, but the Ultra-Light Synthetic Ghillie and The Bow Hunter are most apt to please serious bowhunting customers. The Ultra-Light includes synthetic string material to make it lighter and more comfortable; a complete outfit is just 3.5 pounds. The synthetic material is scentless, hand-washable, non-allergenic, and fire, water and mildew resistant. These new suits are available in either a long jacket style or a jacket/pants combination, both with ³/₄-inch netting shell that allows wearers to insert natural vegetation to further enhance its camouflage properties.

Bushrag's The Bow Hunter, as the name implies, is designed for bowhunters. The bow arm and chest areas are clear of camo material that could interfere with the bow string on release. This ghillie suit covers from head to boot and comes with two additional pounds of



While ghillie-style 3-D suits can appear cumbersome and even hot, they prove quite airy and lightweight. Here Rancho Safari Shaggie inventor Jerry Gentellalli wears a Shaggie suit while bowhunting wilderness elk.

jute/burlap and two applications of fire retardant.

Bug Protection

Early archery seasons in many portions of the nation come with biting, stinging insects. Now there are bugs, and there are bugs. A few buzzing mosquitoes are easily kept at bay with most standard, mesh-lined 3-D suits. But when bugs arrive in swarms, and prove extremely persistent, more protection is in order. The products to follow were designed with the latter in mind; suits to wear during a northern spring bear hunt over bait, during a Deep South turkey hunt, or in any place where swampy terrain introduces pesky insects to the scene.

Underbrush (mentioned earlier) also offers the Bugmaster 2-Piece Suit. Like their standard 3-D camouflage options it includes cut leaf strips sewn to a matching camouflage mesh base with elastic waistband pants and cuffs, patented Visor Pro Head Cover, full-zippered jacket front and convenient storage pockets. To keep the worst kind of insects at bay the suit includes a Bug Blocking No-See-Um Mesh over the entire suit and an adjustable face screen built into the Visor Pro Head Cover. Other options remain the same.

Shannon Outdoor's Bug Tamer products have proven world class at keeping biting insects off of bowhunters' skin. An inner layer of soft "fishnet" is sewn beneath a lighter bug-barrier mesh so that even if mosquitoes should land on the outer material their proboscis can not extend past the fishnet to penetrate skin. The fishnet also allows air to circulate more freely in warm weather. Newer DoubleGuard Bug Tamer Plus has a specially-designed no-see-um mesh. It's more than twice as strong and lightweight as the original material but still allows excellent ventilation. Newer inner mesh material is now sewn from 50 percent lighter material, meaning you stay more comfortable on the hottest days. If that weren't enough, Bug Tamer Plus fabric also uses Contain scent control technology to fight human body odor for the life of the garment. Jacket pockets are made roomier than before and have been moved forward for easier access. The jacket hood has been redesigned and the face shield is dyed black at eye level, dramatically improving vision through the mesh under any lighting conditions.

Big Leaf Bug Buster Plus also serves as a highly-effective 3-D camouflage. These are the biggest 3-D camo leaves in the industry and are individually stitched onto each suit's mesh shell. This makes Big Leaf Bug Tamer Plus top-notch 3-D camouflage, but also a totally effective deterrent against biting, stinging insects, in an outfit that is so light and comfortable that customers can bowhunt successfully in a T-shirt and shorts during the hottest early seasons when swarming insects would otherwise make being outdoors impossible without stinky, gamespooking repellents.

Rocky Outdoor Gear's Buzz Off Insect Shield Repellent Apparel is the first and only insect-repellent clothing to be registered with the Environmental Protection U.S. Agency (EPA). The active ingredient – a synthetic permethrin that occurs naturally in chrysanthemums - is used in the patent-pending Buzz Off Insect Shield process, binding the active ingredient to the fabric fibers of each garment so that its effects lasts through 25 washings. The repellent is odorless and colorless, and doesn't change the feel of the garment. Buzz Off apparel repels mosquitoes, ticks, ants, flies, chiggers and no-see-ums.

Rocky's hunter friendly and well made Leafy Collection includes Buzz Off Leafy jacket and pant that not only provides its insect-repelling protection, but 3-D camouflage concealment. They include Pongee leafy outer shell in a bomber-style jacket and 6-pocket pant. The jacket includes elasticized waist, full length front zipper and two-way cargo pocket. The six-pocket pant includes two scoop pockets, two side cargo pockets and two covered rear pockets, hidden elastic waist adjustments, comfort gusset and ribbon-tie leg openings. They are available in Mossy Oak Break-Up, sized M through 3XL.



It was bowhunting predators that convinced the author of this article that 3-D camouflage was something extraordinary. Nothing's more wary than a coyote, and camo enhanced by 3-D gives a decided edge in bagging these crafty critters.

CONCLUSION

The animals we bowhunt are subjected to an increasing amount of hunting pressure each season. Finding that out-of-the-way hotspot that sees few hunters and leaves game naive and vulnerable has become more difficult. Bowhunting is simply becoming more challenging all the time, while at the same time most of us have less time to do it. This leaves modern bowhunters looking for any product that promises to increase their bowhunting success. A suit of 3-D camouflage offers that edge. It keeps bowhunters concealed from the sharp eyesight of wary game, while it more easily allows them to reach full draw undetected. Bowhunters no longer point and laugh when confronted by the newest 3-D clothing options. These hunting duds have proven themselves and 3-D camo clothing has entered the mainstream. Choose features bowhunters will find most useful in your area, stock it and it will sell.

Manufacturer Directory to 3-D Camouflage

ASAT Outdoors (406) 563-9336 www.asatcamo.com

Camouflage Systems LLC/Bushrag (310) 328-2112 www.bushrag.com

Camo Unlimited (866) 448-2266 www.camounlimited.com

Mossy Oak Apparel Co. (800) 331-5624 www.mossyoakapparel.com

Natural Gear (800) 590-5590 www.naturalgear.com

Rancho Safari (760) 789-2094 www.ranchosafari.com

Robinson Outdoor Products (800) 397-1927 www.robinsonoutdoors.com

Rocky Shoes & Boots (800) 848-9452 www.rockyboots.com

Shannon Outdoors (800) 852-8058 www.shannonoutdoors.com

TrueTimber Outdoors (866) 892-2266 www.TrueTimber.com

Underbrush by Shelter Pro LLC (888) 376-2004 www.underbrushblinds.com

Whitewater Outdoors (800) 666-2674 www.whitewateroutdoors.com