GARDENING WITH GABIONS
Indigenous plants for terraced gardens.

by Ernst van Jaarsveld, Kirstenbosch

Kirstenbosch is situated on the eastern slopes of Table Mountain and on its steep, north-facing gradient are terraces made from local dressed sandstone. When the upper entrance of Kirstenbosch was constructed, dressed stone was urgently needed for new terracing. Existing nursery terraces supplied some, but a substitute was required and vibrocrete walls were used. These, however, burst after the first heavy winter rainfall. Gabions were then introduced to better effect. The bare, cage-like gabions were not very attractive and we started experimenting with indigenous plant cover.

Fourteen years of growing plants on these terraces have shown us which indigenous species are best suited to these conditions.

What are gabions?
‘Gabione’ is a French word for a method of building with large wire baskets (gabbio = cages) filled with local rocks or rock fragments. The size and shape of the baskets vary according to need but are usually square and size of rock must be larger than the openings between the wires. Gabions (‘skanskorve’ in Afrikaans) are made of baskets of woven galvanized steel wire mesh which is woven into a hexagonal pattern, with double twisted joints. This ensures that the basket will not unravel should it break. It is strong and flexible especially in unstable ground.

The use of gabions dates back over a thousand years when organic woven baskets filled with rocks were used in the east. Today they are used throughout the world and you can see them along our highways and byways, dams and river margins and even along the sea.

Once established, soil and debris settle in the holes between the rocks eventually filling up the basket and allowing vegetation to take hold. The bank is then stable when the wire eventually corrodes: all very environmentally friendly. This process is speeded-up if one plants species with a natural tendency to scramble and produce adventitious roots which further bind the rocks and soil.

The gabions provide ideal habitats for various snakes, lizards, insects and other animals. At Kirstenbosch the Cape skink (Mabuya capensis), olive house snake (Lamprophis imnornatus) and slug-eater (Duberia latix) have taken up residence in them.

Establishment.
The only space available to establish plants at the base of the gabions at Kirstenbosch was a few centimeters between the bottom of the wired basket and the cement curb of a brick pathway. The plants had to be small so we chose those growing in 1 pint black plastic bags. These were nursed during the first year, regularly watered and occasionally fed (ample bonemeal and compost were given). They grew rapidly on the warm, north-facing aspect and were trained up the woven wire for initial support. Plantings were usually mixed but, in some cases, monospecific. Once established, the roots rapidly find their way to moist soil below and the plants becomes less dependent on watering. Succulent species such as Sarcostemma vimitule and Aloe ciliaris hardly needed watering at all.

Pruning and maintenance
In smaller private gardens where plants can be given individual attention and regular care and feeding, pruning and training the walls should be obliterated totally in a few years - depending on the growth rate of the species used. On a much larger scale and with no labour available, the plants only need care in the first year or so.
Shrubs and scramblers that do particularly well at Kirstenbosch and on all warm, north-facing embankments in the Western Cape. Aloe ciliaris. The climbing Aloe is best grown with other plants as its growth is not dense. It flowers throughout the year with a peak in midwinter and is then especially attractive. It originates from the Eastern Cape. It is very easily propagated from cuttings planted in situ.

Bauhinia bowkeri. A rare, shrubby plant with a tendency to scramble, it occurs naturally in the dry river valleys of the eastern Cape.

B. galpinii. This fast growing scrambler needs occasional pruning and training. During autumn it is particularly striking with its conspicuous orange flowers. Grows well from seed.

B. natalensis. A shrubby species with a tendency to scramble, it originates in the coastal forests of KwaZulu-Natal. It grows fairly fast and has small leaves and white flowers.

Grows well from seed.

Carpodetus. Sour fig, ghouney or perdey are well known groundcovers. There are seven indigenous species from the coastal regions of South Africa all of which will grow on gables. The cuttings can be planted directly into the soil on top of the gables where they root and eventually grow over the edge. All species are edible (see page 45). Plant C. etulis with its yellow flowers with C. acinaciformis (purple), C. deliciosus (pink), C. dimidiatus (purple), C. piliapari (pink) and C. aurora (pink or white).

Delosperma cooperi. A vigorous scrambling, mat-forming mesemb from the Eastern Cape bearing small hairy to glabrous leaves and purple to white flowers. Easily propagated from cuttings in situ preferably during spring or summer.

Ficus abutilifolia. A natural rock-clinging shrubby species from the northern subtropical summer rainfall bushveld parts of South Africa. It has large, attractive leaves and grows well on gables but doesn’t form adventitious roots as rapidly as the other species. It can easily be grown from seed.

F. burtt-daviesi ‘Cango’. F. burtt-daviesi occurs along the coast from the Western Cape to Mozambique. It is a variable species, normally a scrambling shrub on sand dunes, but sometimes an epiphyte high up on Podocarpus falcatus in Knyasa and on cliff faces in the Little Karoo. The cultivar used at Kirstenbosch, ‘Cango’ (which I collected some years back at the entrance of the Cango Caves growing on lime-stone cliff faces) has smaller leathery blue-green leaves and fruits which are larger than the typical forms with small warts on their surface. This species proved to be one of the most successful. The plants grow rapidly, rooting at various intervals and completely covered a 3 m high gable wall in 8 years. It grows well from cuttings or seed.

F. ilicina. The naturn is a slow-growing species related to the previous plant. It is a natural rock-clinger in Namaqualand and Namibia. In warmer climates like the succulent Karoo it would grow faster. It grows well from cuttings or seed.

F. stuhlmannii. Another slow-grower from the north eastern bushveld area. It has an attractive bark and small leathery leaves. Other suitable Ficus species are F. glauca and F. tetetessis which should also grow well in warmer regions.

Jasminum angulare. A widespread species which will eventually completely cover the wires of any gable. At first it grows slowly, but speeds up rapidly after 3 years.

J. glauca. Another Western Cape plant, the Klipspringer grows naturally among boulders in the Clanwilliam district bearing long runners and white flowers. Could be propagated from stem cuttings.

J. multiflorum. An attractive species with dark green leaves and white flowers, suitable for shady regions. It is a slow grower that can be grown from cuttings.

Mauroeca frangula. The aarvoelbos is endemic to the Western Cape. It is usually a rounded shrub, always growing among boulders and often close to the sea. An attractive feature is the presence of young, red leaves. It is evergreen and bears red berries. Easily grown from seed or propagated from semi-hardwood cuttings in a mistbed.

Pavetta cooperi. The Klein Bruidbos is spreading, densely-branched shrub with attractive white flowers in midsummer (it flowers profusely at Christmas). It occurs naturally on granite boulders in dry bushveld regions and is thus adapted to hot, exposed conditions. Easily grown from seed or cuttings.

P. zeyheri. Hailing from the Magaliesberg, and similar to the preceding species, this plant is less attractive and not as densely branched. Easily propagated from seed.

Pelargonium peltatum. An ideal scrambler bearing succulent leaves and stems with pink flowers. It can be grown from cuttings planted in situ during spring or summer.

Plumbago auriculata (formerly P. capensis). The blueblommetjies is a fast-growing, shrubby scrambler that will need regular pruning. It is best propagated from tip cuttings in a mist unit.

Rhicossus digita. A thick clamber bearing trifoliate leaves and black berries. It can be grown from cuttings or seed.

R. kougabergensis. A rare endemic from the Kouga region, it is an attractive shrub with a tendency to scramble. The underside of the leaves have golden hairs. It is drought resistant and can be grown from cuttings.

Sarcostemma vinatimae. Melkou is a vigorous climber with pencil-thin stems that root at the nodes. Easily propagated by planting parts of the stem. Various forms are available.

Senecio angulates. Similar to the canary creeper but more stumpy and shrubby. The flowers are yellow. It can be propagated from stem cuttings planted directly into the soil during the warmer months.

S. tanaoides. The well-known canary creeper is a fast-growing, twining plant bearing semi-succulent leaves and stems. The bright yellow flowers appear in autumn. Grow cuttings in sand or plant in situ during the warmer months.

Tecomaria capensis. The kamferfoelie is a shrubby scrambler bearing red, orange or yellow tubular flowers.

Thuernbergia alata. The black-eyed Susan is a fast-growing pioneer plant with bright orange, black-centred flowers. It originates in the warm subtropical parts of South Africa.

The roots of Ficus burtt-daviesi covering and holding the rocks. Photo: E. Van Jaarsveld.