

Climbing Plants



by John Mason and staff of ACS Distance Education

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CHAPTER 1 INTRODUCTION AND GROWING CLIMBERS

Climbers are versatile plants that can serve the same purpose as shrubs, while using less space. They can be used to hide unsightly walls, fence off boundaries and provide shelter or shade growing over walls or roofs of structures, such as pergolas, arches and arbours.



Bougainvillea

Some climbers have a natural ability to cling onto structures, while others need training (e.g. tying up) or they will flop and fall off the structure.

There are four types of climbing adaptations found in plants:

1. Twining Stems
2. Tendrils
3. Adhesive Aerial Roots
4. Hooks

TWINING STEMS

The stem grows in a circle around a support (e.g. pole) moving upwards as it grows. The pattern is either clockwise or anti-clockwise according to the type of plant; for example *Convolvulus* twines to the left, while *Lonicera* grows to the right. A small proportion can grow in either direction.

Examples of twining plants: *Actinidia*, *Convolvulus*, *Lonicera*, *Wisteria*.



Twining plant

TENDRILS

Tendrils are twisting thin thread like structures that can emerge from part of a stem or part of a leaf. As they grow they twist, even to the extent of coiling, gripping onto anything appropriate that they contact. A tendril is scientifically speaking, a stem tip; but in effect it is tying the plant to whatever it is climbing up.

Examples of plants with tendrils include *Cucurbita* (Cucumber, etc.), *Gloriosa*, *Lathyrus* (Sweet Pea), *Passiflora*, *Vitis* (Grape).



Cucumber with tendrils

ADHESIVE AERIAL ROOTS

Adhesive roots are most commonly found in plants that originate from relatively moist environments, such as rainforests. Examples of plants with adhesive roots include *Ficus pumila*, *Hedera* (Ivy) and *Monstera*.



Ficus pumila with adhesive roots

HOOKS

Some plants with prickles can have a climbing habit, using the prickles, or

other structures as hooks to hold onto things they climb on. These include some *Calamus* (Wait a While Palm), Climbing Roses, *Solanum wendlandii* and *Rubus* (Bramble Berries).



Calamus nuelleri has hooks for climbing

The only major problem is that, if left uncontrolled, some rampant climbers can block drain pipes or gutters on buildings, or do serious damage to the structure (shrub or tree) they are clinging to. Some climbers cause less damage than others, but you should check for damage every few years, and trim back the climber if need be. Ones to avoid are those such as Ivy (*Hedera*) and Creeping Fig (*Ficus pumila*). They cling to even the smoothest surfaces, growing into and expanding any cracks in the wall.

Without something to climb, some climbing plants may become a ground cover.

Most climbers need something to climb on. You can use materials such as

trellis, wire mesh, single wires or nylon strings (not jute – that will rot).

These can be readily attached to:

- A fence or wall.
- The supports or roof of a pergola, arbour or archway.
- Between two posts.
- A frame made of galvanised water pipe, or similar material.

Climbers can also be allowed to climb other plants, or even to scramble over rocks, tree stumps or logs.



Mandevilla

CLIMBERS GROWN FREQUENTLY IN HOT CLIMATES

- Hoya
- Syngonium
- Mandevilla
- Trachelospermum
- Phaseolus
- Bougainvillea
- Stephanotis
- Cissus
- Solanum



Wisteria

COMMONLY USED CLIMBERS IN TEMPERATE CLIMATES

- Climbing Geranium
- Clematis
- Jasminum
- Lonicera (Honeysuckle)
- Wisteria
- Solanum
- Rosa (Climbing)

CHAPTER 2 ENCYCLOPAEDIA OF CLIMBERS

ACTINIDIA

Family: Actinidiaceae

Common Name: Chinese Gooseberry, Cat Plant, Kiwi Fruit

Origin: 40 species fruiting and ornamental plants from East Asia

Appearance: Deciduous. Lanceolate to ovate leaves. The cream-yellow flowers are bowl shaped with 5 petals.

Culture: Hardy. Most grow best in light or partial shade, and protected from strong winds. Though they grow on poorer soils, they need reasonable drainage and heavy annual feeding to do their best. Some species are dioecious (i.e. female and male flowers on different plants) The plants need a very strong and secure frame to grow on as their growth is vigorous once established and the canes can grow several metres tall. They are also frost tender in cool climates with early and late frosts. A plentiful water supply is also needed.

Propagation: Cuttings are best, with a heel, late summer strike best with bottom heat. Can be grown from seed sown in spring.

Health: Crown gall, nematodes, fruit rots and a range of insect problems including thrips, caterpillars, fruit fly and passion vine hopper.

Uses: Grown for foliage, flowers or fruit, depending on species. Fruits are high in fibre, good source of Vitamin C, and have good antioxidant properties.

Cultivars/Species:

A. chinensis - The well known, edible Chinese Gooseberry or Kiwi Fruit vine is a vigorous climber that needs string support, male and female plants large brown hairy oval fruits with a vivid green centre, produced in autumn are delicious fresh or cooked. Prune annually in winter.

A. kolomikta - Deciduous, new shoots in spring can be purplish, then develop stunning pink, white and green colours in the foliage as they develop.

A. polygama - Silver vine, grown for its ornamental leaves.

A. kolomikya, A. deliciosa



Actinidia pilosula

AKEBIA

Family: Lardizabalaceae

Common Name: Chocolate Vine

Origin: 5 species from East Asia

Appearance: Deciduous or semi evergreen. Compound leaves, each having 3 to 5 leaflets. Flowers occur on a pendulous raceme in spring

Culture: Grows on any fertile soil, acidic or even alkaline.

Propagation: Propagates relatively easy by layering or cuttings (hardwood or semi hardwood). Seed will germinate if sown when ripe (spring)

Health: Susceptible to aphids.

Uses: Makes in interesting delicate focal point in a garden. The twining stems can be used for basket weaving. The fruit of the plant is edible but has a bitter skin. The leaves are sometimes used as a tea substitute.

Cultivars/Species:

Main species grown in gardens is *A. quinata* with its five leaflets per leaf is the main garden species.

A. quinata - A vigorous twining climber that is semi-evergreen in areas with mild winters. Deciduous in areas with cold winters. Mature leaves are dark green, young ones flushed purple. Flowers are chocolate to maroon purple in colour in spring which are followed by purplish-grey fruits up to 10cm in length. It will grow up to 12 metres high. Suited to most soils. It prefers a semi shaded position. *Akebia quinata* 'Alba' is a white flowering form.

A. trifoliata - Deciduous climber, purple pendant flowers, young foliage is bronze then turns dark green.



Akebia quinata

AMPELOPSIS

Family: Vitaceae

Common Name: Porcelain Berry

Origin: Approx. 20 species from Asia and North America.

Appearance: As a member of the Vitaceae or grape vine family, *Ampelopsis* looks very much like *Vitis* (Grape), but the *Ampelopsis* flower opens and the petals hold on the flower; whereas the opening *Vitis* flower drops it's petals. The flowers is fairly insignificant, the berries and leaves are the features.



Ampelopsis brevipedunculata

Culture: Grow in sandy or clayey soils and must have good drainage.

Propagation: Semi-hardwood cuttings and germinates easily from seed.

Health: Relatively free of pests and diseases.

Uses: Cover for a flat ugly walls, reduces heat from walls in the summer months, excellent cut as a source of flowers and leaves for florists.

Cultivars/Species:

A. japonica, *A. acontifolia* and *A. cordata* are the most common species

A. acontifolia - From Mongolia and Northern China, this resembles a grape vine with palmate leaves. Fruits are cluster of small orange berries.

A. brevipedunculata - Dark green leaves, blue fruit and a vigorous growth habit. Sometimes known as the "Porcelain Berry". Fruit is reportedly edible.

A. brevipedunculata 'Elegans' - Variegated Porcelain Berry. This creeping vine can be considered an invasive plant in some areas. It will climb up to 20 metres and grows fairly quickly in mild climates and rich soils. Native to mild areas of Asia it will not grow well in frosty areas unless it has shelter and a warm position. This plant germinates easily from seed without any pre-treatment. The lobed grape vine shaped glossy green leaves of this form are variegated in white which makes them most attractive.

A. cordata - Native to the USA, common on wet soils in Missouri. Flower clusters are broader and not elongated as they are with grapes. Fruit is not edible.

A. japonica - Deciduous climber to 10 metres from China, Japan and Korea.

BIGNONIA

Family: Bignoniaceae

This is an old genus that formerly included approximately 150 species, before it was split by botanists into a number of different genera. The Genus *Bignonia* now only has one species (*Bignonia capreolata*) ; and that species is also considered by some as being in the genus *Doxantha*.

Many other genera were once known as Bignonia including: *Campsis*, *Clytostoma*, *Pandorea*, *Pyrostegia*, *Tecoma* and *Tecomera*.

BOMAREA

Family: Alstroemeriaceae

Common Name: Climbing Alstroemerias

Origin: South and Central America and the Caribbean.

Appearance: Most climbers, some ground covering. This genus Includes evergreens and herbaceous plants. Closely related to *Alstroemeria* but the flowers differ in being a regular shaped tube rather than larger petals on one side of the flower; and most species are twining climbers. The plants form tuberous roots. Most are summer flowering.

Culture: Prefers full sun or light shade. Many are not tolerant of frosts. Suitable as a pot plant, or greenhouse plant in temperate climates.

Propagation: Seed in spring under glass, or division when dormant, after it flowers.

Health: Needs protection from slugs and snails.

Uses: Adds colour to bare trunks of tall trees as it climbs around them, cover

Cultivars/Species:

B. caldasii needs a well-drained soil and sunny position as well as a strong trellis or wire fence for support. The twining stems can reach 3-4 metres. The clusters of long tubular flowers in orange-red have a spotted golden throat and reach 4-5 cm in length and are long lasting as a cut flower like most of the Alstroemeria family.

B. edulis is a hardy, twining species which can reach 3 metres in height.



Bomarea multiflora

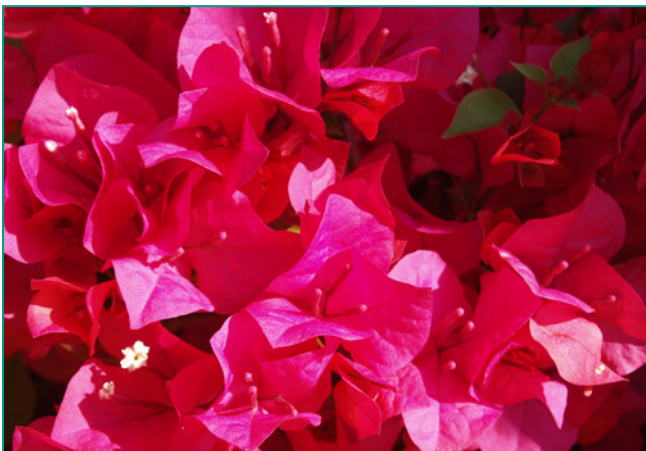
BOUGAINVILLEA

Family: Nyctaginaceae

Common Name: Bougainvillea, Paper Flower

Origin: Up to 18 species from South America have been bred extensively to produce thousands of named cultivars.

Appearance: Climbers and shrubs; large coloured bracts surround insignificant tubular flowers. The bracts are single or two toned in single and double forms and may range from deep carmine and crimson through to delicate pale pink, apricot, orange, yellow, white and the edges of the colourful bracts are sometimes tinged in a contrasting colour, such as white tinged with crimson. Generally evergreen, or semi deciduous.



Bougainvillea 'Mary Palmer'

Culture: Best in full sun, fertile organic soil; but will tolerate a wide range of soil conditions. A few cultivars tolerate frost prone areas (particularly once established), particularly ‘Mrs Butt’ but most are best on sites where the temperature rarely drops below 5 degrees Celsius. The new dwarf forms are compact growers which can be easily grown in pots. They are therefore ideal to keep under the eaves in a warm position over winter in a cool climate.

This will protect them from frosts and they can be shifted out again as the weather warms. The compact growth means a mass of colour almost all year round. Little if any pruning is needed to keep them shapely or under control, like the more vigorous forms.

Propagation: Semi hardwood cuttings, ideally with a heel; strike best with bottom heat around 21 degrees C.

Health: Pest and disease issues are rare, though extreme cold, or extended dry or wet conditions will lead to decline and death in all but the hardiest cultivars.

Uses: Tub and container plants for smaller varieties, hedges, screen plants pergolas and garden arch plants. The sap of this plant can sometimes cause rashes and allergies

Cultivars/Species:

B. glabra is perhaps the hardiest and most commonly grown species, tolerating cooler conditions than many others. It is strong growing and can reach 10 metres or more in height and width.

B. x buttiana is a hybrid of *B. glabra* and *B. peruviana*.

Most of the cultivated varieties are hybrids bred by plant breeders and selected by nurserymen.

Modern Dwarf forms are known as Bambini series and offer a range of leaf variations and a wide range of colour combinations in the flowers from cream through pinks, magenta, yellow, orange, white.

For more information, see the chapter on *Bougainvillea* later in this book.

CAMPSIS

Family: Bignoniaceae

Common Name: Trumpet Vine, Cow Itch Vine

Origin: Native to United States and Canada woodlands.

Appearance: Deciduous, self-clinging vines. Pinnate serrated dark green leaves. Funnel like large orange flowers with a yellowish throat up to 10 cm long occur in trusses in the summer months. This plant is very vigorous and can quickly cover a fence or building, growing as tall as 10 metres.

Culture: Best on fertile soil. Grown mostly in areas from sub tropics to mild temperate climates. Will grow in places with cool summers, but needs a warm place in the garden to flower reliably in such places (eg. A south facing wall in the UK)

Propagation: Hardwood cuttings, Layering, or from suckers. This plant can readily form layers in rich loamy soil and spread quickly. Root cuttings under glass may succeed in spring.

Health: This plant is relatively pest free and attractive to nectar feeding birds. Touching the plant can cause allergic skin reactions.

Uses: Covering unsightly buildings, screening, training onto a wire fence as a quick deciduous climber

Cultivars/Species:

C. grandiflora is the hardiest species, to 10 metres tall, with dark orange to reddish flowers up to 8 cm long and leaves up to 30 cm long.

C. radicans grows to 10 metres is the more sensitive of the two and needs protection from frosts and cold. Both orange and yellow flowering forms of this species exist.



Campsis radicans



Campsis radicans

Campsis

APPENDIX

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