

One universal dryland form is the wash, or *wadi*, as it is called in the Middle East. Washes collect water and convey it to a river or sink. There is a special type of wash that forms at the foot of the rugged San Gabriel Mountains in semi-arid southern California where steep-walled canyons meet the valley floor. Water flowing from the mountains collects in the wash and is held there for a time. A major portion of it soaks into the soil then moves downward to replenish the groundwater in this critical zone where mountains and coastal plain meet.



5. PRACTICAL GRASS AREA

In my own garden, which is also at the base of the San Gabriel Mountains, the small abstracted wash plays a similar role; that is, it collects water and allows it time to infiltrate the underlying soil and rock. While the garden wash collects only water draining from the roof of the house and from the surrounding paved or planted areas, the basic function is the same, and the basic materials - rock, gravel, and a few scattered plants - are the same. In the form, I have tried to recall the natural wash, not to imitate it in literal terms but to suggest its essential qualities, to establish a kind of symbolic correspondence.



6. MULCHING

Next, let's consider the adaptations of plants in dry landscapes. Most of them share certain characteristics of form specifically related to lack of water, to high levels of solar radiation, and strong winds. The plants grow low and spread wide, and their leaves are small, often spiky. Thus, they present a low profile to the wind and smaller surfaces for emitting water through evapotranspiration. Furthermore, they tend to point upward, more or less towards the sun and thus minimise surfaces exposed to desiccating solar rays. They also tend to be greyish green rather than the bright emerald green typical of plants in wetter regions. And, in the semi-arid landscape of southern California, as well as in the surrounding desert, many of the native plants produce brilliant displays of flowers following the winter rains - but only for a short time. As the summer sun gets hotter, the flowers fade and the plants return to their muted colours and low profiles.



7. PROPER MAINTENANCE



SHIBAM, YEMEN, WITH ITS MUD-BRICK SKYSCRAPERS, IS RAISED ON A MOUND IN THE MIDDLE OF WADI HADRAMUT.

In my garden, each member of the community of plants features most or all of these characteristic adaptations. A few are native to the area, but not all or even most. Many of them come from similar climate zones in other parts of the world. All of them seem at home in this setting. They use no chemical fertilisers or pesticides and little water. And they attract a great many birds and beneficial insects.

Let us turn our attention to a project in the rocky, rugged, mountainous region of southeastern Arizona where the Sonoran and Chihuahuan deserts meet. Here, the plants are sparse and far apart, except in a few small areas where water concentrates due to indentations in the land. The Indians who once inhabited this area developed a number of simple ways to augment and amplify these places of concentration and in some locations to create concentrations for their own purposes. Their means was the careful placement of small rocks. A typical example was the check dams they built within narrow drainageways to hold back small volumes of water.

This principle of occasional concentration is applied in the design of the landscape of the Quinn residence located in the Sonoran desert.