



Aquatic Plant Catalogue

Hydroponically Grown
Aquarium and Pond Plants
in New Zealand

Robert Beke

Alternanthera bettzickiana

Water Rose

Alternanthera bettzickiana is often used as an aquarium plant but it is not truly an aquatic plant and it grows best in moist, but well-drained soil.

Alternanthera bettzickiana is an ornamental plant which is believed by some to be a cultivar of *Alternanthera ficoidea*. Research is needed to clarify the taxonomic status of this species.

Origin: South America

Height: 20-50 cm

Temperature range:

Water hardness:

pH Range:

Difficulty:



Alternanthera reineckii 'Pink'

Red Hygrophila

Alternanthera reineckii is an amphibious herbaceous perennial that grows along river courses, in seepage areas, and in wet depressions (rain pools) in its native South America. It has the capacity to grow completely submerged as well as emerged. It grows to 15-50 cm in height and 10-15 cm in width. New Zealand plant guide recommends *Alternanthera reineckii* 'Pink' as a "low risk" plant for aquaria and water ponds.

Origin: South America

Height: 50 cm

Temperature range: 17 - 30 °C

Water hardness: Tolerant

pH Range: 5 - 8

Difficulty: Requires high light intensity
to form dark red leaves



***Alternanthera sessilis* 'Red'**

Rubra

Alternanthera sessilis is an annual or perennial herb, of 0.2 - 1 m high, with strong taproots. The stems are generally prostrate, creeping, often rooting at the nodes, sometimes floating or ascending at the tips, cylindrical and slightly hairy, with numerous, erect branches. The leaves are simple, opposite, shortly petiolate or sessile, broadly lanceolate or spatulate to almost linear, 0.6-5 cm long, and 0.3-1 cm wide.

Origin:

Height: 100 cm

Temperature range:

Water hardness:

pH Range:

Difficulty: Difficult (High light intensity)



Bacopa lanigera

Giant Babies Tears

Bacopa lanigera is capable of growing underwater, on the water surface or on land. Stems are hairy even when kept submerged.

Origin: South America

Height:

Temperature range:

Water hardness:

pH Range:

Difficulty:



Bacopa monnieri

Waterhyssop

Bacopa monnieri is a perennial creeping herb that grows in wetlands and marshes. Its leaves are succulent, oblong, thick and arranged alternately. The flowers are small and white with four to five petals.

Bacopa monnieri are commonly sold in the aquarium trade as Baby's Tears - *Lindernia rotundifolia*.

Origin: Afrca, Asia, Australia, Europe,
India, North and South America

Height: 50 cm

Temperature range: 15 - 30 °C

Water hardness: Tolerant

pH Range: 6 - 9

Difficulty: Easy



Chlorophytum bichetii

Wheat Plant

Chlorophytum Bichetii is perennial flowering plant well suited for terrariums. It is sometimes sold as an aquarium plant but it tends to last only 1-2 months when submerged underwater. Too little water or too low humidity will cause leaf tips to turn brown.

Origin: West Africa

Height: 60 cm

Temperature range: 2 - 30 °C

Water hardness:

pH Range:

Difficulty: Easy



Cryptocoryne beckettii

Cryptocoryne beckettii is a perennial, rhizomatous aquatic herb that can grow as an emergent or as a submerged aquatic plant. Leaf blades are ovate to narrowly ovate, green on top and with reddish brown colouration underneath

Origin: Sri Lanka

Height:

Temperature range: 20 - 29 °C

Water hardness: < 28 °D

pH Range: 6.5 - 7.5

Difficulty: Medium



Cryptocoryne cordata

Cryptocoryne cordata is a perennial, rhizomatous, herb that can grow as an emergent or as a submerged aquatic plant. The species occurs in a range of habitats, from peat swamp forest at elevations slightly above sea level, limestone streams and pools in forest.

Origin: Thailand, Malaysia and Indonesia

Height:

Temperature range: 22 - 28 °C

Water hardness: < 28 °D

pH Range: 5.5 - 7

Difficulty: Medium



Cryptocoryne wendtii

Cryptocoryne wendtii is a perennial, rhizomatous aquatic herb that can grow as an emergent or as a submerged aquatic plant. It is one of the most widely used aquarium plants and is also one of the most widely variable.

Origin: Sri Lanka

Height:

Temperature range: 22 - 30 °C

Water hardness: Very hard

pH Range: 5.5 - 7.5

Difficulty: Medium



Cyperus helferi

Cyperus helferi can grow as an emergent or as a submerged aquatic plant. *Cyperus helferi* is the first species to be used totally submerged in an aquarium.

Origin: Southeast Asia

Height: 20 - 35 cm

Temperature range:

Water hardness: 1 - 20°dH

pH Range: 5 - 7.5

Difficulty: Easy



Echinodorus cordifolius

Marble Queen Sword

Echinodorus cordifolius is a perennial plant that can grow as an emergent or as a submerged aquatic plant.

Origin: USA, Mexico and South America

Height: 35 cm

Temperature range: 19 - 28 °C

Water hardness: 6.5 - 7.5

pH Range: Easy

Difficulty:



Echinodorus grisebachii

Amazon Sword

Echinodorus grisebachii (synonym *Echinodorus amazonicus*) is a perennial or annual rhizomatous aquatic plant that can grow fully submerged.

Origin: Cuba, Central America
and South America

Height: 40 - 60 cm

Temperature range: 22 - 28 °C

Water hardness: 6 - 7.5

pH Range: Easy



Echinodorus osiris

Osiris Sword

Echinodorus Osiris is a perennial rhizomatous aquatic plant that can grow fully submerged. The submerged leaves are relatively large and coloured red and dark green.

Origin: South America

Height: 50 cm

Temperature range: 18 - 24 °C

Water hardness:

pH Range: 6.5 - 7.5

Difficulty: Easy



Eleocharis acicularis

Hairgrass

Eleocharis acicularis is a perennial rhizomatous plant with long, grass-like stems that can grow as an emergent or as a submerged aquatic plant.

Origin:

Height: 12 -15 cm

Temperature range: 10 - 30 °C

Water hardness: Moderate

pH Range: 4.7 - 7

Difficulty: Moderate



Hemigraphis alternata

Green Scarlet Leaf

Hemigraphis alternata is not suitable for submersed cultivation but is very decorative plant for terrarium environments.

Origin: Malaysia, South - East Asia

Height: 15 - 30 cm

Temperature range:

Water hardness:

pH Range:

Difficulty: Easy



Hemigraphis repanda

Red Sawtooth

Hemigraphis repanda is not an aquatic plant and is best used as a terrarium plant.

Origin:

Height:

Temperature range:

Water hardness:

pH Range:

Difficulty:



Hydrocotyle leucocephala

Cardamine

Hydrocotyle leucocephala is an aquatic perennial herb that can grow either emerged or fully submerged. Flowers are white, small and inconspicuous and grouped together in an umbel.

Origin: North and South America

Height:

Temperature range:

Water hardness: Hard

pH Range:

Difficulty:



Hydrocotyle verticillata

Pennywort

Hydrocotyle verticillata is an aquatic perennial, glabrous, creeping plant with slender stems occasionally submerged. Its leaves have long petioles and laminas that are orbicular peltate, 5–60 mm in diameter.

Origin: North and South America

Height:

Temperature range: 10 - 28 °C

Water hardness: Hard

pH Range: 5 - 7

Difficulty:



Hygrophila corymbosa

Cherry Leaf

Hygrophila corymbosa is an aquatic plant that can grow either emerged or fully submerged. The flowers are arranged in axillary corymbs and the corolla is purple with small white spots on the lower lip.

Origin:

Height:

Temperature range: 20 - 28 °C

Water hardness: Tolerant

pH Range: 5.5 - 8

Difficulty: Easy



Hygrophila corymbosa 'Angustifolia'

Hygrophila Blue

Hygrophila corymbosa is a herbaceous aquatic plant that can grow either emerged or fully submerged. It has opposite leaves that are 8-10 cm long and 3-5 cm wide. The entire plant is covered with glandular hairs. The emerged shoots of *Hygrophila corymbosa* 'Angustifolia' have opposite lanceolate leaves of a dark to blueish green colour and when touched they give off a strong smell.

Origin: South-East Asia

Height: 50 - 100 cm

Temperature range: 20 - 28 °C

Water hardness: Tolerant

pH Range: 5.5 - 8

Difficulty: Easy



Hygrophila difformis

Water Wisteria

Hygrophila difformis is a herbaceous aquatic plant that can grow emerged or fully submerged. It has slender, lacy leaves when grown submerged. When *Hygrophila difformis* is grown out of water, its leaves become smaller, serrated, and covered in glandular hairs.

Origin:

Height:

Temperature range:

Water hardness:

pH Range:

Difficulty:



Hygrophila polysperma

Indian Swampweed

Hygrophila polysperma is an aquatic annual or perennial herb that can grow either emerged or fully submerged. It grows 10 - 20 cm tall and has scrambling or erect stems. The leaves of *H. polysperma* are opposite, 2

Origin: Indian Sub-continent and south-eastern Asia

Height: 20 cm

Temperature range:

Water hardness: pH Range: 5.5 - 8

Difficulty:

Growth rate:



Lilaeopsis brasiliensis

Zealandia Chain Sword

Lilaeopsis brasiliensis is a small, perennial rhizomatous creeping herb. Leaves are septate, linear to spatulate or oblanceolate, 1 to 7 cm long, and are hollow and elliptical in cross section for most of their length. Flowers are whitish or maroon-tinted.

Lilaeopsis brasiliensis with oblanceolate leaves are commonly sold in the aquarium trade as *Lilaeopsis novae zelandiae*, a true species from New Zealand.

Origin:

Height:

Temperature range:

Water hardness:

pH Range:

Difficulty:



Lilaeopsis brasiliensis

Brazilian Micro Sword

Lilaeopsis brasiliensis is a small, perennial rhizomatous creeping herb. Leaves are septate, linear to spatulate or oblanceolate, 1 to 7 cm long, and are hollow and elliptical in cross section for most of their length. Flowers are whitish or maroon-tinted.

Origin:

Height:

Temperature range:

Water hardness:

pH Range:

Difficulty:



Lilaeopsis mauritiana

Mauritius micro sword

Lilaeopsis mauritiana is a small, perennial rhizomatous creeping herb. The leaves are hollow and terete to elliptical in cross section, 3 to 13 cm long, becoming flattened and solid in cross section distally. Flowers are greenish whit.

Origin: Endemic to Mauritius

Height: 13 cm

Temperature range:

Water hardness:

pH Range:

Difficulty:



Limnophila sessiliflora

Ambulia

Limnophila sessiliflora is an aquatic perennial herb. It is fast growing and exhibits re-growth from fragments.

Origin: Southeast Asia

Height:

Temperature range: 15 - 28 °C

Water hardness:

pH Range:

Difficulty:



Lindernia rotundifolia

Baby's Tears

Lindernia rotundifolia can be planted either partially or totally submerged under water or it can be grown in moist soil. Leaves are small, round to egg-shaped and they are hairless or slightly pubescent. The flowers of *Lindernia rotundifolia* are predominantly white with bright blue to purplish spots. Plants may be annual or perennial.

Origin: Kenya, Tanzania, Uganda

Height: 15 - 20 cm

Temperature range: 18 - 28 °C

Water hardness:

pH Range: 5 - 8

Difficulty: Easy



Ludwigia perennis

Red Ludwigia

Ludwigia perennis is a perennial plant that can grow fully submerged and the slender stems are often reddish when submerged. Flowers occur in the leaf axils of the emergent portion of the plant and are very small with tiny yellow petals.

Origin: Central America

Height: 20 - 100 cm

Temperature range: 15 - 30 °C

Water hardness: soft - medium

pH Range: 5 - 8

Difficulty: Easy



Lysimachia nummularia 'Aurea'

Golden Moneywort

Lysimachia nummularia 'Aurea' has yellow leaves. May be less vigorous than the species, though it is known to occasionally revert.

Lysimachia nummularia is an herbaceous, low-growing, perennial plant that has ability to function as a submerged aquatic plant. The leaves are obtuse at both ends, resembling coins and giving it the common name, moneywort. *Lysimachia nummularia* 'Aurea' plant often does not flower at all, but when it does the flowers are yellow with small dark red spots. The flowers arise from the leaf axils and have pedicels about 0.6-3.8 cm long.

Origin: Europe and western Asia

Height: 0.2 - 1.0 m

Temperature range: 3 - 31 °C

Water hardness:

pH Range: 4 - 7.2

Difficulty: Medium



Lysimachia nummularia

Moneywort

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Origin: Europe and western Asia

Height: 0.2 - 1.0 m

Temperature range: 3 - 31 °C

Water hardness:

pH Range: 4 - 7.2

Difficulty: Medium



Myriophyllum propinquum

Water Milford

Myriophyllum propinquum can form submerged and emergent leaf forms. Submerged leaves are pinnately divided in whorls of 3 - 4 and appear long and feathery. Stems can grow up to 3 m tall in deep water and arise from runners in the sediment. Small whitish pink flowers are borne on the lower leaf whorls of emergent stems during summer months.

Origin: New Zealand

Height: 20 - 60

Temperature range: 0 - 25 °C

Water hardness:

pH Range: 6.0 - 7.0

Difficulty: Medium



Male flower



Female flower



Rotala rotundifolia

Dwarf Rotala

Rotala rotundifolia is a perennial herbaceous plant that can grow fully submerged as an emerged aquatic plant, and as a terrestrial plant. The emerged leaves are round, 1-2 cm in size, and green, while submerged leaves are lance-shaped, up to 2.2 cm in length, and green to red in colour. Flowers occur in spikes at the tip of stems.

Origin: South and Southeast Asia

Height: 70 cm

Temperature range: 4 - 8 °C

Water hardness: Soft - Medium

pH Range: 4 - 8

Difficulty: Easy



Rotala wallichii

Red Pine

Rotala wallichii is an aquatic, annual herb that grows 5 - 30 cm high. It grows both emerged and fully submerged.

Origin: Southeast Asia

Height: 10 - 40

Temperature range: 18 - 28 °C

Water hardness: Soft - Medium

pH Range: 5 - 7

Difficulty: Medium



Submersed (underwater) form



Saururus cernuus

Mouse Ear

Saururus cernuus is a perennial herbaceous plant, found in forested and open wetlands in saturated soils and in periodically inundated conditions. It can tolerate being inundated, but may not be able to tolerate complete inundation during the growing season.

Origin: North America

Height: 15 cm

Temperature range: 4 - 27 °C

Water hardness: It can tolerate salinity up to 1.5 ppt

pH Range: 6 - 9

Difficulty: Medium



***Syngonium podophyllum* 'Red Knight'**

Arrowhead Vine

Syngonium podophyllum is not suitable for submersed cultivation but is very decorative plant for terrarium environments.

Origin: Central and Sout America

Height: 15 - 30 cm

Temperature range:

Water hardness:

Difficulty:

Growth rate: Slow



Glossary

Amphibious: Adapted for both land and water.

Annual: Plant living only one year or season.

Glabrous: Having a surface without hairs or projections.

Herb: A plant that have no persistent woody stem above ground.

Gland: A secretory structure within or on the surface of a plant.

Lanceolate: Lance-shaped.

Oblanceolate: Lanceolate with the more pointed end at the base.

Ovate: Egg-shaped, attached at the broad end.

Pedice: A pedicel is a stem that attaches a single flower to the inflorescence.

Peltate: A round leaf shape with the stem attached near the centre of the lower surface rather than the margin.

Perennial: A plant that lives more than two years.

Pinnate: A compound leaf structure with a feather-like formation of leaflets arranged either in pairs or alternating along the main stem.

Prostrate: Growing along the ground.

Pubescent: Covered with short soft hair; downy.

Rhizome: Stem growing underground, usually horizontally.

Septum: A wall, dividing a cavity or structure into smaller ones.

Spathulate: Spoon-shaped.

Taproot: A taproot is the main root anchoring system that the feeding roots grow from.

Terete: Circular in cross-section; more or less cylindrical without grooves or ridges.

Terrestrial plant: A plant that grows on land.



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