

IT MAY BE HARD TO THINK OF ROOFING WORK AS "FUN," but slate roofing can be both fun and creative when standard installation techniques are set aside and new ones are employed. Standard American slate roofs include field slates that are all the same length and width and usually the same color. Yet, slate roofing allows for a number of variations, including length, width, shape, color, thickness, and recycled content. All of these variations can be blended on one roof - the combinations are endless.

The technique is simple enough. On a standard installation, say all 18 " long slates, the field of the roof is chalked for the exposure on $18^{\prime \prime}$ slates, usually with a $3^{\prime \prime}$ headlap. That exposure is $7.5^{\prime \prime}$, so the chalk lines are set $7.5^{\prime \prime}$ apart up the roof deck. Now, let's add 20 " and 22 " slates to the mix. They are also installed on the same chalk lines, but the extra length is left to simply hang down. Because the extra slate length creates extra headlap, these longer slates can also be lifted above the chalk line an inch or two in order to adjust the appearance of the finished roof.

Add a variety of colors, which, in the U.S. include various shades of gray, purple, mottled green and purple, red, "sea green," various shades of green, and black, in whatever combination suits your desire. And make sure you are using a variety of widths, such as 9 ", $10 ", 11^{\prime \prime}, 12^{\prime \prime}$ and $14^{\prime \prime}$. If you want to throw some thicker slates into the mix, go ahead. Same for salvaged, weathered slates - they can add some character.

In the end you can obliterate any semblance of uniformity on the roof. Or you can install a more conservative style that retains some uniformity. The advantages of this roof style include a very tight roof due to the extra headlap, not to mention the unique, one-of-a-kind artistic character of the roof. You can also take a mix of sizes and colors of slates that are lying around left-over and make a beautiful roof out of them. You can create a color scheme that suits your needs, matches your house, or just appeals to your sense of artistry.

There is a trick to the system, however - blend the slates on the ground before you send them up onto the roof. Let's say you're installing $1 / 318$ ", $1 / 320$ " and $1 / 322^{\prime \prime}$ slates. Then for every 12 slates sent up to the roof, there will be four of each length. If your 18 " slates are two colors, or maybe half new and half salvaged, then, of those four, two are one type and two are the other. Etc. You have to figure
out your blend ahead of time this way, then blend the slates on the ground - a job usually done by the ground worker(s), and an important job as well (Figure 1). The slates are then sent up already pre-mixed so the installers just have to look at each one to make sure they're grabbing the correct width. Each overlying slate should lap the underlying slate down the center, if possible, although a $3^{\prime \prime}$ lateral overlap is permissible. The installers are also looking at the lengths and colors, trying to not lay the same length and/or same color beside each other. In other words, the installer is looking at every slate prior to nailing it. This is what creates the artistry.

For this article, we have installed six such roofs on small buildings using different combinations of lengths, widths, colors and recycled content. Each roof is totally unique in its own


1) Timberframe Structure, under construction, at the 2005 International Preservation Trades Workshops, Belmont Technical College, St. Clairsville, Ohio. All new VT slates donated by Camara Slate Company, Fair Haven, Vermont. 3 sq. VT sea green: ( 1 sq. each: 14 " random, 16 "r, 18 "r) 1 sq. VT black: ( $1 / 3$ sq. each: 14 "r, $16 " r, 18 " r$ ) 1 sq. VT purple: (1/3 sq. each: 14 "r, $16 " r, 18 " r$ ) 3 sq. VT unfading green: ( 1 sq. each: 14 "r, $16 " r, 18 " r$ ) All are random widths (9", 10", 11", 12", 14"). A few 20 " long slates are also in the mix. 8 "x16" slates were used to make a saddle ridge. For every 8 slates carried up, 3 were sea green, 1 was VT black, 1 was VT purple and 3 were unfading green, all in mixed widths.
2) Retreat Center, under construction (saddle ridge not yet installed in photo), roofed at the Natural Building Colloquium East, 2005, Bath, NY. All new Vermont slates donated by Camara Slate Company, Fair Haven, Vermont.

3 lengths: 14 ", 16", $18 " ; 5$ widths: $9 ", 10 ", 11^{\prime \prime}, 12^{\prime \prime}, 14^{\prime \prime}$ 3 squares new VT sea green (mixed lengths and widths) 2 squares VT black (mixed lengths and widths)
2 squares VT purple (mixed lengths and widths)
1 square unfading green (mixed lengths and widths)
For every 8 slates carried up, 3 were new sea green, 2 were VT black, 2 were VT purple and 1 was unfading green.
3) Cottage, under construction, designed and built by Brent Ulisky, Grove City, Pennsylvania. We hand-rounded all of these slates using GT slate cutters and/or a GB hammer.

3 lengths: 18, 20, 22, all rounded - front of building 1 sq.: Mottled grn. \& pr. (new): $1 / 2$ sq. $10 \times 20 ; 1 / 2$ sq. $12 \times 18$ 1 sq.:Sea green (new): $1 / 2$ sq. $12 \times 20 ; 1 / 2$ sq. $12 \times 18$ 1 sq.: Unfading green (new): $12 \times 18$
3 sq.: Sea grn. (salv.): 1 sq. $14 \times 22$; 1 sq $12 \times 22$; 1 sq $11 \times 20$ The mix: 6 salvaged sea green ( 2 from each size), 2 purple (one of each size), 2 unfading green and 2 new sea green (1 of each size) or 12 slates total per handful sent up to roof. Half of these slates are new, half salvaged.
4) Picnic Pavilion, designed and built by the author, Grove City, Pennsylvania. We used a blend of both new and salvaged slates from our slate yard. 3 lengths: 16", 18", 20 "

NY red (all 16 " long by 8 ", 9 ", 10 " wide)
VT unfading purple (new) 12"x18"
VT mottled green and purple (new) 12"x18", 8"x16"
VT sea green (new) 12"x20"
VT unfading green (new) 12"x18"
VT sea green, salvaged, stained, 12"x18"
VA Buckingham (salvaged) 12"x20"
VT sea green (salvaged) 12 "x20", 14 "x20"
5) Woodshed, designed and built by the author, Grove City, PA. Here we used only two lengths, half 18 " and half 20 ". All of the slates were sea green, mostly salvaged, from five different old roofs.
$1 / 5$ new sea green, 12 "x18"
$1 / 5$ salvaged sea green, 10 "x20"
$1 / 5$ salvaged sea green, 12 "x 20 "
$1 / 5$ salvaged sea green, 9 " $\times 18$ "
$1 / 10$ salvaged sea green, 10 "x18"
$1 / 10$ salvaged sea green, 11 "x18" For every 10 slates carried up, 2 were $12 \times 18$ new sea green, 2 were $10 \times 20,2$ were $12 \times 20$, 2 were $9 \times 18$, 1 was $10 \times 18$ and 1 was $11 \times 18$. Note: Smaller slates require more per square.
6) Hunting Stand, designed and built by the author, Grove City, PA: $1 / 3$ salvaged red, 16 " long, 8 ", 9 ", 10 " wide; $1 / 3$ mottled green and purple, new, 8 "x14"; $1 / 3$ salvaged purple, 10 "x18", slightly thicker.


