

from dew to dew.....

a west aspect may have its day of 16 hours practically reduced to 10 or 11 hours, while an east aspect has the whole day to contend with". This is good advice for builders on how to orientate the sides of a crevice garden and how to utilize the effect of the high ridge and ledges screening crevices under them.

If the ideas of James Backhouse are translated to the terminology of crevice gardening we arrive at the following design. On a flat site the crevice garden should have the shape of a short rectangle with the longer side facing south. Layers are orientated in an east–west direction. The southern third of the rectangle is a high ridge with high side-cliffs having a southern aspect and lower side-cliffs facing north. The eastern third is a high ridge with very steep faces of layers. So we have a high ridge in the shape of an L, screening some crevices behind them and giving support for layers in a sheltered cool cauldron facing north-west. Here, the faces of layers tilt down to the western ground, but there are also small side-cliffs stepping down to the northern ground. For a full understanding you can make a model from plasticine.

Of course, if you have at your disposal a gentle slope down to the north, the design should be different. The “rectangle” of this crevice garden should face to the east, with layers orientated in a south–north direction. The eastern third of the “rectangle” is a lower ridge with low side-cliffs with an eastern aspect and deeper side-cliffs with western aspect. The southern third is a ridge with steep faces of layers facing south. The rest of the “rectangle” has a long return of faces of layers to the ground northward and a series of small side-cliffs stepping down to the west.

The screening possibilities in a crevice garden projecting from a south-facing slope are minimal and could be improved only after digging at the northern part of the outcrop so that the faces of layers form a cliff with a northern aspect.

LANDSCAPING

On flat ground it is important to undulate the chosen site by digging soil in a larger area to have very gradual slopes to the ground level. The deeper you go, the more soil you get and the more imposing the side-cliff will be if it rises from low ground. In the Lamberton Nursery the soil for a mound under the rock work was excavated from in front of the side-cliffs and the large hole became a place for a pond (see front cover). I would have preferred to dig deeper behind the rock work to get a longer slope to the north.

The excavated material must be smoothed into a firm mound with steep slopes under screening ridges and gradual slopes behind them. I agree with Mr Symons-Jeune that the best view of a rock formation is facing the highest cliffs and that the best feeling of a viewer is when those cliffs run diagonally across narrow gardens. He inspired me to use the human hand to show natural returns of a rock exposure to the flat ground. Fingers represent the top part of rock layers and the spaces between them are crevices. Put one hand, palm downwards, on the table and when you raise your knuckles, you can see how the faces of layers are getting steeper and tiny vertical side-cliffs will rise. Then place your other palm flat against the side of this and you will have a simple ridge and layers screened behind.

ADVANTAGES OF A CREVICE GARDEN

There are two major advantages to be considered:

1. CREVICES. In narrow crevices, between deep vertical walls, the roots of young plants are led down deeply underground and the plants do not form shallow root systems. *"Deep rooting is the main secret of successful cultivation for plants from high alpine regions. The roots descend to very great depth in fissures where they find nearly or quite unvarying moisture and unvarying temperature"*, wrote James Backhouse in 1875. In deep, only one-inch wide crevices, and under them, soil is cool during hot days and warmer during cold winter days. With their insulation effect, crevices prevent sudden swings in soil temperatures, so reducing heat stress for plants and co-operating soil organisms, and ensuring more continuous metabolism in both. In cooler soil, the aggression of pathogens is minimized. Plants make a dense network of fine roots adpressed to rock where their white root tips collect microscopic particles of water from condensation and absorb nutrients. I presume that at surfaces of stones condensation is more effective than in the soil of open space. James Backhouse and Son of York informed that their *"plants, in their correct structures [deep fissures], have roots with opportunity to descend among congenial material to the depth of two or three feet — out of the way of the uncertain fluctuations of their fickle climate — and no artificially supplied moisture is needed."* Ron McBeath, in the front of his crevice garden, with *Stellera chamaejasme* var. *chrysantha* in bloom, informed visitors that he never waters this formation. I water only freshly planted seedlings — plants with first true leaves and three-inch-long roots are pricked directly into crevices and shaded for two weeks.

Crevice gardens are luxurious rock gardens. They need plenty of rocks to form their stony bodies. Investing money and time to have this modern, well-functioning structure will enable your alpine plants to live in luxury and, you will have more leisure because of less weeding and no watering.

Zdenek Zvolanek is a leading Czech rock-gardener who is particularly concerned with the design and function of rock in the rock garden. He was one of the lecturers at ALPINES 2001 and this article is a more detailed consideration of some of the issues that were outlined in his report in the Proceedings of that conference.

87. Small flakes used superbly by Mr. Cepicka in his garden in the Czech Karst
(Joyce Carruthers)

88. Ridge of granite in garden of Ota Vlasák (Vojtech Holubec)

