AQUARIUM PLANTS
– NEW PRODUCTS 2013/2014
Experience nature underwater
“Gardening” above and below water is our passion. We are active all over the world in a variety of ways, whether it be on a Plantahunter tour in Florida or Borneo or on our partner farm in Sri Lanka. Constant contact with good friends in Japan, China, Taiwan and India helps us to develop new plant products. But one or two long „forgotten“ plants are also regaining significance. Modern aquascaping in particular has significantly enhanced awareness of the needs of plants. These days, plant enthusiasts with underwater gardens no longer ask whether or not CO₂ fertilisation is necessary.

In addition to many new plants in pots, we have expanded our selection of in-vitro plants and established a separate product segment. In the new plant-it series there are now 22 attractive plants for various planting areas in the aquarium. The plant-it tubs are especially well suited for aquascaping. Their small size means you can insert the plants into the hardscape between stones and roots very easily.

There are also new and exciting things to discover in the decorative range. The range of products for designing magical underwater landscapes is supplemented by Bonsai Palm, Scape Wood, Coco Cave, Scaper pads and much more.

…..now have fun „gardening“ under water!

Stefan Hummel
NEW PRODUCTS FROM A – Z

On the following pages you will find out more about our new products from 2013/2014. As usual, the plants are described in detail with lots of hints and tips. In addition to really new plants such as *Limnophila spec. ‘Vietnam’* and our *Echinodorus cultivar ‘Breuni’*, there are also some well-known „classics“ such as *Rotala macandra* and *Heteranthera zosterifolia*.

**Item key:**

- **Suitable for cichlids**
- **Recommended for Nano Cubes**
- **Ideal for aquascaping**
- **Easy-care, low-maintenance plant**
- **High-maintenance plant**
- **A rarity for plant connoisseurs**

**Information about the plant labels**

Often, the appearance of the plants supplied is not identical to the subsequent growth habit in the aquarium. One example is *Micranthemum*, which is supplied as a flat cushion but grows up to a height of 30 - 40 cm and is therefore suitable as a midground plant. Dennerle provides information about the growth habit in the current plant guide, *Aquarium Plants – New Products 2013/2014*, and on the plant labels.

1. Detachable barcode on the item
2. Illustration of the plant when emersed or submerged
3. Care information, including details about positioning in the aquarium
4. Price group
5. Dennerle no. (same as aquarium plant guide)
6. Item no.
7. QR code, which links to the plant database
**Cryptocoryne cordata**

*Cryptocoryne cordata* is native to South Thailand, West Malaysia, Sumatra and Borneo. The species is very variable in leaf shape and colour. This variety of *cordata* has narrower leaves than the more familiar heart-shaped variety. The underside of the leaf is slightly red and the upper leaf surface has an attractive streaked pattern. Softer water is preferable with mid to low intensity lighting. After a certain period of acclimatisation, this *cryptocoryne* can also be kept in harder water. Growing to a height of 20 cm, this variety is recommended for the middle area of the aquarium.

**Genus:** *Cryptocoryne*  
**Species:** *cordata* (narrow-leaved variety)  
**Family:** *Araceae*  
**Origin:** Southeast Asia  
**Area/height:** Midground up to 20 cm  
**Light:** medium – low  
**Temperature:** 22 – 28 °C  
**Growth:** slow  
**pH:** 4.5 – 7  
**Water hardness:** very soft to medium hard  
**CO₂:** 10 – 30 mg/l  
**Propagation:** Stolons  

**Alternanthera reineckii ´Red Ruby´**

The variety ´Red Ruby´ is a very pretty new cultivar which is a type of *Alternanthera reineckii*. The most noticeable feature is the ruby red venation on the leaves, which stands out clearly from the red background colour. The growth rate is a little slower than for *Alternanthera reineckii* ´Red´ and ´Bronze´. This means with good lighting you can also cultivate this red beauty in a 30 l cube. In large aquaria you should plant around 15 - 20 stems to achieve an impressive group of plants, which harmonises best with „green“ neighbours.

**Genus:** *Alternanthera*  
**Species:** *reineckii ´Red Ruby´*  
**Family:** *Amaranthaceae*  
**Origin:** Cultivar  
**Area/height:** Background up to 40 cm  
**Light:** high – medium  
**Temperature:** 22 – 28 °C  
**Growth:** medium  
**pH:** 5 -8  
**Water hardness:** soft to hard  
**CO₂:** 20 to 30 mg/l  
**Propagation:** Head cuttings, side shoots

**Ammannia gracilis**

*Ammannia gracilis* is a vibrantly coloured stem plant from West Africa. In the emersed form the plant is rather unremarkable with ovate green leaves. With good lighting, the plant displays a wonderful brown-red colouring under water. A good CO₂ supply and nutrient-rich substrate are certainly important requirements for it to flourish magnificently. It can grow up to 60 cm tall, making this African stem plant suitable for the middle to background. Due to its rapid growth rate, the shoot tips should be replanted regularly.

**Genus:** *Ammannia*  
**Species:** *gracilis*  
**Family:** *Lythraceae*  
**Origin:** Senegambia  
**Area/height:** Background up to 60 cm  
**Light:** high – medium  
**Temperature:** 22 – 28 °C  
**Growth:** rapid  
**pH:** 5 -8  
**Water hardness:** soft to hard  
**CO₂:** 20 – 30 mg/l  
**Propagation:** Head cuttings, side shoots
Cryptocoryne lutea ‘Hobbit’

Cryptocoryne lutea is one of the easiest Cryptocoryne species from Sri Lanka to care for. The new dwarf form, Hobbit, was isolated from a normal sized plant in the greenhouse and further propagated in the laboratory. Growing to a height of just a few centimetres, this Cryptocoryne is ideal for even the smallest aquaria. The growth rate is also significantly slower than that of the stem form. With good lighting, the leaves become a deep purplish-brown colour and make a nice contrast to other green foreground plants.

Genus: Cryptocoryne
Species: lutea ‘Hobbit’
Family: Araceae
Origin: Cultivar
Area/height: Foreground up to 5 cm
Light: high – medium
Temperature: 20 – 28 °C
Growth: very slow
pH: 5-8
Water hardness: very soft to hard
CO₂: 10 – 20 mg/l
Propagation: Stolons

Cryptocoryne usteriana

Cryptocoryne usteriana is an impressive plant from the Philippines. Unlike many other Cryptocoryne species, it grows permanently under water and is therefore not suitable for emersed cultivation in the greenhouse. For this reason it is very rarely found commercially. The bullate leaves are up to 70 cm long and the leaves are bright mid-green with a reddish underside. With medium lighting, Cryptocoryne usteriana grows best in hard, alkaline water and is therefore ideal for cichlids from Lake Malawi and Lake Tanganyika. Even with a low CO₂ supply the plant still grows rather well and is very easy to care for. The more familiar Cryptocoryne aponogetifolia looks confusingly similar.

Genus: Cryptocoryne
Species: usteriana
Family: Araceae
Origin: Philippines
Area/height: Background 70 cm
Light: medium – low
Temperature: 22 – 26 °C
Growth: slow
pH: 6 -8
Water hardness: medium-hard to hard
CO₂: 5 – 30 mg/l
Propagation: Stolons

Cryptocoryne x purpurea

Cryptocoryne x purpurea is a rarity from Southeast Asia. It is a natural hybrid between Cryptocoryne griffithii and Cryptocoryne cordata. The variety described here comes from Borneo and has remarkable marbling on the leaf blades. The growth is significantly slower than other Cryptocoryne species that are well known in aquatics. Growing to a height of around 10 cm (previous experience of cultivation in an aquarium), it remains relatively small in size and, depending on the size of the tank, can therefore also be used in the foreground. As with all Cryptocorynes, a nutrient-rich substrate is very important, as a lot of nutrients are absorbed by the roots.

Genus: Cryptocoryne
Species: x purpurea [natural hybrid]
Family: Araceae
Origin: Borneo
Area/height: Foreground 10 cm
Light: high – medium
Temperature: 22 – 28 °C
Growth: slow
pH: 5 – 7
Water hardness: soft to neutral
CO₂: 10 – 30 mg/l
Propagation: Stolons
PLANT-IT!
In-vitro plants in tubs

A logical further development of tissue culture plants is the marketing of little mini-tubs for aquatics fans. This originated at Dennerle from the problem of cultivating a plant and marketing it. *Cryptocoryne spec. 'Flamingo'* was found in a clump of *Cryptocoryne wendtii 'Braun'*. This striking pink coloured plant was propagated in the laboratory and, like all other *Cryptocorynes*, was to be grown on in pots for several months until it reached sale size. Unfortunately, all attempts at cultivation above water failed, while the plants in the aquarium continued to grow steadily. As a result, we decided to market this rarity in mini tubs directly from the laboratory.

From these beginnings Dennerle developed a new range of plants: plant-it, in-vitro plants in mini tubs. The range includes various types of plant such as the ground-cover plant *Hemianthus callitrichoides 'Cuba'* and the new *Micranthemum spec. 'Montecarlo'*, foreground and middle ground plants such as *Rotala indica* (syn. *Ammannia spec. Bonsai*) and *Staurogyne repens*, as well as a few rarities like *Eichhornia diversifolia* and the uncommon *Cryptocorynes usteriana* and *Cryptocoryne x purpurea*.

All of these plants have one thing in common:

- They are all cultivated under sterile conditions, which means there are no pest infestations and no pathogens
- No algae growth
- No snails or snail eggs
- Very compact and highly branched plants
- The submerged habit eliminates the changeover phase from emersed to submerged in the aquarium
The plant-it tubs are especially well suited to aquascaping. Their small size means you can insert the plants into the hardscape between stones and roots very easily. However, you have to be quite patient, as the plants are significantly smaller than aquarium plants that are cultivated conventionally in pots.

Plant-it plants are also a good way for shrimp enthusiasts to add new plants to already well-established aquaria containing shrimp. It is not necessary to water the plants for several days as usual. The gelatinous nutrient medium should simply be carefully washed off. As a general rule, the plant cushion should then be divided into small pieces and planted at intervals in the substrate.

Just as the slogan says:

Clean it!  Cut it!  Plant it!

plant-it! | 7
Echinodorus ’Breuni Red’

Echinodorus ’Breuni Red’ originated from a second generation range of cultivars of our Dschungelstars varieties. The somewhat peculiar name relates to the company Breuninger. The variety was presented and named during an aquatics event in one of the large shopping centres. With its characteristics, the new Echinodorus fits seamlessly into the Dschungelstar range. ’Breuni Red’ grows well and is easy to care for. A nutrient-rich substrate and adequate CO2 supply guarantee lush growth. With good lighting, the new inner leaves are bright red and make a nice contrast to the older, olive-green leaves. Growing to a height of 40 - 50 cm, the plant makes a very eye-catching specimen.

**Genus:** Echinodorus  
**Species:** Cultivar ’Breuni Red’  
**Family:** Alismataceae  
**Origin:** Cultivar  
**Area/height:** Midground up to 50 cm  
**Light:** high – medium  
**Temperature:** 22 – 28 °C  
**Growth:** medium  
**pH:** 5 – 8  
**Water hardness:** soft to hard  
**CO2:** 20 – 30 mg/l  
**Propagation:** Adventitious plantlets on the pedicel

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Eichhornia diversifolia

Eichhornia diversifolia is a decorative stem plant from the water hyacinth or Pontederiaceae family. The submerged shoots form leaves around 10 cm long on the stems. Eichhornia diversifolia grows relatively quickly and should therefore be trimmed regularly. If the stems reach the water surface, less decorative simple floating leaves form. A good supply of nutrients and CO2 is absolutely essential for this beauty from South America. Slightly acidic to neutral water also promotes healthy, strong growth. Eichhornia diversifolia is one of the most magnificent stem plants and it should therefore be positioned in the middle or background of an underwater landscape as a specimen plant.

**Genus:** Eichhornia  
**Species:** diversifolia  
**Family:** Pontederiaceae  
**Origin:** Central America, South America  
**Area/height:** Background 60 cm  
**Light:** high  
**Temperature:** 18 – 30 °C  
**Growth:** rapid  
**pH:** 5 – 7  
**Water hardness:** soft to neutral  
**CO2:** 20 – 30 mg/l  
**Propagation:** Head cuttings

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Eleocharis pusilla

The dwarf spikerush, Eleocharis pusilla, is native to Australia and New Zealand and inhabits wetlands with different water levels. In contrast to Eleocharis acicularis, the growth height is significantly shorter, usually only a few centimetres high. Another distinguishing feature are the light green, slightly curved stems of the dwarf spikerush. This grass grows best in cooler water, it cannot tolerate permanently high temperatures over 25° C. This delicate beauty is ideal for stone layouts in the Iwagumi style, as it results in a fresh ‘summer meadow’. Like Echidonorus acicularis, the dwarf spikerush can also be cut well back, which makes the plant even denser and more compact.

**Genus:** Eleocharis  
**Species:** pusilla  
**Family:** Cyperaceae  
**Origin:** Australia, New Zealand  
**Area/height:** Foreground 3 – 6 cm  
**Light:** high – medium  
**Temperature:** 12 – 26 °C  
**Growth:** medium  
**pH:** 5 – 7  
**Water hardness:** soft to medium-hard  
**CO2:** 10 – 30 mg/l  
**Propagation:** Stolons, division
Floscopa scandens

Plants from the dayflower or Commelinaceae family are recognised more as house plants than aquatic plants. The origin of Floscopa scandens is unknown, it was probably imported from Asia. The habit of the plant is somewhat reminiscent of a bamboo plant, which explains the commercial name, water bamboo. Floscopa grows significantly faster when cultivated above water than when it is living submerged. A nutrient-rich substrate, good lighting and adequate CO₂ are absolutely essential for stems with strong leaves to form. Its slow growth rate also makes water bamboo suitable for Nano Cubes.

- **Genus:** Floscopa
- **Species:** scandens
- **Family:** Commelinaceae
- **Origin:** possibly tropical Asia
- **Area/height:** Midground up to 30 cm
- **Light:** high - medium
- **Temperature:** 20 – 26 °C
- **Growth:** slow
- **pH:** 5 – 7
- **Water hardness:** soft to neutral
- **CO₂:** 20 – 30 mg/l
- **Propagation:** Head cuttings

Helanthium tenellum ‘Broad Leaf’

We found this grass-like beauty on our Florida Plantahunter tour in winter 2012. At first glance it looks very similar to Helanthium tenellum (former name: Echinodorus tenellus) and is easily confused. The difference lies in the colour and width of the leaves and the growth height appears to be somewhat smaller. We named this plant ‘Broad Leaf’ due to the width of the leaf blades being up to 2.5 mm. The colour of the leaves stays bright mid-green, so it combines well with colourful plants such as Hygrophila pinnatifida, for example. Care needs are similar to the standard Helanthium tenellum. Lawn formation is encouraged by vigorous pruning.

- **Genus:** Helanthium
- **Species:** tenellum ‘Broad Leaf’
- **Family:** Alismataceae
- **Origin:** North America
- **Area/height:** Foreground 4 - 6 cm
- **Light:** high – medium
- **Temperature:** 20 – 28 °C
- **Growth:** medium
- **pH:** 5 – 8
- **Water hardness:** soft to hard
- **CO₂:** 20 – 30 mg/l
- **Propagation:** Stolons

Heteranthera zosterifolia

The stem plant Heteranthera zosterifolia is a stunning beauty in the aquarium. The bright light-green leaves are up to 5 cm long and grow in an alternating leaf formation. Its requirements are relatively minimal, with good lighting and CO₂ fertilisation, growth is compact and fast. It is therefore recommended that the shoots are trimmed regularly. On our Plantahunter tour in Brazil, we saw the plant in the Rio da Prata over several kilometres of river. In fact, we even encountered lush plants in the crystal clear water where it was 2 m deep. The Heteranthera is a plant that is rich in contrast for the midground to background and works especially well in combination with colourful plants such as Rotala rotundifolia.

- **Genus:** Heteranthera
- **Species:** zosterifolia
- **Family:** Pontederiaceae
- **Origin:** Brazil, Argentina, Bolivia
- **Area/height:** Midground 30-40 cm
- **Light:** high – medium
- **Temperature:** 20 – 26 °C
- **Growth:** rapid
- **pH:** 5 – 8
- **Water hardness:** soft – hard
- **CO₂:** 20 – 30 mg/l
- **Propagation:** Head cuttings
The genus *Limnophila*, from the figwort (*Scrophulariaceae*) family, has been well known in aquatics for a long time and is also commonly used. A new and rare plant is the as yet undefined *Limnophila spec. ‘Vietnam’*. Like almost all species, the leaflets, which are just 1-2 cm long, sit radially on the stem. With a leaf width of just a few millimetres, the plant looks particularly delicate and decorative. With adequate lighting the plant displays considerable creeping growth and is ideal for the foreground to midground. Vigorously trimming the plants into shape enables the growth of wonderful, harmonious cushions. *Limnophila spec. ‘Vietnam’* is highly recommended for designs with hills and mountains.

**Genus:** *Limnophila*
**Species:** *spec. ‘Vietnam’*
**Family:** *Scrophulariaceae*
**Origin:** Southeast Asia
**Area/height:** Midground 20 cm
**Light:** high
**Temperature:** 18 – 28 °C
**Growth:** medium
**pH:** 5 – 7
**Water hardness:** soft to medium-hard
**CO₂:** 20 -30 mg/l
**Propagation:** Head cuttings

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*Marsilea hirsuta* belongs to the water clover family and is native to Australia. Due to its small size it is also known as dwarf four leaf clover. In marsh conditions, the plant forms small clover shaped leaflets when out of the water; under water ovate leaflets usually form, which are strongly reminiscent of the *Glossostigma* plant. The dwarf four leaf clover, however, is much easier to cultivate and very low maintenance. It does take a certain amount of time for the young plant to acclimatise to the aquarium, but it gradually forms an attractive carpet. Ideally the emersed shoots should be completely cut off before planting; new submerged shoots will gradually form.

**Genus:** *Marsilea*
**Species:** *hirsuta*
**Family:** *Marsileaceae*
**Origin:** Australia
**Area/height:** Foreground 1-3 cm
**Light:** high – medium
**Temperature:** 20 – 26 °C
**Growth:** medium
**pH:** 5 – 8
**Water hardness:** soft to hard
**CO₂:** 10 -30 mg/l
**Propagation:** Stolons, division
**Micranthemum spec. 'Montecarlo'**

*Micranthemum spec. 'Montecarlo'* is a new, promising foreground plant. The name of this variety comes from the Argentinian city of Montecarlo in the province of Misiones. In contrast with *M. umbrosum*, this plant does not grow upright, but creeps along the bottom as a cushion. This makes this new variety a very good alternative to *Hemianthus callitrichoides 'Cuba'* with much better growth habits. This new pearl grass is ideally suited for aquascaping and perfect for Nano Cubes.

**Genus:** *Micranthemum*

**Species:** spec. 'Montecarlo'

**Family:** Scrophulariaceae

**Origin:** Argentina

**Area/height:** Foreground 3-5 cm

**Light:** high – medium

**Temperature:** 20 – 26 °C

**Growth:** medium

**pH:** 5 - 7

**Water hardness:** very soft to medium

**CO₂:** 20 - 30 mg/l

**Propagation:** Division

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**Myriophyllum mattogrossense**

The Mato Grosso milfoil is a species from the *Myriophyllum genus* that is particularly easy to care for. It is found in Ecuador, Brazil and Bolivia. This plant inhabits fast-flowing, cooler waters. The pinnate submerged leaves are bright light-green and contrast very well with other green or coloured plants. In terms of care you should make sure there is a good supply of nutrients, especially good iron fertilisation. If there is an iron deficiency the shoot tips become much lighter to whitish. *Myriophyllum mattogrossense* also grows relatively well with medium lighting and is therefore also ideal for aquascaping beginners. Due to its potential height, this plant is recommended for the midground to background.

**Genus:** *Myriophyllum*

**Species:** mattogrossense

**Family:** Haloragaceae

**Origin:** Ecuador, Brazil, Bolivia

**Area/height:** Background

**Light:** high – medium

**Temperature:** 18 – 28 °C

**Growth:** rapid

**pH value:** 5 – 8

**Water hardness:** soft to hard

**CO₂:** 10 – 30 mg/l

**Propagation:** Head cuttings

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**Najas graminea**

Chris Lukhaup brought this delicate beauty from Lake Sentani in Papua New Guinea. Unlike other water-nymphs, *Najas graminea* is much more robust and the stems are not as fragile. Like all stem plants, several individual stems should always be used as group planting. The plants should be trimmed regularly as they are quite vigorous. When doing so the strong head cuttings can be replanted in a layered arrangement. In Lake Sentani this plant grows at almost 30 °C in the water, so *Najas graminea* is also highly recommended for discus aquaria.

**Genus:** *Najas*

**Species:** graminea

**Family:** Najadaceae

**Origin:** Papua New Guinea, Indonesia

**Area/height:** Midground up to 40 cm

**Light:** high – medium

**Temperature:** 22 – 30 °C

**Growth:** rapid

**pH:** 5 – 7.5

**Water hardness:** soft to medium-hard

**CO₂:** 10 – 30 mg/l

**Propagation:** Head cuttings, side shoots
Pogostemon quadrifolius

*Pogostemon quadrifolius* is a new water starwort from Laos. This species is closely related to *Pogostemon stellatus*. This new stem plant is sometimes also referred to as *Pogostemon stellatus ‘Octopus’*. It is very easy to care for and grows very strongly. For this reason, the stock of plants should be frequently replanted by means of head cuttings. The side shoots can also be used, they grow somewhat slower and are therefore also recommended for Nano Cubes.

**Genus:** Pogostemon  
**Species:** quadrifolius  
**Family:** Lamiaceae  
**Origin:** Laos, Southeast Asia  
**Area/height:** Background up to 50 cm  
**Light:** high – medium  
**Temperature:** 20 – 28 ºC  
**Growth:** very rapid  
**pH:** 5 - 7.5  
**Water hardness:** soft to medium-hard  
**CO₂:** 10 - 30 mg/l  
**Propagation:** Head cuttings, side shoots

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Pogostemon stellatus ‘Adelaide River’

This new stem plant is most probably a type of *Pogostemon stellatus*, which is highly variable in form. The name ‘Adelaide River’ refers to its Australian native home in the Northern Territory. Good lighting and balanced nutrition are also important requirements for cultivating this variety. This plant’s growth is compact and particularly delicate and it is easily propagated by taking head cuttings. With good lighting, the shoot tips become coloured in various shades of red to purple.

**Genus:** Pogostemon  
**Species:** spec. ‘Adelaide River’  
**Family:** Lamiaceae  
**Origin:** Australia  
**Area/height:** Background up to 40 cm  
**Light:** high – medium  
**Temperature:** 22 – 28 ºC  
**Growth:** medium  
**pH:** 5 - 7  
**Water hardness:** very soft to medium hard  
**CO₂:** 20 - 30 mg/l  
**Propagation:** Head cuttings, side shoots

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Pogostemon stellatus ‘Broad Leaf’

*Pogostemon species* are now very popular in aquatics, especially in aquascaping. The older designation *Eusteralis stellata* is still more commonly found commercially. *Pogostemon stellatus* is a very variable species with a variety of leaf shapes and colours. The name ‘Broad Leaf’ refers to the appearance of the wider leaf shape. Interestingly this variety is not as sensitive as the stem form, which frequently forms stunted shoot tips. Very good lighting, a constant CO₂ supply and intense fertilisation of the water guarantee lush, colourful plants in an underwater landscape.

**Genus:** Pogostemon  
**Species:** stellatus ‘Broad Leaf’  
**Family:** Lamiaceae  
**Origin:** Australia, Papua New Guinea  
**Area/height:** Midground up to 40 cm  
**Light:** high  
**Temperature:** 20 – 28 ºC  
**Growth:** medium  
**pH:** 5 – 7  
**Water hardness:** soft to neutral  
**CO₂:** 20 – 30 mg/l  
**Propagation:** Head cuttings, side shoots
Ranunculus inundatus

The river buttercup, *Ranunculus inundatus*, is a very decorative plant which is new to aquatics. In its natural site in Australia, this plant grows in damp locations, in some cases in the shallow water of ponds and lakes. Its most striking feature are the wonderfully formed leaves which are shaped like a slotted umbrella. Like *Hydrocotyle* species, this plant constantly forms stolon shoots. They generally creep along the substrate and form new leaf stems at the nodes. This gradually results in beautiful groups of plants with a very ornamental appearance. *Ranunculus inundatus* is a plant that needs strong lighting and therefore also requires a higher nutrient supply.

**Genus:** Ranunculus  
**Species:** inundatus  
**Family:** Ranunculaceae  
**Origin:** Australia  
**Area/height:** Midground 10-15 cm  
**Light:** high – medium  
**Temperature:** 20 – 28 °C  
**Growth:** rapid  
**pH:** 5 – 7  
**Water hardness:** soft to medium-hard  
**CO₂:** 20 – 30 mg/l  
**Propagation:** Stolons, division

Rotala indica

This new arrival was known as Ammania spec. Bonsai, but it is actually the “real” *Rotala indica*. This name was mistakenly used as a synonym for *Rotala rotundifolia* for decades. Unlike *Rotala rotundifolia*, the differences between the emersed and submerged leaves of this plant are hard to see. The oval to circular leaflets are densely packed on the stem and give a very ornamental appearance. The growth is always upright, which provides interesting design possibilities. The slow growth also favours placing it in the foreground or the mid-zone of an underwater landscape. A free standing group in a *Hemianthus* carpet looks particularly impressive.

**Genus:** Rotala  
**Species:** indica  
**Family:** Lythraceae  
**Origin:** India, Southeast Asia  
**Area/height:** Midground 30-40 cm  
**Light:** high – medium  
**Temperature:** 22 – 28 °C  
**Growth:** medium  
**pH:** 5 - 7  
**Water hardness:** soft to medium-hard  
**CO₂:** 20 – 30 mg/l  
**Propagation:** Head cuttings

Rotala macrandra ‘Green’

*Rotala macrandra* has a very variable appearance with many colours and leaf shapes. The emersed leaflets are round, whereas in water the leaves are narrow and elliptical with a light green colour. With good lighting, the shoot tips become slightly reddish in places, resulting in a striking appearance. This variety is easier to cultivate than the pure red stem form. The growth rate is average, so this variety is highly recommended for the background in Nano Cubes. This delicate stem plant is also well suited for use in aquascaping layouts.

**Genus:** Rotala  
**Species:** macrandra ‘Green’  
**Family:** Lythraceae  
**Origin:** Southeast Asia  
**Area/height:** Background  
**Light:** high – medium  
**Temperature:** 22 – 28 °C  
**Growth:** medium  
**pH:** 5-7  
**Water hardness:** very soft to medium hard  
**CO₂:** 20 -30 mg/l  
**Propagation:** Head cuttings, side shoots
The acanthus *Staurogyne spec. ‘Bihar’* is a new arrival in aquatics. In contrast to the well-known foreground species *S. repens* and *S. spec. ‘Porto Vehlo’*, it is a plant for the background. It grows well and is easy to care for. Due to its rapid growth, the stems should be trimmed regularly. The leaves on the shoot tips are usually slightly slotted and are strongly reminiscent of the well-known *Hygrophila pinnatifida*. With good lighting the plant becomes brownish red with slightly pink coloured undersides of the leaves.

**Genus:** Staurogyne  
**Species:** spec. ‘Bihar’  
**Family:** Acanthaceae  
**Origin:** India  
**Area/height:** Background  
**Light:** high – medium  
**Temperature:** 22 – 28 °C  
**Growth:** rapid  
**pH:** 5-8  
**Water hardness:** soft to hard  
**CO₂:** 20 -30 mg/l  
**Propagation:** Head cuttings, side shoots

*Staurogyne spec. ‘Porto Vehlo’* from Brazil is still a little known species in Europe. It is named after the capital of the state of Rondonia in the western part of Brazil. This plant from the acanthus family (like *Hygrophila*) has very narrow, pointed leaves. Good lighting promotes creeping growth and even a light purple colouring to the leaves. After settling in, the plants grow into dense cushions. Occasional thinning of the shoots promotes a strong plant. There is little experience of cultivation, but the growth is slower than the *Staurogyne repens*. A good CO₂ supply and adequate micro-nutrients are absolutely essential.

**Genus:** Staurogyne  
**Species:** spec. ‘Porto Vehlo’  
**Family:** Acanthaceae  
**Origin:** Brazil  
**Area/height:** Foreground 3-5 cm  
**Light:** high – medium  
**Temperature:** 22 – 28 °C  
**Growth:** slow  
**pH:** 5 -7.5  
**Water hardness:** soft to medium-hard  
**CO₂:** 20 – 30 mg/l  
**Propagation:** Head cuttings

Hardly any other moss is as popular as the *Java moss*, *Vesicularia ferriei*. The commercial name ‘Weeping Moos’ refers to the drooping fronds of this attractive moss. Ideally the moss is attached to roots or stones, where it quickly takes hold with fine holdfast roots. By trimming the moss cushion regularly, wonderful layouts can be created. Little miniature trees made of delicate roots and the weeping moss as the ‘treetop’ are a particular art form. This beautiful moss is very easy to care for and resilient.

**Genus:** Vesicularia  
**Species:** ferriei  
**Family:** Hypnaceae  
**Origin:** China, Japan  
**Area/height:** Foreground  
**Light:** medium - low  
**Temperature:** 22 – 28 °C  
**Growth:** slow  
**pH:** 5 -7  
**Water hardness:** very soft to medium hard  
**CO₂:** 20 -30 mg/l  
**Propagation:** Division
The rarity
from the Plantahunter tour, Brazil!

We discovered the new Bonito moss on our Plantahunter tour in Brazil and propagated it in our greenhouses. It forms dense, elongated, palmate fronds with an intensive green colour. Like most mosses, it is very easy to care for in the aquarium. Vigorous pruning promotes especially compact moss cushions. The growth is hugely influenced by changing the water regularly, fresh, clear water and the CO₂ supply. Ideally this new moss from Brazil grows attached to roots or stones.

Genus: Taxiphyllum  
Species: spec. ‘Bonito’  
Family: Hypnaceae  
Origin: Brazil  
Area/height: Foreground up to 10 cm  
Light: medium - low  
Temperature: 18 – 26 °C  
Growth: slow  
pH: 5 – 8  
Water hardness: soft to hard  
CO₂: 0 – 20 mg/l  
Propagation: Division
DECORATIVE ELEMENTS

Many well-known aquarium plants grow naturally in the spray of streams, rivers, and waterfalls. Rocks and cliffs, roots and dead tree trunks are overgrown with these epiphytes. Anubias, Microsorum, Bolbitis and mosses are interesting plants that all possess this same growth habit.

With our new decorative additions, magically beautiful underwater landscapes are possible in any size of aquarium.

SCAPER PADS

Aquascaping is a modern variety of aquarium design. The use of stones and roots has a particularly important role in aquascaping. With this in mind we developed Scaper pads.

With the new mini size you can „green” every small gap between the stones and roots with ease.
SPECIMEN PLANTS
In our Dennerle greenhouses, we lovingly care for and cultivate extra-large plants for months on end. These „specimens“ are made for large aquarium setups and designs, since they immediately give the impression of a mature, long-standing landscape. There are now XXL plants for larger aquaria from the stem plant range too.

**Alternanthera reineckii ‘Red’ XXL**

Hardly any other stem plant is as vividly coloured as this variety. The stems and upper and lower surface of the leaves are brown-red to cherry red in colour. To ensure that you get the most intense colours, this plant needs good lighting and an adequate supply of CO₂. The growth rate is average, which means the stems should be trimmed or pruned every 6-8 weeks. In discus aquariums this South American plant adds a splash of colour when combined with sword plants.

**Bacopa caroliniana XXL**

A stem plant that is one of the classic aquarium plants. It grows much more slowly than other stem plants, and needs a well-lit location to help it produce the pretty brown-coloured leaves. Emerged plants are pure green and display obvious hairs on the stems. It is most effective in a larger group; ideally the stems should be planted in stages rising towards the back. This results in a harmonious sight for the observer.

**Hygrophila corymbosa XXL**

*Hygrophila corymbosa* is a common stem plant in Southeast Asia. There are several varieties, each of which has a different leaf shape. Generally the leaves above water are much darker in colour than when submerged. Giant Hygro is a good beginner plant for the background. Rapid growth means that excess nutrients are removed, eliminating the food source for any algae. As soon as the shoots reach the water’s surface they should be trimmed back to half their length. A stepped arrangement of the stems is recommended for this.
### DISCONTINUED PLANTS 2013/2014

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item description</th>
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<tbody>
<tr>
<td>112</td>
<td>Anubias congensis</td>
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<tr>
<td>120</td>
<td>Anubias heterophylla</td>
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<tr>
<td>106</td>
<td>Asplenium cf.normale</td>
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<tr>
<td>612</td>
<td>Bacopa monieri</td>
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<tr>
<td>105</td>
<td>Bolbitis heteroclit „Difformis“</td>
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<td>611</td>
<td>Bacopa caroliniana, submers</td>
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<td>Cryptocoryne spec. Indonesia</td>
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<tr>
<td>621</td>
<td>Cryptocoryne wendtii Brown XL</td>
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<td>Cryptocoryne wendtii Brown XXL</td>
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<td>Cryptocoryne wendtii Green XXL</td>
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<td>Cyperus helferi</td>
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<td>Didiplis diandra</td>
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<td>162</td>
<td>Echinodorus cordifolius</td>
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<td>640</td>
<td>Microsorum pteropus <code>Trident</code></td>
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<td>Rorippa aquatica</td>
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<td>735</td>
<td>Rotala spec. Enie</td>
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<td>931</td>
<td>Taxiphyllum spec. Spiky Moos</td>
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<td>920</td>
<td>Coco Shell with M40</td>
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<td>Coco Shell with M50</td>
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<td>Coco Shell with T60</td>
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<td>Nano Bridge with A21</td>
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<td>225</td>
<td>Lysimchia nummularia</td>
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<td>Anubias barteri XL</td>
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<td>Anubias Bonsai on stone</td>
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<td>135</td>
<td>Cryptocoryne cordata, Blister</td>
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<td>Cryptocoryne x purpurea, Blister</td>
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<td>Juncus repens, Blister</td>
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<tr>
<td>147</td>
<td>Helanthium tenellum <code>Broad Leaf</code>, Blister</td>
</tr>
<tr>
<td>231</td>
<td>Mayaca fluvatilis</td>
</tr>
</tbody>
</table>
FERTILIZE AQUARIUM PLANTS AUTOMATICALLY. SIMPLY. WITHOUT ELECTRICITY. DROP BY DROP.

Supply your aquarium plants with the necessary nutrients exactly when they are needed - namely permanent!

- Works without electricity
- Very easy to use
- Ensures a lush plant growth - continuously and by itself

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