



# Pocket Change

By Bob Dews

The way pond/stream artist Bob Dews sees it, simple structures he calls 'dirt pockets' could revolutionize the way plants are used in naturalistic watershapes. For starters, he says, these pockets give him unprecedented flexibility in taking care of the aesthetics. In addition, they also offer benefits when it comes to the sustained health of the streams, ponds and cascades he's been installing for clients in the most beautiful parts of North Carolina.

**T**o make a pond or stream successfully "natural," the designer and installer must know what it takes to produce an illusion so convincing that observers are certain the end product is actually a naturally occurring body of water.

It's no secret in the trade that this illusion is made or broken at the edges, where the physical boundaries between waterway and the hardscape and plantings must be both precisely controlled and completely concealed. Necklaces of stone won't cut it, nor will waterlines sharply defined by lines of terrestrial plants. In fact, the challenge here is to make visually linear boundaries disappear, and that's a tall order for even the best pond/stream designers and builders.

In my own projects, I work almost every day in tweaking and refining my approaches to these margins and edge treatments, and I've come up with many ways to enhance the natural appearance of my ponds and streams. In recent years, I've been honing a technique for landscaping in and around the water that's given my work an entirely new dimension: It's a type of planting container I call a "dirt pocket" – a simple structure that lets me plant a broad range of non-aquatic plants directly in contact with the water.

## Beyond the Pot

With dirt pockets, I've been able to broaden the variety of plants I use along edges and elsewhere in my watershapes. At the same time, these dirt pockets improve water quality; turn some of the most demanding plants (in terms of their water requirements) into the easiest of all to maintain; and dramatically increase the visual appeal of all my ponds, streams and cascades.

Simply put, dirt pockets are structures I use to contain soil and plants' root systems. Using cuttings from sheets of geo-textile underlayment material, I hold the planting in a ball form or in whatever shape I want and place it somewhere directly in contact with the water within the liner. The root system is fed by the constant flow of water moving through the watershape.

I'll place plants at different elevations relative to the waterline to accommodate their specific needs for water. Some of the root balls will be completely submerged, others will crown just above the surface, and still others will be positioned above the waterline, allowing only the bottoms of the roots to touch the water.

I first developed this technique in my efforts to conceal the locations of the pots I'd always used to contain plants in or near the water. I'd tried for years to disguise these pots and make them look natural on the banks of



One effective use of plant pockets is in softening the “edges” that often become a little too apparent at points of elevation change. Here, for example, the plants at the water’s level break down any possible sense one might get of too-regular stone stacking behind them.

my clients’ ponds and streams, but I could never get them to *disappear*, which is what I really wanted.

As a result, many of my past watershapes looked great during the growing season, when lush foliage hid the pots – but it was an illusion that held up for just three or four months out of the year in our area. The rest of the time, when the foliage retreated or disappeared, the outline of the circular pots would be visible throughout the space, disrupting any pretense of “nature.”

Unlike pots, which have predetermined shapes and sizes, my dirt pockets can be tailored to any size, shape or depth; can easily be concealed and used in an amazing variety of ways; and, because they are

### Edge Contrasts

Edges are tough because of the two contrasting elements we as watershapers are trying to combine.

Liquid water is smooth, flowing, silky, and graceful. It’s also highly reflective, transparent and ever-changing. By contrast, rock is solid, hard, heavy, seemingly unchanging, not very reflective (in most cases) and certainly not transparent. So often, the tendency in watergarden design has been to surround the silken water with unyielding rocks with little else in the mix to soften the visual boundaries between the two materials.

In essence, it’s akin to building a swimming pool or fountain with a tile edge. That’s fine if it’s what you mean to do, but it’s certainly not the desired effect in a naturalistic pond or stream. One of the best ways to soften that transition is through the use of plants, which are solid but soft, pliable and subtly textured.

Unfortunately, we’ve all been taught to confine plants in solid containers when we place them in our watershapes. That might work for lilies and lotuses, which grow from the bottom of the pond, but when you’re working to make seamless, natural-seeming transitions from water to rock, the last thing you want to see is a plastic pot.

Managing the aesthetics of these transitions is what dirt pockets are all about. To do so in a way that creates a healthy situation for the plants and the stream itself is the icing on the cake.

– B.D.

permeable, can be used to create an environment in which the water of the stream or pond nourishes the plants and at the same time is being cleansed of troublesome organic compounds.

### Wondrous Flexibility

As mentioned above, I make these dirt pockets using scraps of geo-textile fabric of the sort used as an underlayment to protect liners from the surrounding soil.

I start by arranging rocks of different shapes and sizes to support the contours of the pocket – basically a mold for its shape. Then I press the fabric into the void defined by the rocks and fill it with

a sandy-type soil. The fabric retains the soil while providing an area of natural transition between water and rock.

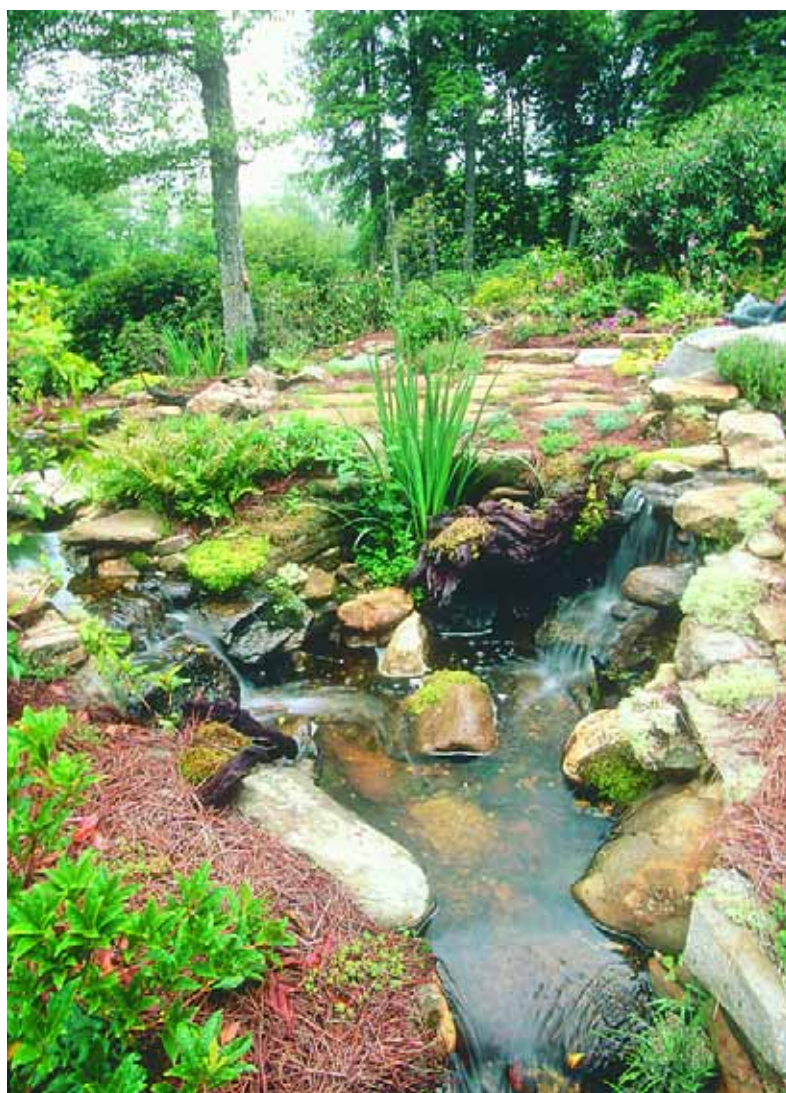
A pocket can be small – a single root ball, say, wedged between two rocks – or large enough that it sprawls over the entire side of a pond basin. From small to large, the flexibility of this approach is basically limitless, and at this point I'm happy to place dirt pockets anywhere the water flows.

Sometimes that flow is rapid, sometimes it's very slow. Sometimes the pockets are in the middle of a stream; other times I'll start them off under water and carry them across the edge to dry land to establish a riverbank look. They can be

used to set up planted spaces in the midst of elaborate rock formations, or to allow ground cover to come down into the water from along the banks.

I've also set up eddies, peninsulas and islands as well as broad, submerged shelves that contain a range of plants, thereby providing a layered transition to and across the shoreline. Before I lit on dirt pockets, every one of these effects, all of which seem simple to me now, were causes for concern because they represented an opportunity to blow the illusion of "nature."

Best of all, using dirt pockets puts me in a position where I can use rocks the way I think they should be used – for dramat-



We often use plant pockets in the middle of our streams. Whether in flat sections or as part of cascades, they add compelling visual interest – and there's no intrusion of the rims of plastic pots to break the illusion if or when plants die back in the winter.



Plant pockets are particularly effective when used in establishing a stream's banks. Having plant material rising at the water's edge and draping over surrounding rocks is obviously preferable to an artificial-looking necklace of stones along the bank.

ic, aesthetic effect rather than to stabilize or define an edge. With dirt pockets, I can put rocks wherever they're needed to increase the impression that the observer is seeing a natural formation.

### Healthy Competition

I came at dirt pockets through experimentation with ways of enhancing the natural filtration that occurs in bog areas.

I often set up bogs as the headwaters of my streams. It's an aesthetic choice: It has always seemed to me that the place where water wells up from a manifold hidden beneath the bed of rocks lining the bottom of a bog would be the perfect place for treating the water naturally. My thought was that, by placing planting pockets in the bog area, water flowing around and through the root balls would let organic compounds be absorbed by the plants – good for the plants, *great* for the water.

I've never seen these pockets as a replacement for some sort of mechanical

bio-filter. In fact, combining dirt pockets with a properly designed and installed circulation system is a pathway to a level of water quality that neither approach can achieve on its own.

As I've studied plants and the dynamics of man-made streams and ponds, I've become increasingly aware of how useful a service plantings can perform with respect to water quality. We all know that plants act as biological filters by absorbing nutrients through their root systems. It therefore follows that you thwart this function by using pots and their impermeable plastic.

It also stands to reason that pots don't offer plants the best of environments in aquatic conditions. Why else, after all, is it suggested that plants for ponds should have "acclimated" root systems that will not decay in stagnated water conditions?

Because a dirt pocket enables water to move through the root base, it allows the water in the root ball to get refreshed via osmosis and allows minerals and other

nutrients to penetrate the dirt in the root area through diffusion. This allows the plant to interact fully with the water and become a secondary filtering system.

As this cycle continues, the nutrient level in the water decreases and the water becomes less susceptible to a whole range of problems. Right from the start with dirt pockets, for example, I noticed that problems with algae and water clarity disappeared and that, almost without exception, plants in dirt pockets did spectacularly well.

It's the perfect trade-off: Algae starve while desirable plants receive constant feeding and grow larger with more vivid greens and blossom colors than I've ever observed with pot-bound plants – or even with plants in the ground, where their needs for nutrients and water are not met with such consistency.

### Plant Manager

Of course, you have to choose plants



that require a great deal of water for dirt pockets.

Don't be discouraged by the relatively short list of "aquatic plants" available for watergardens: There are numerous species, widely available at nurseries, that are *not* classified as "aquatic or marginal-type" plants but that *do* enjoy wet (but not stagnant) conditions. These are the plants you want for dirt pockets, including some of my favorites: hostas, ferns, lobelia and sedum. Even impatiens and other annuals will thrive in these conditions.

This approach has changed the way I look at plants in nurseries. Typically, plants are considered most desirable if they're able to look good without needing a great deal of water. In fact, the trend toward "drought-resistant" plants in recent years has changed the nature of the nursery business in many parts of the country.

These days when I'm looking for plants, I ask for those that just can't seem to get enough water – and I'm pleased to report that the folks at my local nursery now know that when they see me coming all they need to do is point me toward plants

that have an endless thirst.

Plants within this thirsty class are far from uniform in their water requirements. For hostas, for example, I build up the dirt pocket's base so that the roots will be above water level, leaving just the tips of the roots to stay wet in the saturated soil. With thirstier plants, including some ferns and grasses, I use dirt pockets that are completely or partially below the surface.

I don't claim to be a botanist, and I'm really only familiar with the way plants behave in my area (Climate Zone 6), so I rely on the expert advice I get at my local nursery. I also experiment a great deal, sometimes successfully, sometimes not. I'd suggest that anyone giving dirt pockets a try will be in the same position, both with respect to needing advice and needing to throw caution to the wind every once in a while and give things a try.

Whenever I find a new plant for a trial run in my dirt pockets, I typically buy three and try them at different levels relative to the waterline in my own stream at home. Whichever one flourishes the

most, I'll use that planting level when I set things up for my clients' watershapes.

### Fun With Dirt

As I've moved through my own learning curve with this technique, I've discovered some amazing things.

Early on, for example, I observed that many types of plants would send roots out through the mesh of the pocket to dangle freely in the water, absorbing nutrients hydroponically. I've also seen certain types of plants send out runners beneath and between rocks that emerge several feet away from the original pocket. And I've seen annuals (including impatiens) that reappear in spring all on their own – something I've never seen these plants do in pots.

Mostly what I've seen are species of plants that would be hard-pressed to receive enough water on land go quite crazy in a dirt pocket and relatively few other plants that won't thrive if they're placed at the right level relative to the waterline. In fact, most plants that don't work do so for reasons other than too-moist conditions, including those plants with sharp,

penetrating roots that tear through liners.

Fortunately, unacceptable species seem to be few in number, and it's easy to steer clear of them with a little advice from your nursery about root characteristics.

One of the nicest things about dirt pockets is that they work just as well in retrofits as they do in new projects. I've found it particularly encouraging and rewarding to go back to past projects and remedy aesthetic flaws that had always bothered me. It's also great to go to other peoples' projects and get rid of the necklace effect with a few well-placed dirt pockets. I've enhanced waterfalls, shallow areas, headwaters, lower ponds and especially edges of all sorts with this simple technique.

I've also found that my clients who enjoy gardening get hooked on making their own dirt pockets and adding them to their watergardens. It gives them a ready way to interact with the water, and they'll often get quite adventurous in their experimenting with different plantings. And because they're spending more time with their watershapes, they also tend to pay helpful attention to weeding and removing debris from the water.

I've taught classes explaining dirt pockets to other pond and stream builders. The reports that filter back to me have all been strongly positive, particularly with respect to the lush plant life, clear water and aesthetic flexibility my students are now using to great effect. Through their testimonials, I've been able to confirm that this technique works through a wide range of climate zones and in planting schemes we don't use much in my region.

When you boil it all down, it's the visual effect that gets me every time. The way the dirt pockets let me soften transitions from water to rock, the improved appearance of the water, the way plants and rocks and water are more fully integrated within the design are all fantastic. And who knows? Maybe you'll find a new favorite plant that you never dreamed could be in a pond!

---

Setting up a plant pocket is quite simple. Choose a likely spot, such as the one bounded here by the branch and three large stones (A), remove a rock or some dirt and replace the depression with a scrap of geo-textile fabric to line the hole (B), fill it with appropriate soil (C), then insert plants selected to thrive in the environment you've established (D).



