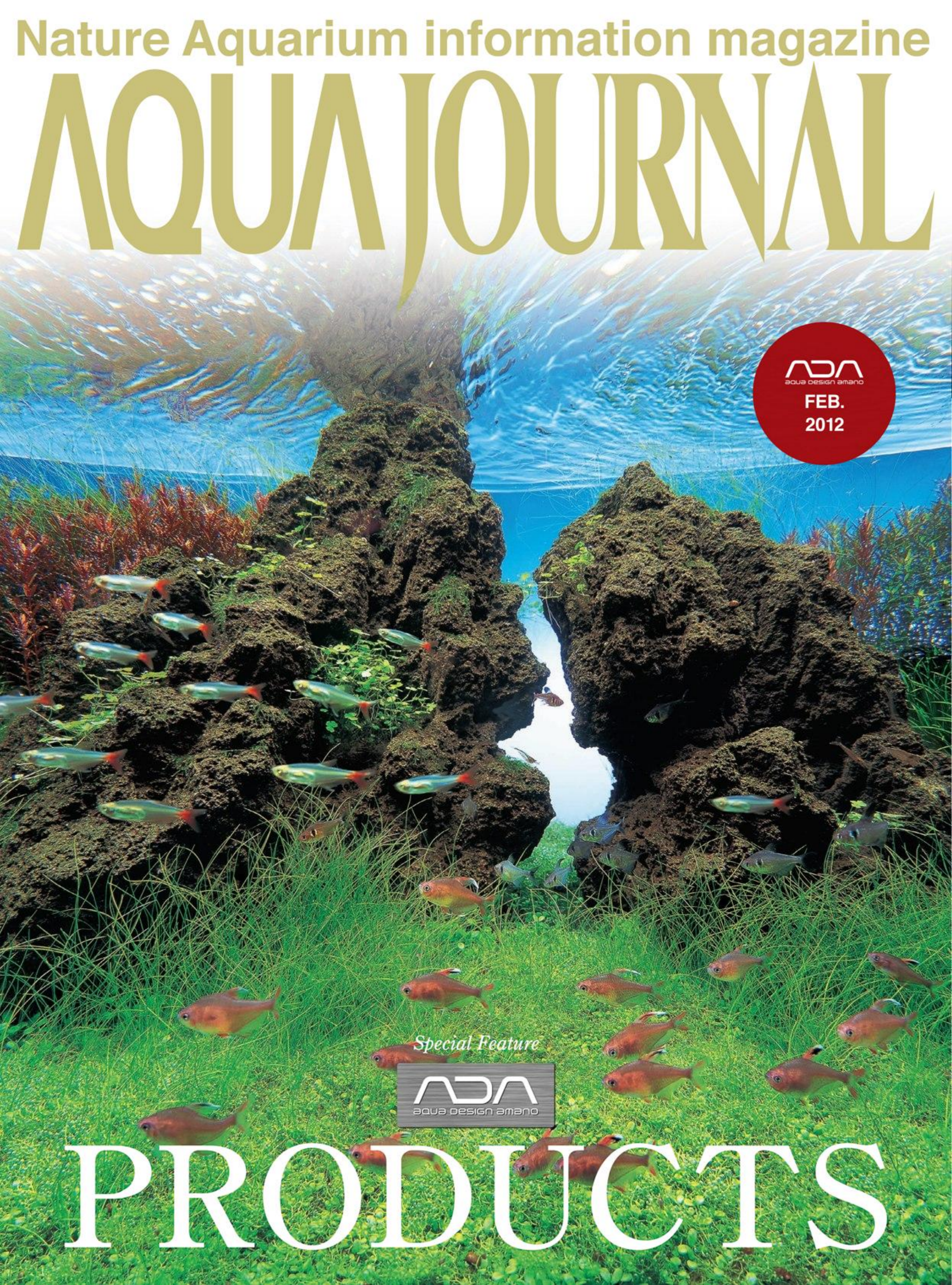


Nature Aquarium information magazine

AQUAJOURNAL

ADA
aqua design amano
FEB.
2012



Special Feature



PRODUCTS



SUPER JET FILTER SERIES

NATURE AQUARIUM FILTRATION SYSTEM

THE PURSUIT OF AN IDEAL FILTER

ADA began the journey for an ideal filter when other sources of external filtration just didn't provide what was needed: stable water flow, consistent and long-term performance and the maximum capacity for as much filtration media as possible.

www.adana.co.jp/en



Super Jet Filter's consistent water flow is produced by the superior power of an IWAKI external pump.

1 Originally-designed impeller

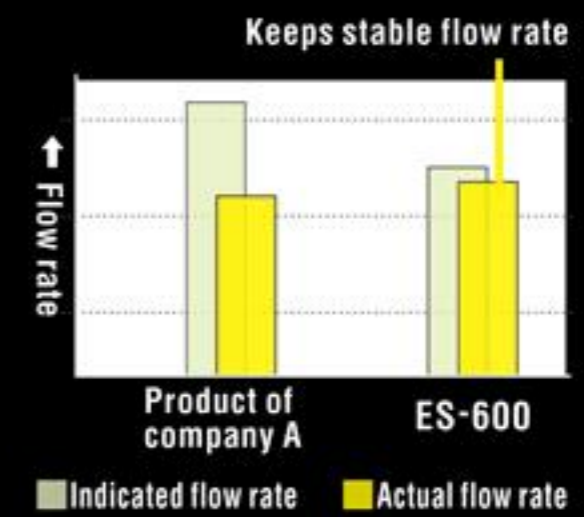
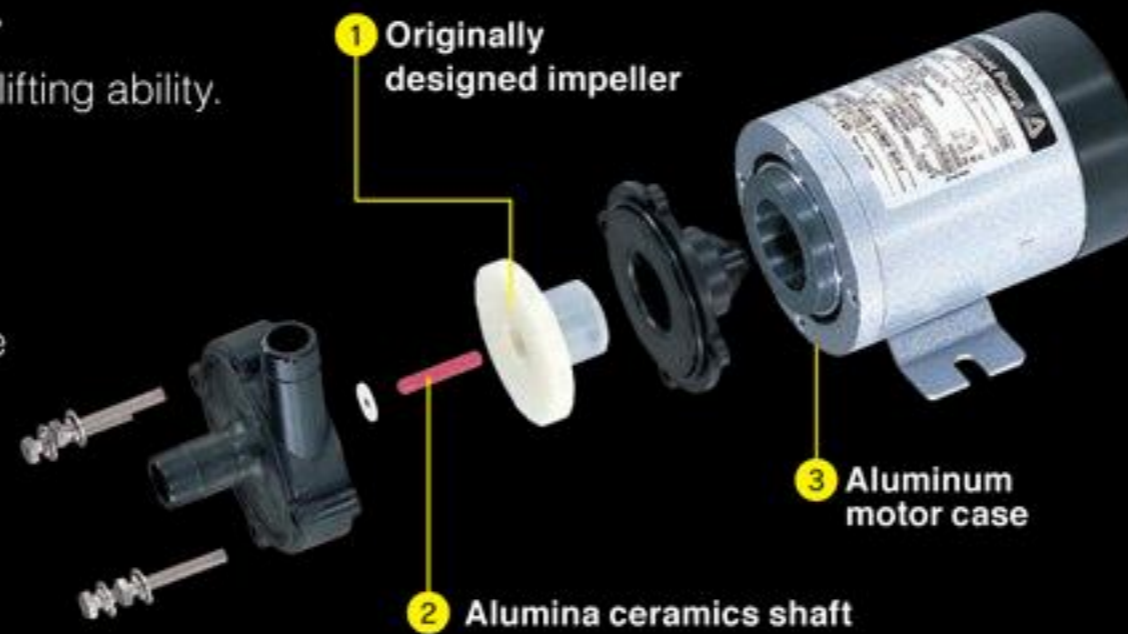
Original impeller produces the high lifting ability.

2 Wear-resistant shaft

Alumina ceramics shaft with wear-resistant property supports the driving of impeller.

3 Aluminum motor case sustains high performance

The motor case with high durability is truly a professional quality.



Flow rate does not change much even after loaded with the filtration media.

Large capacity of filtration media produces extra filtration ability.

In order to fully realize the potential of ideal flow in the aquarium, the inside of the canister filter also had to be simple: using a cylindrical shape allows water to flow through the filter easily, and the absence of excess filter media baskets allows for water flow to be sustained and an infinite combination of filter media to be used for ideal bacteria growth for biological filtration.

The last touch was to make it long-lasting. We wanted a filter that wouldn't ever have to be replaced and had the finest professional grade quality. That's why all of our parts are built out of stainless steel and high-grade aluminum. By including all of the glass pipes, clear hose and filtration media with every SUPERJET filter, we finally created the best canister filter system in the world:



THE SUPER JET

Included with each Super Jet Filter:

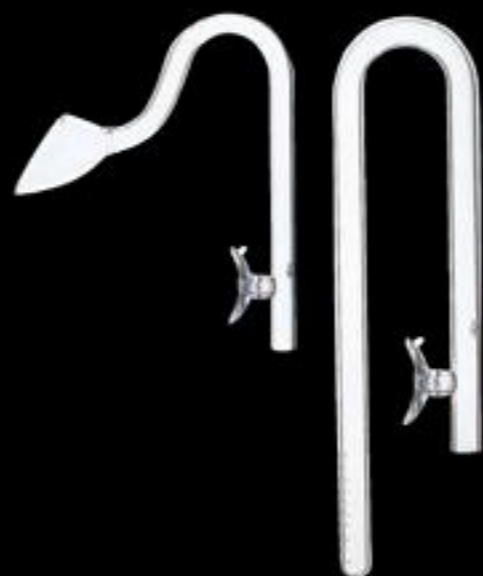


BIO RIO

Bio Rio filtration media for ideal biological filtration (For ES-600, Bio Cube 20 and Anthracite are included.)

Glass Pipes

Glass Outflow and Inflow Pipes with corresponding Clear Hose tubing.



BIO CUBE

SUPER JET FILTER

High durability filter with professional quality, consisted with 3 series, 9 products



made in japan







©Takashi Amano

A ray of light piercing through dark clouds in the sky. The landscape of the town appears in the natural spotlight.

Vik, Norway

Contrast well with green color of aquatic plants



The aquascape is an image

NEW

Now on sale

LA PLATA SAND

NATURE AQUARIUM GOODS

New cosmetic sand, La Plata Sand is added to the existing lineups of cosmetic sand series that create a bright and natural ambient in a layout. The white color of La Plata Sand brings out the green color of aquatic plants.

NEW layout materials are also released!



Unzan stone

NEW

A lava stone with rustic appearance. Its dented surface can hold Wabi-kusa, so you can develop your own way and create a unique layout with Unzan stone.



Kei stone

NEW

A natural stone with the mixture of ocher and red-purple colors. Available in various sizes.



Sado-akadama stone

NEW

A rare raw-stone of Akadama stone from Sado island. It has the intent red color partly on its surface, giving a strong impression to a viewer.

ADA
aqua design amano

<http://www.adana.co.jp>

Find more issues at
magazinesdownload.com



A Ray of Light Beaming over a Fjord (Vik, Norway)

I visited Norway in late October last year. In sharp contrast to the rainy weather up to the day before I arrived, my three-day stay in Norway was favored by good weather. On the final day, I headed for a hill offering a panoramic view of the town along the coast. From the heavily laden sky, a common sight in Scandinavian countries in winter, a ray of light shone like a spotlight and illuminated the beautiful landscape of the town.

Shooting data /Linhof Technorama 612, APO Symmar 135mm, 1/8 sec at f32, Velvia 100F
Text and photographs by Takashi Amano

AQUA JOURNAL

FEBRUARY 2012

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Special Feature



PRODUCTS

*Photographs by Takashi Amano
Text by Masatoshi Abe/Tsuyoshi Oiwa*

Every one of the Nature Aquarium Goods was developed through actual production of aquascapes.

They represent Takashi Amano's experiences in the form of performance and design.

And their outstanding effectiveness is proven by the numerous works of art of Nature Aquarium.

The Special Feature of this issue describes the features and effective use of ADA's Nature Aquarium Goods.

35

Exploring the Steadfast Philosophy of ADA's Nature Aquarium Goods

A solid philosophy of Nature Aquarium Goods

ADA's Nature Aquarium Goods broke through the concept that aquarium supplies are cheap and fit for the rubbish heap. Let's look into ADA's steadfast philosophy that produces high-quality and long-lasting ADA goods.



Why NA Goods are Simple in Design?

At first glance, anybody would feel that Nature Aquarium Goods are ultimately simple in design for aquarium supplies. Compared to the majority of aquarium products which are mass produced in plastic, ADA's products made of glass and stainless steel must seem unusual. However, ADA needed to use these materials in order to materialize its philosophy in the form of products. For Nature Aquarium that expresses natural beauty by placing stones and driftwoods and growing aquatic plants within an aquarium tank, any artificial object is considered a foreign material which can spoil the beautiful aquascape. Nevertheless, various items such as CO₂ injection equipment for the healthy





growth of aquatic plants and external filter for water purification need to be installed within the tank to maintain the Nature Aquarium. For this necessary equipment to be installed within the tank, transparent glass was chosen as the most suitable material as it is not so noticeable in water. To bring out the beauty of the aquascape, the equipment to be used around the tank is also of simple design mainly using stainless steel and other types of metals. ADA pursues the ultimate beauty in aquarium supplies. The distinctive materials and simple design of the Nature Aquarium Goods embody ADA's philosophy that ultimate priority should always be placed on the beauty of the aquascape.

Affection for Goods

Another reason that ADA specifically adopts glass and stainless steel as materials for its products is because ADA wishes the users to have affection for the goods they use. No one could have emotional attachment to aquarium products made of plastic which are meant for mass production and consumption. On the other hand, glassware and stainless steel ware that are elaborately made by craftsmen have the warmth and attractiveness of hand-crafted goods that one can use with affection for a long time. ADA even places specific focus on the packaging materials and design of its products so that the users will not discard the package, and waste will eventually be

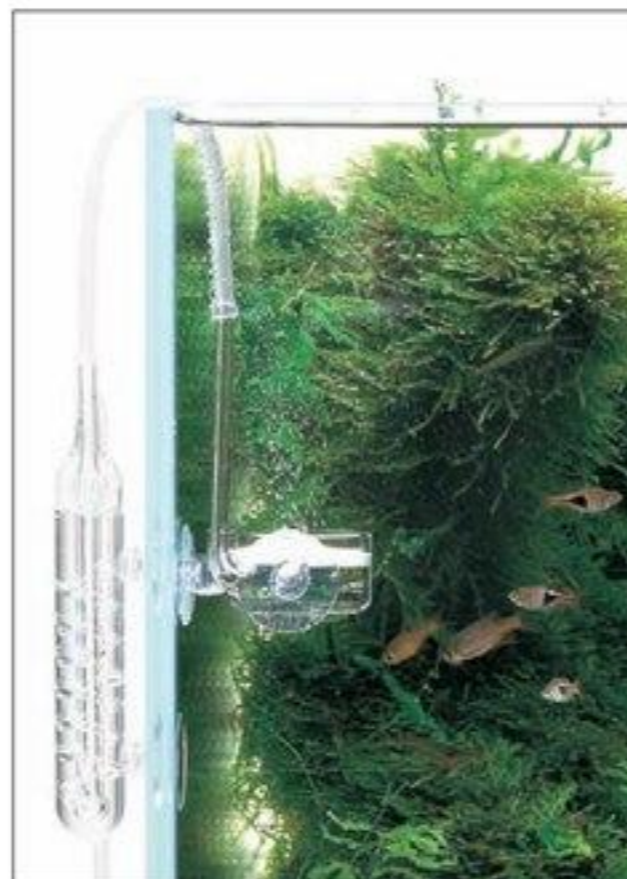
reduced. We go this far solely because Nature Aquarium is inseparable from nature and the wellspring of the philosophy that runs through ADA products and Nature Aquarium is found in nature. We need to know about the ecosystem and beauty of nature to produce an attractive Nature Aquarium.

However, today the natural environment is subject to destruction in exchange for economic development, and the beautiful landscape is contaminated by artificial objects such as rubbish and signboards. We sincerely hope that aquarium hobbyists who enjoy Nature Aquarium would understand this situation and use our products carefully over a long period of time. Such a wish is deeply embedded in our products.



“The Healthy Growth of Aquatic Plants” is Not the Only Pursuit in Product Development

Simple & Sophisticated
Product designs



The sight of CO₂ bubbles rising in a spiral and floating in water stirs the aquarist's scientific curiosity.

Bring Joy and Specialty to Hobby

Besides its effective role in establishing an environment for the growth of aquatic plants, the aquatic equipment for Nature Aquarium should also offer a sense of fun, a beautiful appearance upon installation and pleasure to use. What is further required for aquarium goods and tools is attractiveness so that the users grow fond of them over constant use. Technically, every hand-crafted piece of glassware varies in terms of its curves and roundedness, which is a significant difference from standardized machine-made products. Moreover, the use of specialized tools is an important factor to make our hobby more enjoyable. Design which places focus on specialty rather than on versatility brings out the functionality of the tool without the frills.



With the help of the Bottom Release, the fertilizer can be inserted deeply into the substrate even in recessed locations. The Bottom Release offers the joy of using a good tool.

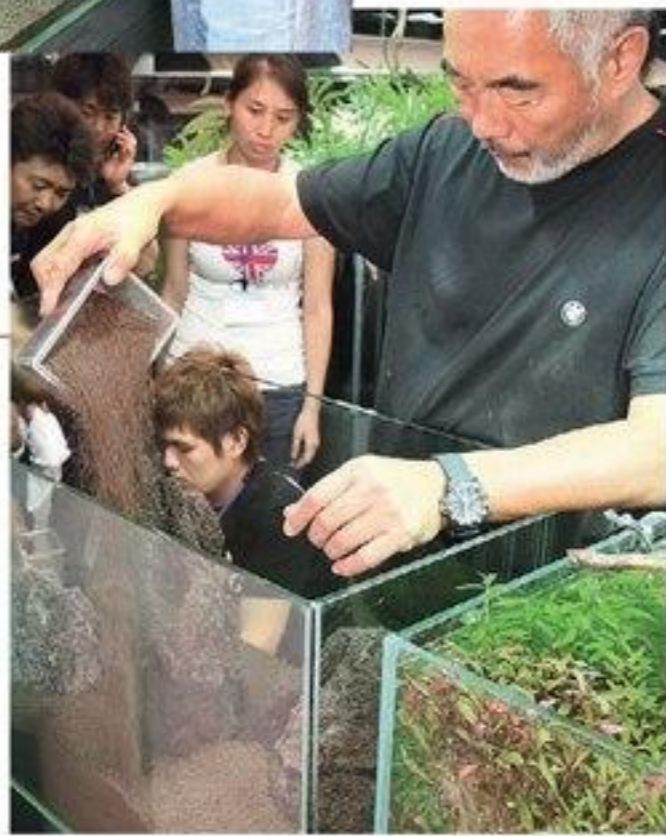
Clear, transparent glass with a soft curve naturally blends in the aquascape. The design is so unique that it cannot be found among conventional aquarium equipment.



Layout Technique Taking Advantage of New Materials

Layout style created
by a new material

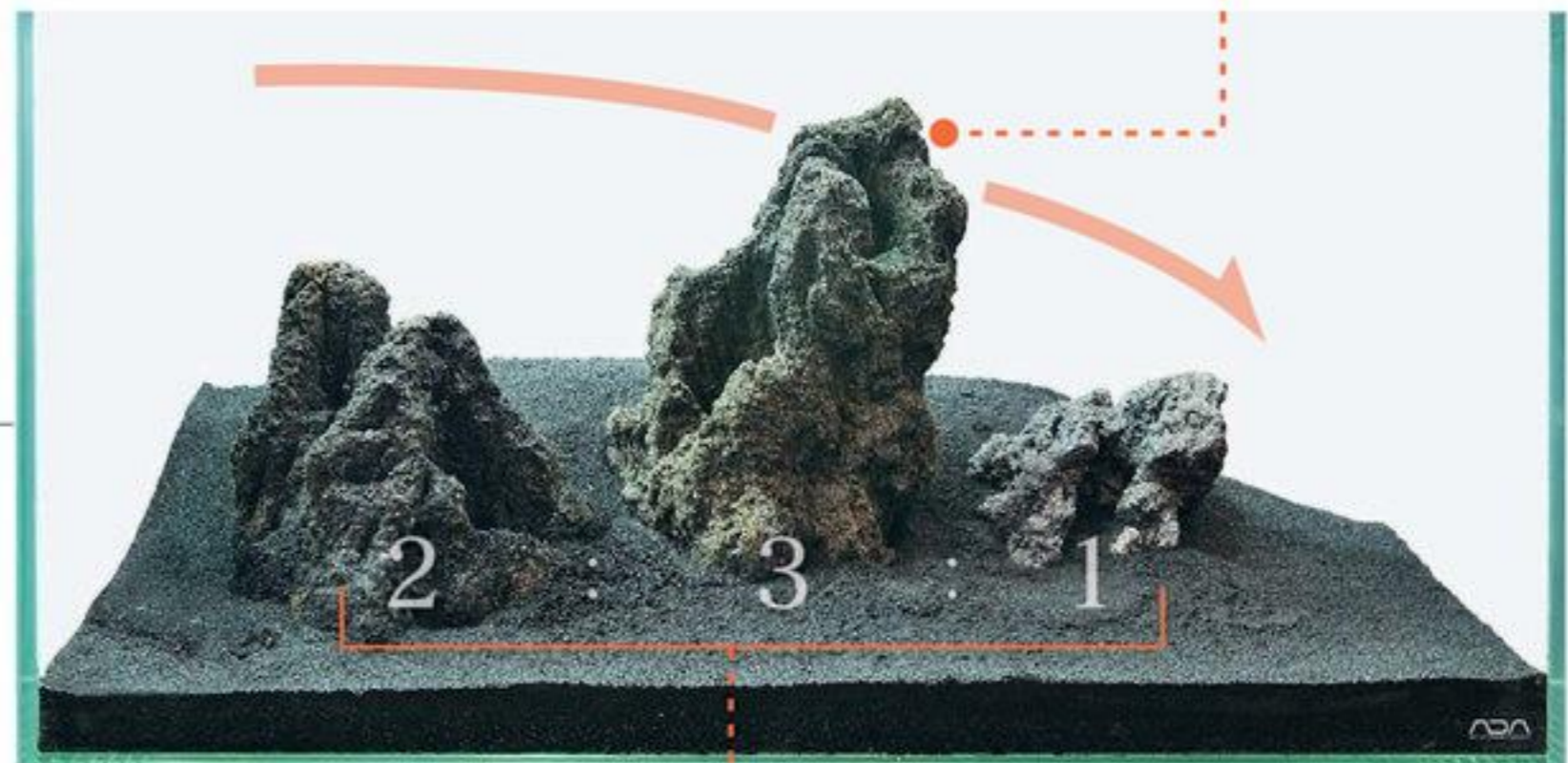
Having produced numerous Nature Aquarium works, Takashi Amano always pursues new layout expressions. His rich experience brings a wealth of new ideas.



Once the stone arrangement is completed, pour out some soil to create an undulating surface. The line of the substrate is also important.

Stone arrangement according to Sanzon Iwagumi creates a left-to-right flow.

Unzan stone with an intrinsically fascinating shape is recommended for aquarist novices.



Stone sizes are selected in the ratio of approximately 2:3:1

Arrangement of Unzan Stones with Good Usability

People say that Iwagumi layout is difficult because it requires stone arrangement techniques along with good stone selection skills. In the case of Manten stone and Ryuoh stone, it must be hard for beginner aquarists to even figure out what good stone is. The Unzan stone used for this layout has a superior shape and is user-friendly compared to ordinary stone materials. This sample layout within a 90cm tank adopts the very basic stone arrangement consisting of three stones where the largest stone which serves as the main stone (Oyaishi) is placed in the center, followed by the sub stone (Fukuishi) and accompanying stones (Suteishi) on both sides.

Plant the aquatic plants carefully up to the secluded area around the stones. Once the aquatic plants grow runners, the gaps between the stones are covered, creating a seamless flow through the stone arrangement.



Pinsettes L

A thin layer of Aqua Soil-Amazonia Powder type is laid down within the pocket on Unzan stone and Wabi-Kusa Short Hairgrass is placed on top of it. This is one of the points of this layout.



Taking advantage of the rough texture, put some finely-chopped willow moss on the stone surface.

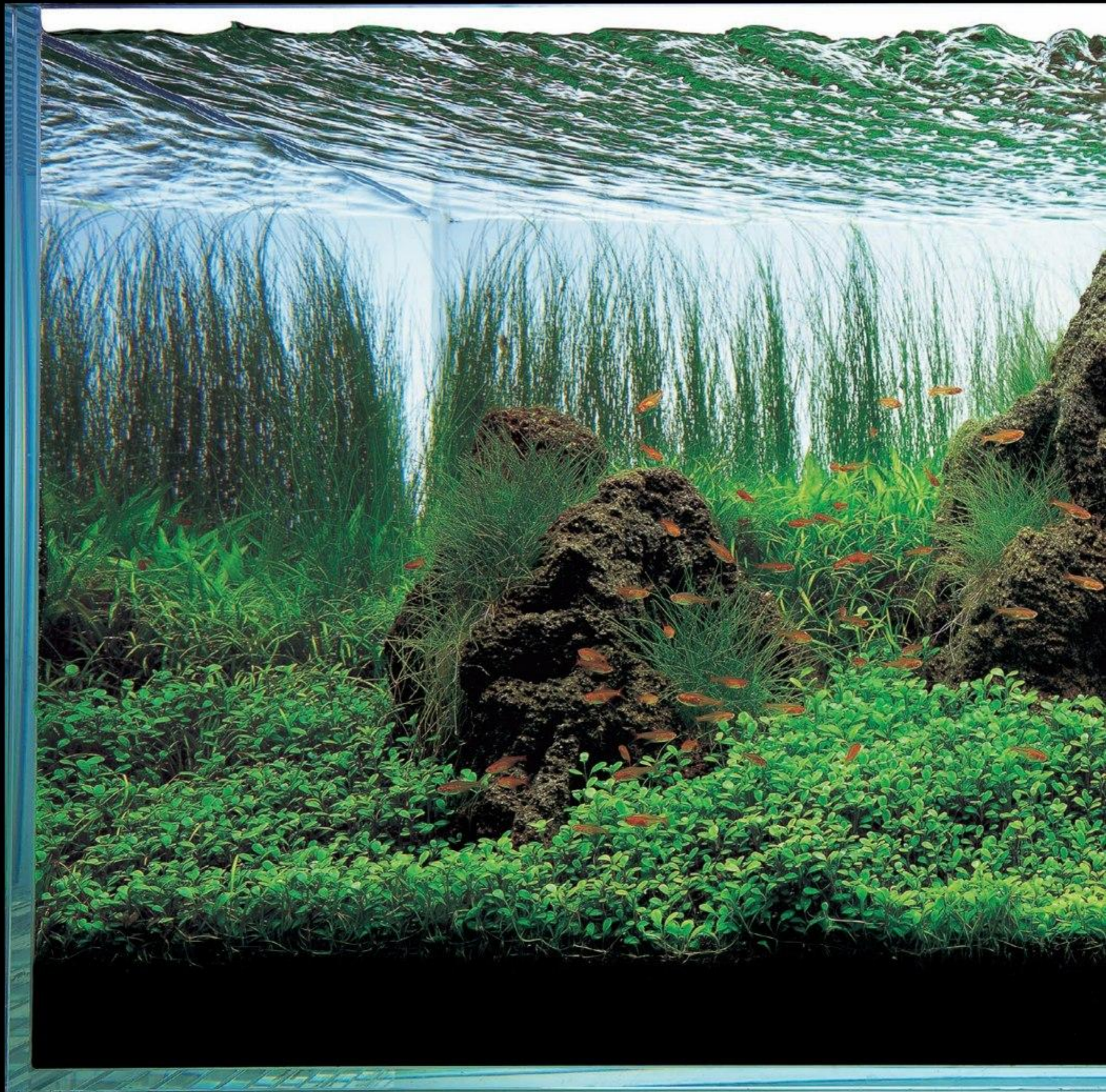
[After planting]



Sand Flattener



The substrate is fairly slanting due to the soil mound. Make a neat substrate surface with the Sand Flattener.



Combination of Unzan Stone and Wabi-Kusa

The Unzan stone used for this layout is a new addition to ADA's layout material. With Unzan stone which is a volcanic stone in a natural shape, you are able to produce a rustic layout just by placing it in the tank. Since it has a hole of almost the size of the diameter of ADA's Wabi-Kusa products, you can grow aquatic plants

on the stone by laying down a thin layer of Aqua Soil-Amazonia within the hole and then placing a Wabi-Kusa on its top. This arrangement adds a whole new natural ambience to the aquascape. The combination of Unzan stone and Wabi-Kusa expands your layout expressions.



D A T A

Tank	Cube Garden W90×D45×H45 (cm)	CO ₂ system	Pollen Glass Large 30Ø – 3 bubbles per second with CO ₂ Beetle Counter	Aquatic plants	<i>Wabi-kusa Eleocharis acicularis</i> <i>Glossostigma elatinoides</i> <i>Echinodorus tenellus</i> <i>Echinodorus quadricostatus</i> <i>Eleocharis sp.</i>
Lighting system	Grand Solar I (NAG-150W-Green) ×3 units for two of 90P tanks Lighting for 10 hours a day	Air	Aeration with Lily Pipe P-4 for 14 hours when lighting is OFF at night	Fish species	<i>Hyphessobrycon amandae</i> <i>Otocinclus sp.</i> <i>Caridina japonica</i>
Filtration system	Super Jet Filter ES-600 (Bio Rio, NA Carbon)	Additives	Brighty K & Green Brighty STEP 2		
Substrate system	Aqua Soil – Amazonia, Bacter 100, Clear Super	Water change	1/3 water change once a week		
		Water quality	Water temperature: 25°C; pH: 6.8; TH: 20mg/l		



Layout Materials Offering an Outstanding Natural Feel Created by Stones and Grass

Unzan Stone  Wabi-Kusa Short Hairgrass



Top: It is advisable to prune white roots which are too long.
 Bottom left: As time passes by, the Wabi-Kusa looks naturally fit perched on the stone.
 Bottom right: The expression of a secluded area beside the stones is an important point.

Technique to Combine Two Different Materials

The Nature Aquarium Seminar organized for ADA International Distributors and their retailers in September was broadcast live worldwide via USTREAM. Among the programs aired, the one that received the biggest response was layout techniques using Unzan stone, a newly launched layout material, and Wabi-Kusa. On Unzan stone, there is a pocket of just the right size for hobbyists to lay down a thin layer of Aqua Soil-Amazonia Powder type within it and then place a Wabi-Kusa. Wabi-Kusa Short Hairgrass used for this layout will drape itself over the Unzan stone as it grows, bringing a rich natural ambience to the aquascape. Another attractive aspect of this technique is that it allows the hobbyist to easily treat a relatively hard expression by softening the rigid impression of the stone.

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素
材

Nature Aquarium Layout

NEW MATERIALS

[Master ADA's New Layout Materials]

Layout materials are essential for the composition of Nature Aquarium.

Now three new types of stone are added to ADA's current extensive lineup of layout materials.

They all have unique characteristics with a natural look and are recommended for your next new layout.

Here are some great features of these new layout materials.

4

MATERIALS

NEW MATERIALS

1 Unzan stone

Volcanic stone with its rough, uneven surface. Its calm, blackish color offers a wonderful match with aquatic plants.



NEW MATERIALS

3 Sado Akadama stone

This is a raw piece of rare Sado Akadama stone (which is not an ornamental natural stone). The stone's reddish color stands out when wet.



NEW MATERIALS

2 Kei stone

This stone is sourced from the mountains and has a natural color. Since this stone does not have any impact on water quality, it is suitable for use in a wide variety of planted aquariums.



Along with aquatic plants, layout materials such as stones and driftwood are an essential component of the layout in view of their function as the framework. There is a wide variety of layout materials including several types of stone, namely, Manten stone, Ryuoh stone and Yamaya stone. This lineup is now even wider with the addition of three new types of stone. The colors, shapes and surface unevenness vary according to the types of stone and this substantially influences the layout appearance. This is why a wide range of stones, including Hakkai stone and Keikan stone - to name a few - have been used for Nature Aquarium. Use of a new layout material expands the boundaries of your layout expression.

Unzan stone introduced in the feature article of this issue is a blackish volcanic stone. With a shape resembling a mountain, Unzan stone looks magnificent when it is placed in the tank. The surface of Unzan stone has a pocket just right for inserting Wabi-Kusa such as Short Hairgrass and Australian Dwarf Hydrocotyle, making it possible for hobbyists to produce a brand-new expression of natural ambience. Meanwhile Kei stone

and Sado Akadama stone both have a unique natural look with their rough surface resembling crushed rock. Kei stone has a warm color, akin to a mixture of ocher and red, while Sado Akadama stone comes in a deep maroon. These stones look slightly whitish when dry, but their colors emerge once they are wet. None of these new stones influences water quality and they can therefore be used without worry.

In addition to the new stones, La Plata Sand is added to the current lineup of cosmetic sands. La Plata Sand is a versatile, white cosmetic sand and introduces a bright atmosphere to the layout. This sand is a perfect match with vivid stem plants especially in the coming bright season. Please try this sand together with ADA's new layout materials.

NEW MATERIALS

4 La Plata Sand

La Plata Sand is a type of highly-favored white cosmetic sand. Use of this sand in the foreground brightens the layout in a natural way.





DISPLAY

Nature Aquarium Goods

EVENT in SPAIN

DISTRIBUTOR

“Avenlux Global s.l.”

C/Lepanto 264 1-G 08013, Barcelona, Spain

TEL: +34 93 245 1111

URL: <http://www.ada-spain.com/>



“Pursuit of Design Makes it Simple”

Due to the overwhelming support of aquarium hobbyists, Nature Aquarium Goods are now becoming popular all over the world. Not to mention its outstanding performance, it also features a unique design.

Lately Nature Aquarium Goods made its appearance in an exhibition in Spain.

While the ADA booth might look too cool for the passionate Spanish people, let's see their response to ADA products.

A: Mr. Yago presenting a slide show in the booth (second from the left). Tropica from Denmark lent its cooperation.

B: A display of planted aquarium in a 60cm tank. The clear glass tank is well blended with the aquascape.

C: Overall view of ADA booth. The booth was coordinated in white and made simple, just like ADA products.

D: The sophisticated display of layout materials inspires the visitors to try them out.

E: AVENLUX's refined sense of display is a good example.

F: Leaflet on the website of ADA's distributor in Spain. It also contains information on layout techniques.

“ Iberzoo '11”, the largest and the most important professional trade fair targeting the Spanish and Portuguese pet markets, was held from September 29 to October 1, 2011 in Barcelona, Spain. During the three-day fair, the booths were packed with about 21,000 visitors. AVENLUX, ADA's international distributor for Spain and Portugal, participated in this trade fair and exhibited Nature Aquarium Goods as well as Dolaqua products. It also organized an event to introduce the concept of Nature Aquarium and demonstrate the actual production of the layout.

With the motto of spreading Takashi Amano's philosophy on Nature Aquarium, Mr. Yago Alonso Gimenez, CEO of AVENLUX who had attended the seminar at the ADA headquarters in Japan, created a space for a slide show on the workshops conducted by Takashi Amano. AVENLUX displayed a number of layouts produced in various types of tanks, including a Nano Tank and 60cm tank, with the use of ADA products with the aim of presenting the overall picture of aquarium system to the visitors in a succinct way. Mr. Yago said the most

popular ADA product in Spain is Aqua Soil, but what also attracted the visitors' attention during the trade fair were the Super Jet Filter and the lighting systems (such as the Solar series) and stand. According to Mr. Yago, the majority of visitors to this trade fair targeting professionals in the pet industry prefer simple no-frill designs and thus approve of the taste of the ADA products displayed. White was selected as the main color for the booth as it was deemed the best choice for the simple minimalist design. One point worth noting was the white racks used for display of the Nature Aquarium Goods. On these racks, layout materials such as stones, driftwood and substrate materials were displayed in the manner of AVENLUX's refined style. It was very impressive to see such a sophisticated display where layout materials were presented as art objects placed beside the ADA products. From the ADA booth at Iberzoo '11, the message came home: “Pursuit of design makes it simple”.

Delivering Long Lasting Products

You do not need to be particular about the things you use if you only enjoy a hobby as something temporary.

Nature Aquarium Goods place particular focus on the use of stainless steel for the material because it is superior in design and highly durable.

In pursuit of the ultimate goal of maintaining the aquascape in good condition for a long time, Nature Aquarium Goods offer a sense of reassurance and reliability in long-lastingness without deterioration of performance.

Selecting things of quality increases the fun and enthusiasm in your hobby.



S stainless steel

Glass Items

Nurturing Tender Loving Care

Clear colorless glass is the optimal material for Nature Aquarium in light of our pursuit to form a beautiful figure that can harmonize well with the aquarium without standing out.

Glassware is fragile and vulnerable, which is why we naturally handle it with care.

Caring for aquatic plants and fish has something in common with this gentle handling of glassware.



1 PENAC P for Plants
Helps aquatic plants spread their roots. Ideal for Echinodorus which is a heavy root feeder.

2 PENAC W for Aquarium
Prevents the substrate from becoming anaerobic. This can be added under cosmetic sand.

3 Bacter 100
Contains more than 100 kinds of substrate bacteria in a dormant state. Use this together with Power Sand.

4 Clear Super
Activated carbon powder absorbs excess organic substances in the substrate. It becomes food for beneficial bacteria.

5 Tourmaline BC
Tourmaline contained in bamboo charcoal powder improves the substrate environment. Attracting an increasing number of users.

6 Power Sand series
An essential substrate item for long-term maintenance of the aquarium. Select S, M or L according to the depth of the aquarium tank.

7 Aqua Soil-Amazonia
Its effectiveness is supported by global aquarium hobbyists. It is certainly different from other black soils.



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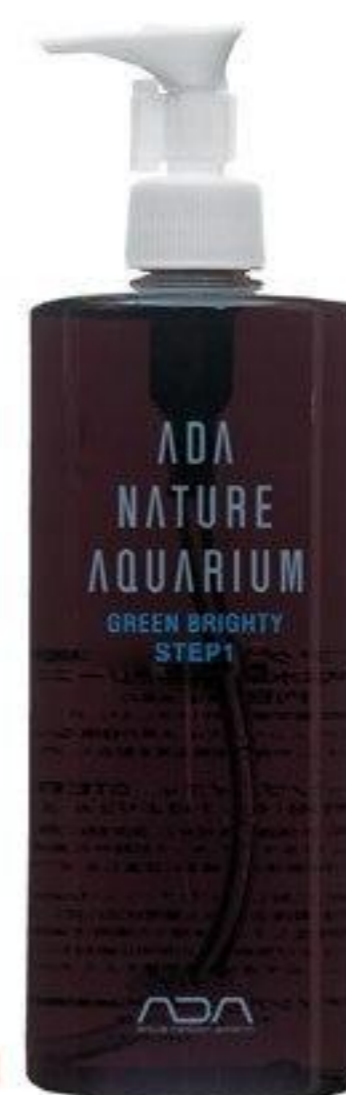
Enjoying Aquatic Plants with Enthusiasm Using Nature Aquarium Goods

Utilizing NA GOODS for layout making & maintenance

Highly professional Nature Aquarium Goods – your ideal partner in the production, maintenance and management of the planted aquarium. You will feel the difference with its outstanding usability and effectiveness.



8



9



10

11 Pro-Scissors Spring
Spring-type scissors that can be used with either hand. Effective for finish trim of willow moss.

12 Pro-Scissors Short
Recommended for hobbyists who find the ordinary trimming scissors too long.

13 Pro-Scissors Straight Type
One of the first items to be prepared to enjoy the planted aquarium.

14 Pro Picker
You can remove algae while enjoying its outstanding helpfulness and usability.

15 Pinsettes S
This compact pair of tweezers is convenient for removing rock wool.

16 Pinsettes L
Recommended for hobbyists to purchase this pair of tweezers together with aquatic plants for the first planting opportunity.

17 Sand Flattener
Use of a set square is too ordinary. Sand Flatter offers greater advantages for small aquariums.

18 Pro Razor
An essential tool for the removal of algae on glass surfaces. Mini type is also available.

8 Brighty K
Your aquatic plants not growing well? Then, supply potassium to your aquarium with Brighty K.

10 Green Brighty Special SHADE
Effective for growing Tonina species that are difficult to grow in water with high carbonate hardness.

9 Green Brighty STEP 1
The basis of ADA-style fertilization is supplementing potassium as well as trace elements. Start it now!



11



12



13



14



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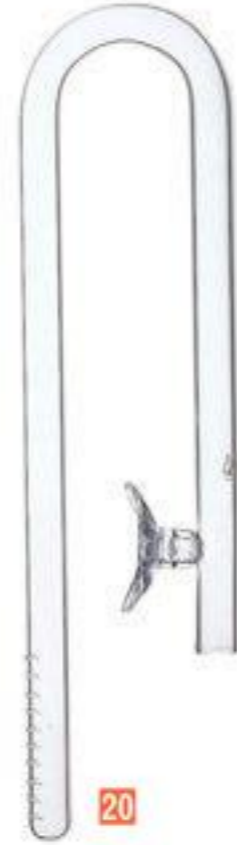


18

19 Lily Pipe P (Outflow)
Many users commented "Outflow pipe must be the Lily Pipe". You will understand this when you use this pipe.



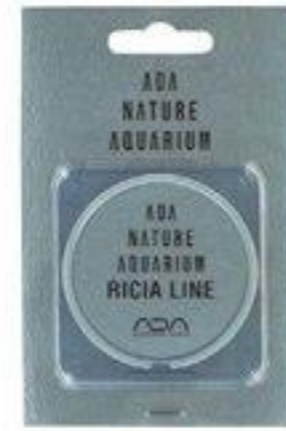
20 New Lily Pipe V (Inflow)
Select clear glassware as the optimal choice for a beautiful aquascape.



21 Super Jet Filter ES-600
The most important equipment in maintaining a good environment within the tank. ES-600 is the true choice.



22 Riccia Line
Along with the same color as Riccia, this layout item features a well-defined diameter. You will feel it when you wind this thread around the plant.



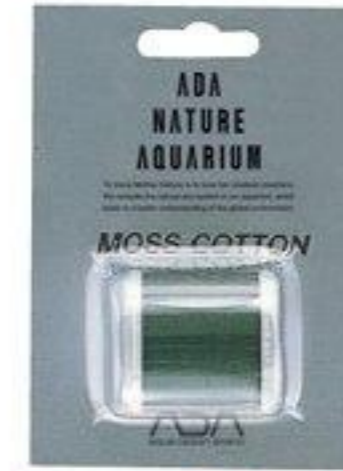
22

24 Wood Tight
Recommended to have one for epiphytic aquatic plants that are frequently used for layout.



24

23 Moss Cotton
This lasts very long after purchase. Ideal for attaching willow moss to layout materials.



23



25

26



27

25 Green Gain
The plant hormone contained in this product helps the plants spread new leaves after trimming.

26 Chlor-Off
Chlorine neutralizer is an essential item for aquarium owners. This is also highly cost-effective.

27 CO₂ Advanced System
A complete set covering the full range of necessary CO₂ supply equipment. It has excellent extensibility.



28

29



30



28 Spring Washer
Ideal for the cleaning of Lily Pipe and Clear Hose. It perfectly fits the curved pipe.

29 Superge
A glass detergent that rinses well without leaving any foam behind. Effective for removing stubborn algae.

30 Clean Bottle
A plastic bottle for soaking small glassware such as Pollen Glass.



31

31 Maintenance Stand I
Stylishly stores frequently-used maintenance tools.

※ Nature Aquarium Goods are subject to change due to design upgrade.

NA Goods for Each Process of Aquarium Production

Making of a 60cm Nature Aquarium, and NA GOODS

This section shows the items necessary for each step in the making of an aquarium taking the most popular 60cm tank as an example. The aquarium totally coordinated with Nature Aquarium Goods can have a beautiful aqua-interior piece.



Gun metallic silver easily fits any type of room.

[Substrate – Composition]

Setting up Substrate

1. Sprinkle substrate additives



The surface line of the substrate in the foreground should be made straight.

The substrate cannot be redone once it is completed. Apply substrate additives during substrate setup according to your budget.



2. Pour substrate soil

Use of the Aqua Soil-Amazonia makes the growing of aquatic plants easier. Be sure to use the Power Sand together with the soil if you intend to maintain the aquarium over a long period.



3. Flatten the substrate

Flatten the substrate with a slight inclination from foreground up to background. Be careful not to let the substrate in the foreground become too thick (refer to the sample on the left top).



Making of Composition

1. Attach willow moss

Place some willow moss until the surface of the driftwood is barely covered and fix it with the Moss Cotton. The Moss Cotton will biodegrade by the time the willow moss has taken root to the driftwood.



2. Attach Riccia

Riccia should be attached to the Riccia Stone or other small stone as it floats up in water. Use insoluble Riccia Line to attach Riccia which is not epiphytic.



Make a stable composition paying close attention to the flow created by the driftwood branches.

[Planting]

Preparation and Planting of Aquatic Plants

Preparation of aquatic plants

When planting aquatic plants sold in a pot, you need to remove the rock wool thoroughly. Remove any damaged leaves, too.



Planting Points

Point of planting mid-ground plants

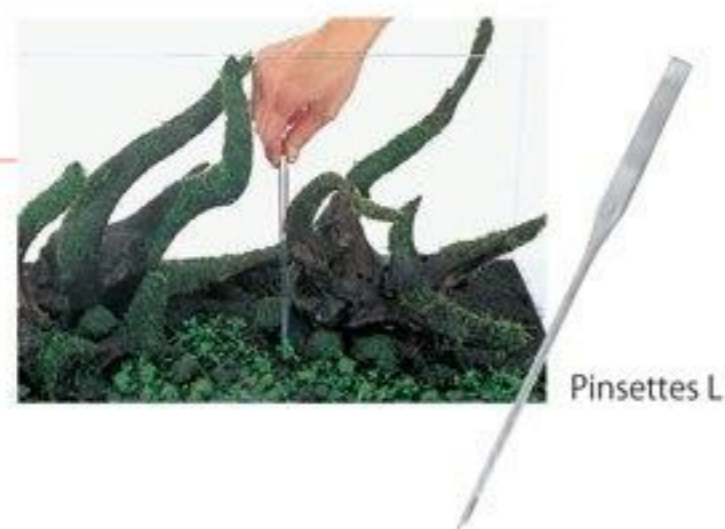
Plant Cryptocorne in the open space on both sides in order to conceal the bottom part of the stem plants.

Point of planting background plants

Use of bamboo sticks is convenient for checking the balance of planted stem plants.

Planting of aquatic plants

Plant foreground plants and stem plants densely with Pinsettes L. The Pro-Pinsettes Grip Type is convenient for planting Cryptocorne.



Attaching of Aquatic Plants

Attaching of epiphytic aquatic plants

Attach epiphytic aquatic plants such as ferns and Anubias to the driftwood using the Wood Tight. At the base of the driftwood, place the stones to which epiphytic plant is attached.

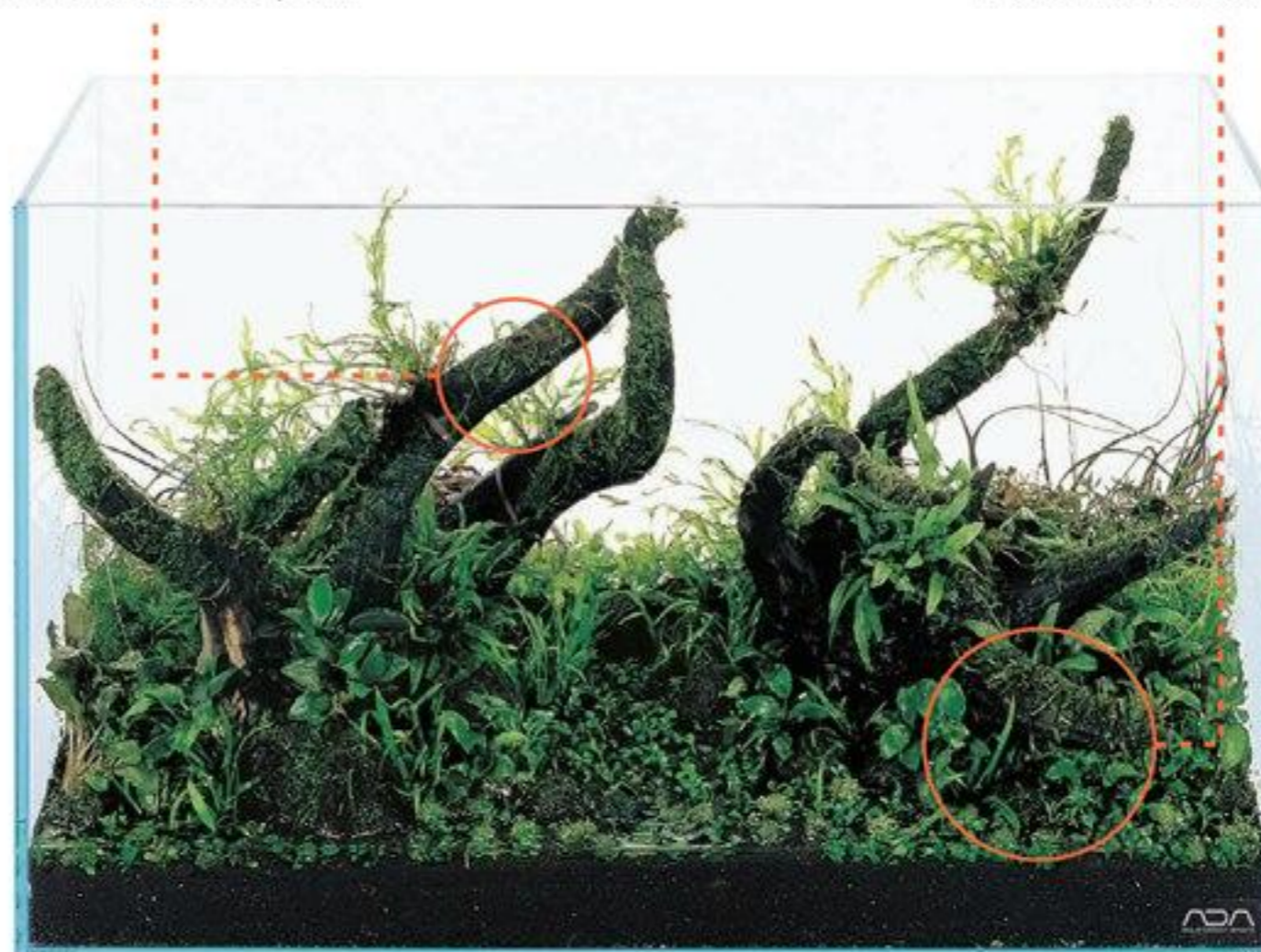
Planting Points

Point of epiphytic plant No.1

To attach epiphytic plant to the branch tip, put the Wood Tight through the roots of the plant.

Point of epiphytic plant No.2

At a location like this, place the epiphytic plant fixed on a small stone with Wood Tight.



[Management]

Setting up of Equipment

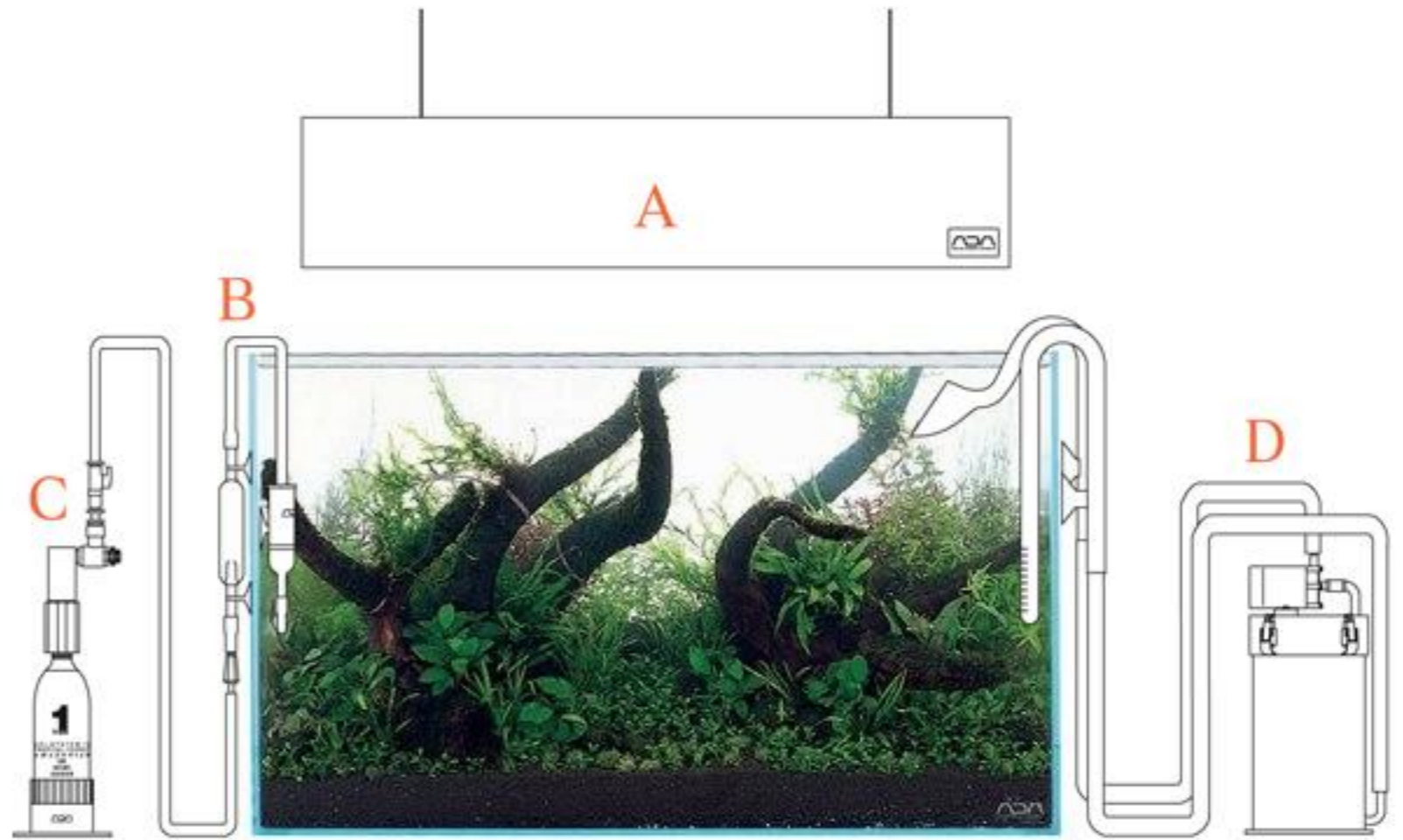
A. Setting up of lighting system

Write the date of installation on the lamp as the reference for the next replacement period. Standard replacement cycle is once a year.



B. Setting up of the equipment for CO₂ injection

The Pollen Glass should basically be installed at around the middle point of height of the tank. The installation at this position also provides a balanced look.



C. Setting up of regulator

Be sure to use the regulator in an upright position. Do not make the piping excessively long.



CO₂ Advanced System

D. Setting up of filter

The filter can be filled with 6 l of filter media. Thanks to its outstanding pumping capacity, the filter offers the best filtration performance in its class. This filter is your most reliable partner.



Lily Pipe P & V

ES-600

Points of Maintenance

1. Neutralization of chlorine in tap water

During water change which is a core activity of daily maintenance, neutralize residual chlorine in tap water thoroughly with the Chlor-Off especially in winter when the chlorine level in tap water is high.



Chlor-Off

3. Removal of algae on the glass surface

Algae grown on the glass surface undermines the aesthetic value of the aquarium. Pro Razor helps you remove the algae without wetting your hands.



Pro Razor

2. Supplying potassium to promote photosynthesis

Photosynthesis is promoted and aquatic plants grow healthily by adding potassium which can easily fall short within the tank. Supply potassium daily with Brighty K.



Brighty K

4. Post-trimming care

Trimming is essential to maintain a beautiful aquascape. Add the Green Gain approximately one week after the trimming so as to promote the development of new leaves.



Green Gain

Unique Features of NA Goods

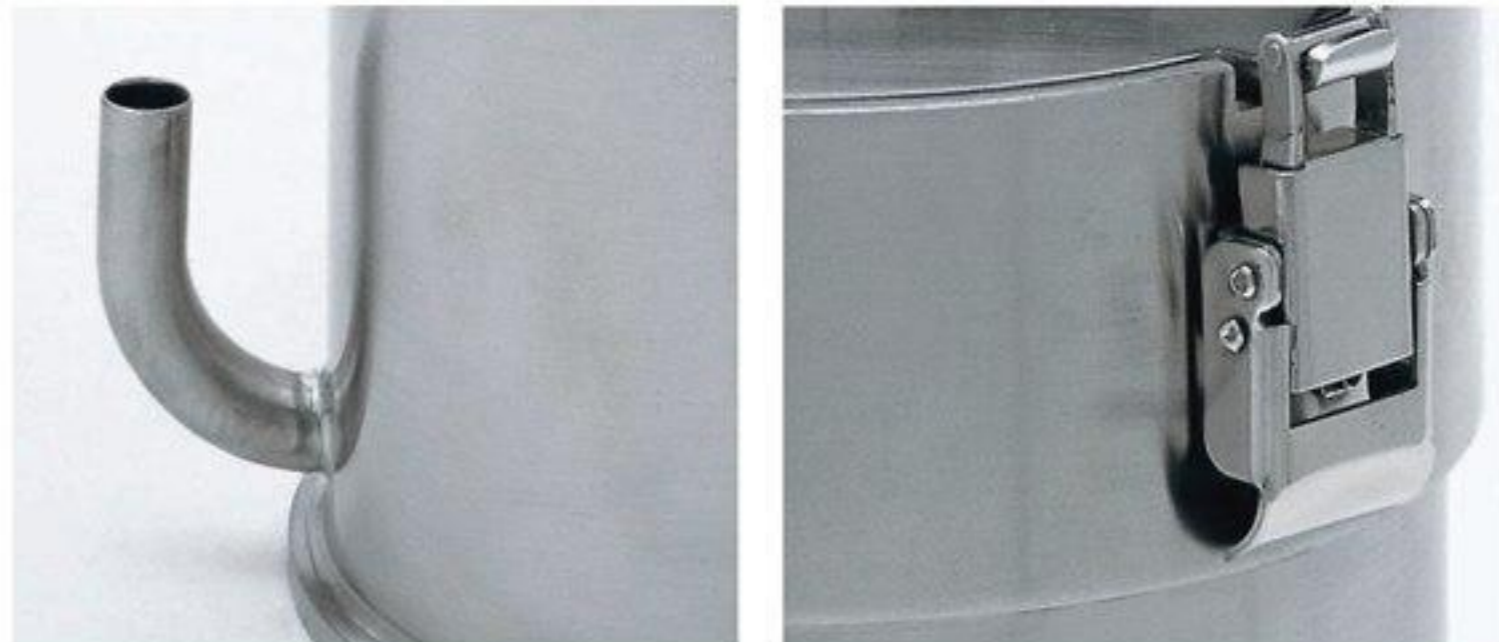
Persistence to original product design

Having been developed through actual production of layouts, the Nature Aquarium Goods reflect ADA's unique concepts. ADA never imitates others even if others imitate its products. The Nature Aquarium Goods always values originality.

01 Super Jet Filter – Giving Priority to Filtration Capacity over Convenience

The Super Jet Filter in fact has some disadvantages such as heavy weight, hard connection/disconnection of the buckle and difficulty in removing the filter media. Nevertheless, these are all because ADA did not wish to sacrifice the filter's "high filtration capacity" and "durability".

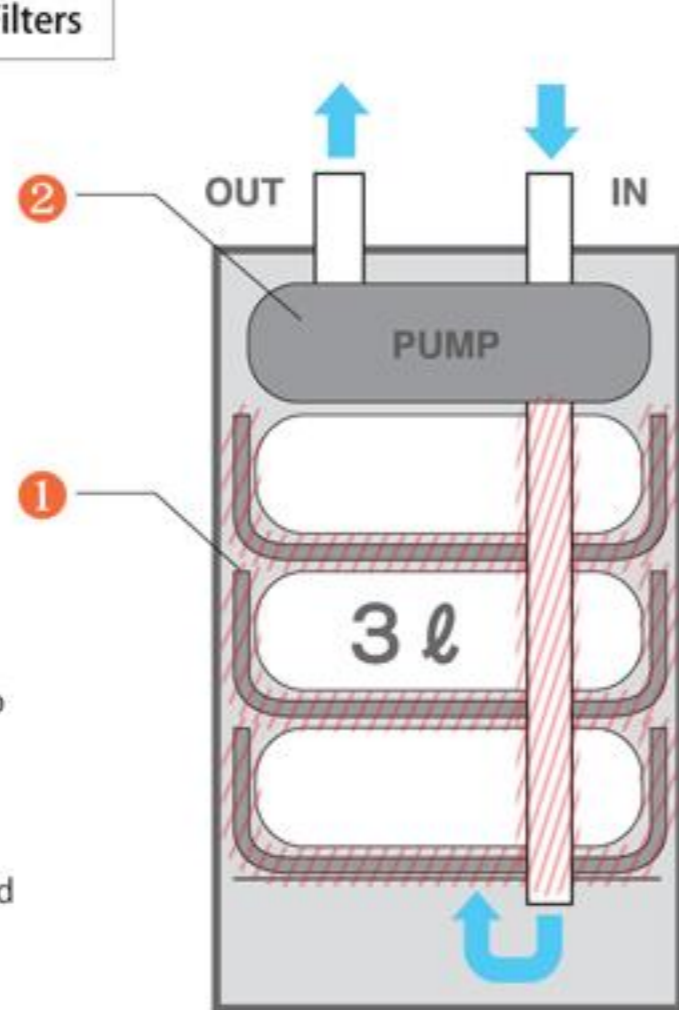
"Unbreakable" durability is required for the filter which serves as the heart of the aquarium.



Structural Comparison of Filters

[Competitors]

- ❶ **Waste of space**
Filtration space is sacrificed due to the basket and inflow path.
- ❷ **Built-in motor**
The filter media is easily influenced by electromagnetic waves due to their proximity to the motor.



Very efficient!

[ES-600]

- ❸ **Independent motor**
The motor independent from the filtration system prevents the influence of electromagnetic waves on filtration.
- ❹ **Spaciousness**
Simple cylindrical shape of canister allows accommodation of a large amount of filter media and smooth flow of water during filtration.

02 Green Brighty Series Containing Deep Seawater

In addition to ADA's unique step-by-step system according to the ever-changing environment within the tank, the Green Brighty series also features rich natural minerals derived from deep seawater (desalinated) contained in the product which cannot be obtained artificially (except for Brighty K).

ADA adopted the push nozzle, which is now very common, for the first time in the industry.



Seawater is collected from a depth of more than 200m below sea level (the image is for illustrative purposes only).

Comparison with Similar Products



Improvement by way of invisible weight reduction

The weight has been reduced for enhanced workability. You will feel it only when you hold this product in your hand.

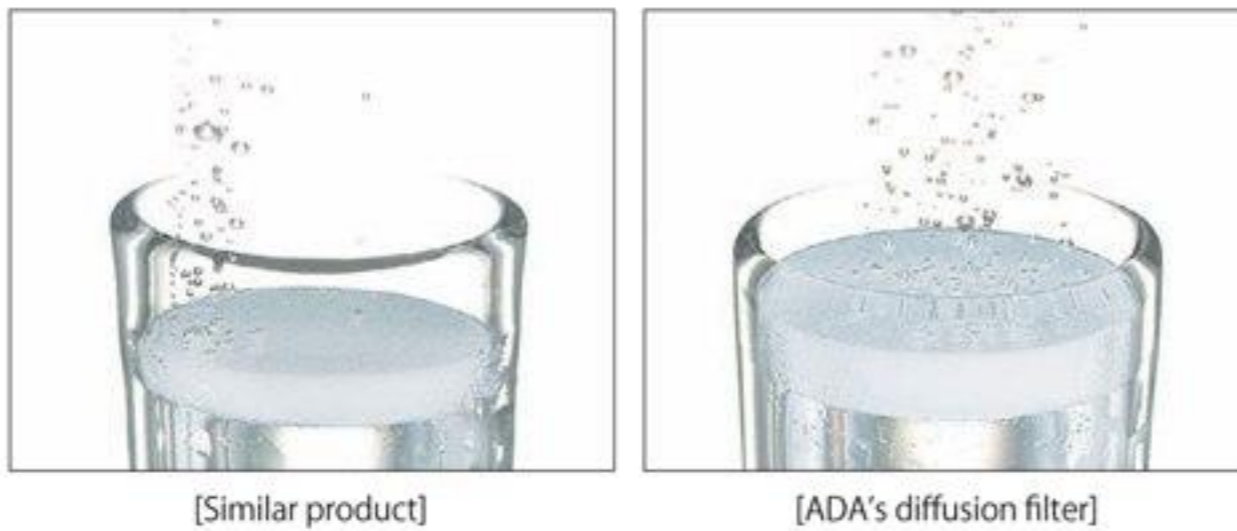
03 Sharp Cutting Performance Achieved by the Cutting Edge Made of High-Hardness Tungsten Steel

The trimming tool of Nature Aquarium Goods adopts double-layered tungsten steel for its blade edge. Unlike other cheap models, ADA's trimming tools maintain sharp cutting performance over a long period of use.



04 Difference in Workmanship Creates Difference in CO₂ Injection

There are many kinds CO₂ injection equipment made of glass available in the market, but you will find the difference in CO₂ injection performance if you actually use and compare ADA products with other similar items. CO₂ injection as sophisticated as "XX bubbles per second" can only be achieved with ADA products.



Although the CO₂ injection amount is the same, the diffusion amount differs substantially.

The formation of plate-like glass into a spiral requires a high level of skill unlike the readily set up glass tube. The size of the bubbles used for counting also varies between these two types.



05 Contains Crustacean's Favorite Humic Acid

Benthos like Red Bee Shrimp always pecks at substrate soil. In view of this, this product contains Aqua Soil-Amazonia rich in humic acid and minerals, making it a really healthy food for the shrimps.

Contains 14 types of nutrients including the ones derived from Aqua Soil-Amazonia.



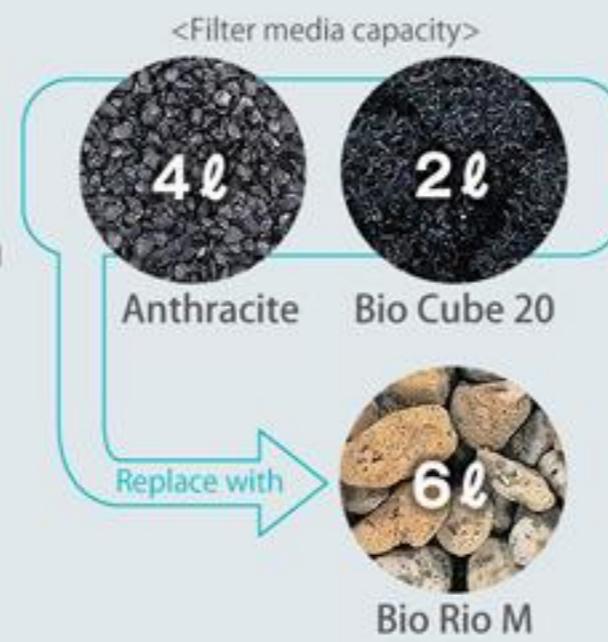
Blended with a particular focus on nutritional value.

Super Jet Filter ES-600 Series

■ Accessories
Inflow glass pipe, outflow glass pipe, hose 13Ø (12/16mm) and hose clip
※ The height of the inflow pipe varies with the water depth of the tank.

【ES-600】

External size: Ø180×H420mm
Capacity: 6ℓ
※ Storable within the Wood Cabinet.



【ES-600EX】

External size: Ø180×H580mm
Capacity: 9ℓ
※ Storable within the Wood Cabinet.



Super Jet Filter ES-1200 Series

■ Accessories
Outflow glass pipe
Inflow glass pipe
Inflow hose 17Ø (15/20mm)
Outflow hose 13Ø (12/16mm)
Hose clamp (Small)

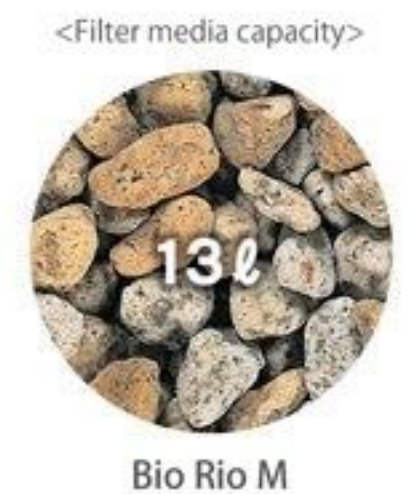
【ES-1200】

External size: Ø220×H510mm
Capacity: 12ℓ
※ Storable within the Wood Cabinet.



【ES-1200EX】

External size: Ø220×H705mm
Capacity: 18ℓ



Super Jet Filter ES-2400 Series

■ Accessories
Outflow glass pipe
Inflow glass pipe
Inflow hose 20Ø (19/25mm)
Outflow hose 17Ø (15/20mm)
Hose clamp (Large)

【ES-2400】

External size: Ø280×H555mm
Capacity: 24ℓ
※ Storable within the Wood Cabinet.



【ES-2400EX】

External size: Ø280×H770mm
Capacity: 36ℓ



Exhaustive Study on Super Jet Filter



The secret of anthracite provided only for Super Jet Filter ES-600

Among the Super Jet Filter series developed for professional use, the model ES-600 is positioned as the entry model for the most popular 60cm aquarium tanks. Considering the beginner hobbyists who is setting up a planted aquarium for the first time in a 60cm tank, this series is provided with anthracite to help beginners successfully overcome the initial two weeks during which the aquarium is subjected to serious water contamination. With its grain size finer than activated carbon, anthracite can deliver the maximum absorption performance for a certain short period of time. However, the fine grain size of anthracite can cause clogging if the anthracite is continuously



Filter media provided with ES-600 deliver powerful performance during the initial stage of aquarium.

used even after its absorption effect is lost. To avoid this problem, it is advisable to replace the anthracite approximately one month after installation of the filter. If the filtration system has effectively been established, the canister should be filled with Bio Rio, a biological filter medium, instead of anthracite for the purpose of complete shifting the filtration method to biological filtration. After the Bio Rio is loaded in the canister, the beneficial bacteria grown on Bio Cube, which was provided together with anthracite, will start colonizing the Bio Rio. Taking into account the fact that beginner hobbyists who are not familiar with use of anthracite and maintenance of filter media often face the problem of clogging, the ES-600 series adopts a motor designed with a particular focus on its pumping capacity.

【ES-600EX2】

External size: $\varnothing 180 \times H 750 \text{mm}$
Capacity: 12 ℓ



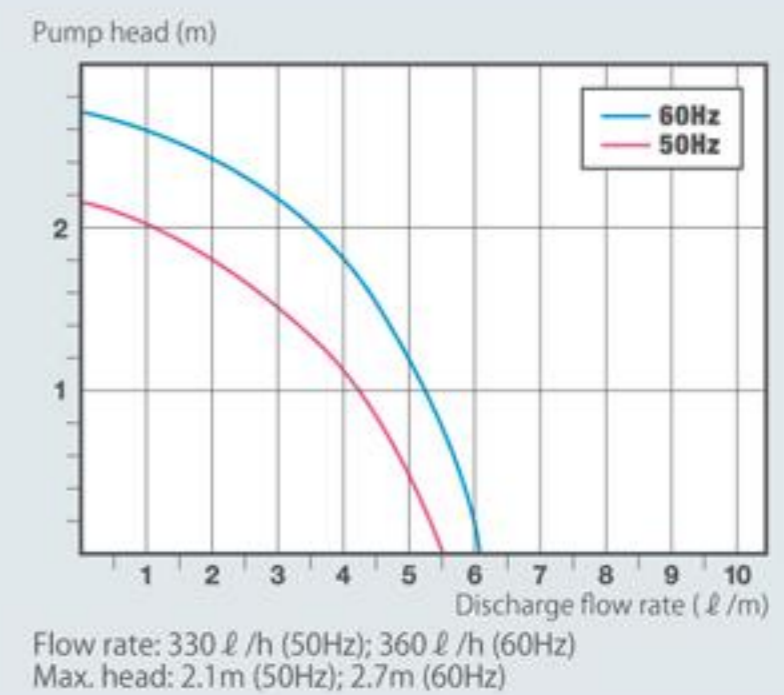
<Filter media capacity>



Bio Rio M



Assuming a basic 60cm tank, this series adopts an impeller designed primarily for pumping capacity rather than on flow rate as the tank of that size does not require intense water flow. This impeller has resistance to clogging.



【ES-1200EX2】

External size: $\varnothing 220 \times H 895 \text{mm}$
Capacity: 24 ℓ



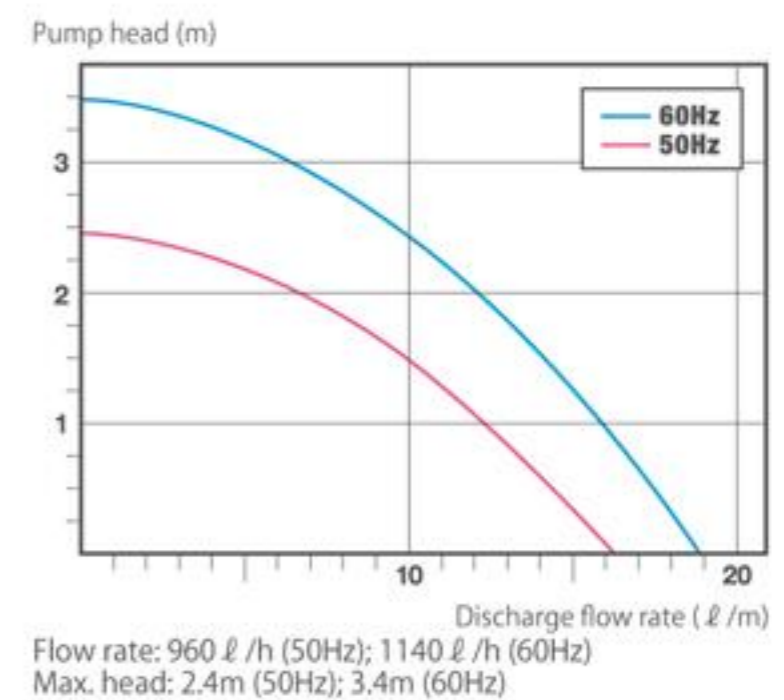
<Filter media capacity>



Bio Rio L



Panoramic 120cm tank requires intense water flow to avoid water stagnation. In view of this fact, this series uses an impeller designed for high flow rate.



【ES-2400EX2】

External size: $\varnothing 280 \times H 990 \text{mm}$
Capacity: 48 ℓ



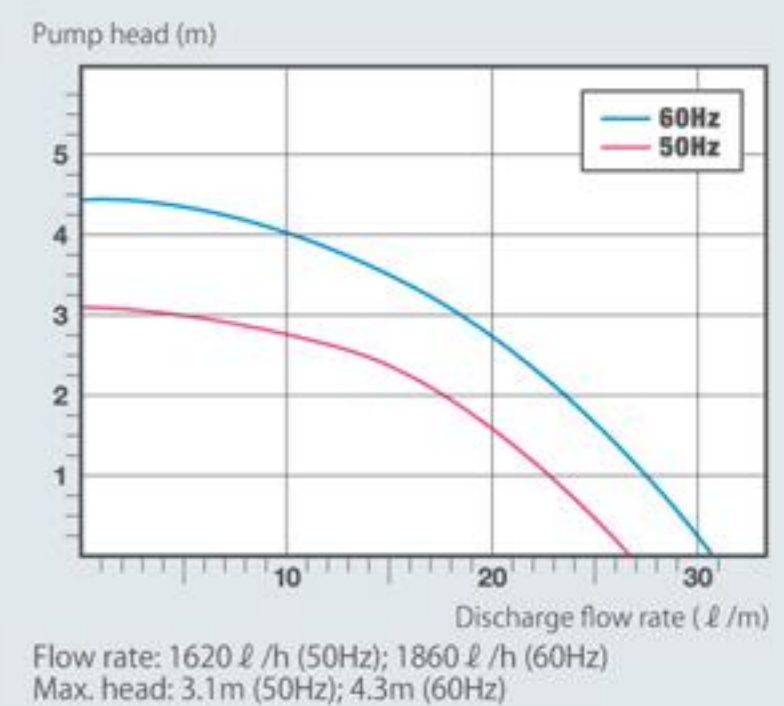
<Filter media capacity>



Bio Rio L



This series adopts an impeller featuring a good balance between flow rate and pumping capacity to cater for tanks with a capacity of more than 600 ℓ such as 180cm tanks. It maintains a stable filtering capacity for a long time.



The Power of Cylindrical Large-Capacity Canister

The essence of filtration is, briefly, the power of beneficial bacteria to function within the canister. What is important is how much biological filter media can be loaded in the canister and how much water containing abundant oxygen can pass through them. Most of the external filters available in the market use filter media packed in a container for the easy maintenance of the filter media, which leads to sacrifice of the adequate space for the filter media. On top of it, there are many canisters square in shape, but the canister should ideally be cylindrical to achieve a uniform flow of fluid. The



Canister in ideal cylindrical shape.

Super Jet Filter is therefore equipped with a cylindrical large-capacity canister. This filter is designed to bring out the power of beneficial bacteria which is the essence of filtration to the maximum extent, instead of placing the priority on easy handling of filter media, etc.

Simple Structure and Outstanding Durability

For a filter that serves as the heart of the planted aquarium, stable filtration capacity over a long time as well as durability with no breakage and failure are deemed to be among the most important elements required. Unlike external filters which have the outflow and inflow ports on the top and are equipped with a container-type filter media, which are often seen lately, the Super Jet Filter has a simple structure in which water flows from top to bottom of the cylindrical

canister of the diameter suitable for the motor flow rate. The simple structure minimizes unnecessary trouble and, on top of it, its stainless steel body and elbow do not break or crack easily like plastic parts. The same goes for its buckle parts. The Super Jet Filter is a filter for professional use designed for long-term use.



Durable and trouble-free structure for buckle and inflow port.

New Launch

The Reason for the Birth of VUPPA-I

The Path to the Birth of VUPPA-I

Various troubles occur in the course of keeping a planted aquarium and oil film on the water surface is one of them. The formation of oil film is an old problem and it has become further noticeable since the pendant type lighting system which makes the water surface clearly visible came into the mainstream. While shooting aquascape pictures, too, the oil film must be completely removed as perfect pictures cannot be achieved with a contaminated water surface. In this circumstance, the oil film removal method was devised by ADA more than ten years ago. This method is the original model of VUPPA-I. Conventional oil removal methods include floating the Clear Float (special activated carbon) to absorb oil

film and stirring the water near the water surface using the water flow from the Lily Pipe. However, these methods take a lot of trouble and also have a problem of the oil film recurring. The oil film removal method developed by Takashi Amano was to provide a cylindrical structure to the top of a submersible pump, which worked effectively in the course of maintaining the Nature Aquarium Gallery as well as during shooting of aquascape photographs. Commercialization of this method had been considered for quite some time, but some improvements had to be made to solve such problems as too large a size for constant installation within the tank and the need for manual fine adjustment of the installation

position which involved wetting the hands with tank water.

The first things which have been done to overcome these problems were downsizing of the device, cost reduction and development of a mechanism to regulate the inlet flow easily according to water level. Prototypes were made one after the other using stainless steel, which symbolizes ADA's hardware, as the material, but ADA faced the challenge of designing the shape of the slits through which the water flows into the VUPPA-I until the very last stage of development. After many trials and errors, the optimal width and number of slits were finally determined and the product VUPPA-I came into being.

Evolved into the Optimal Form through Repeated



1



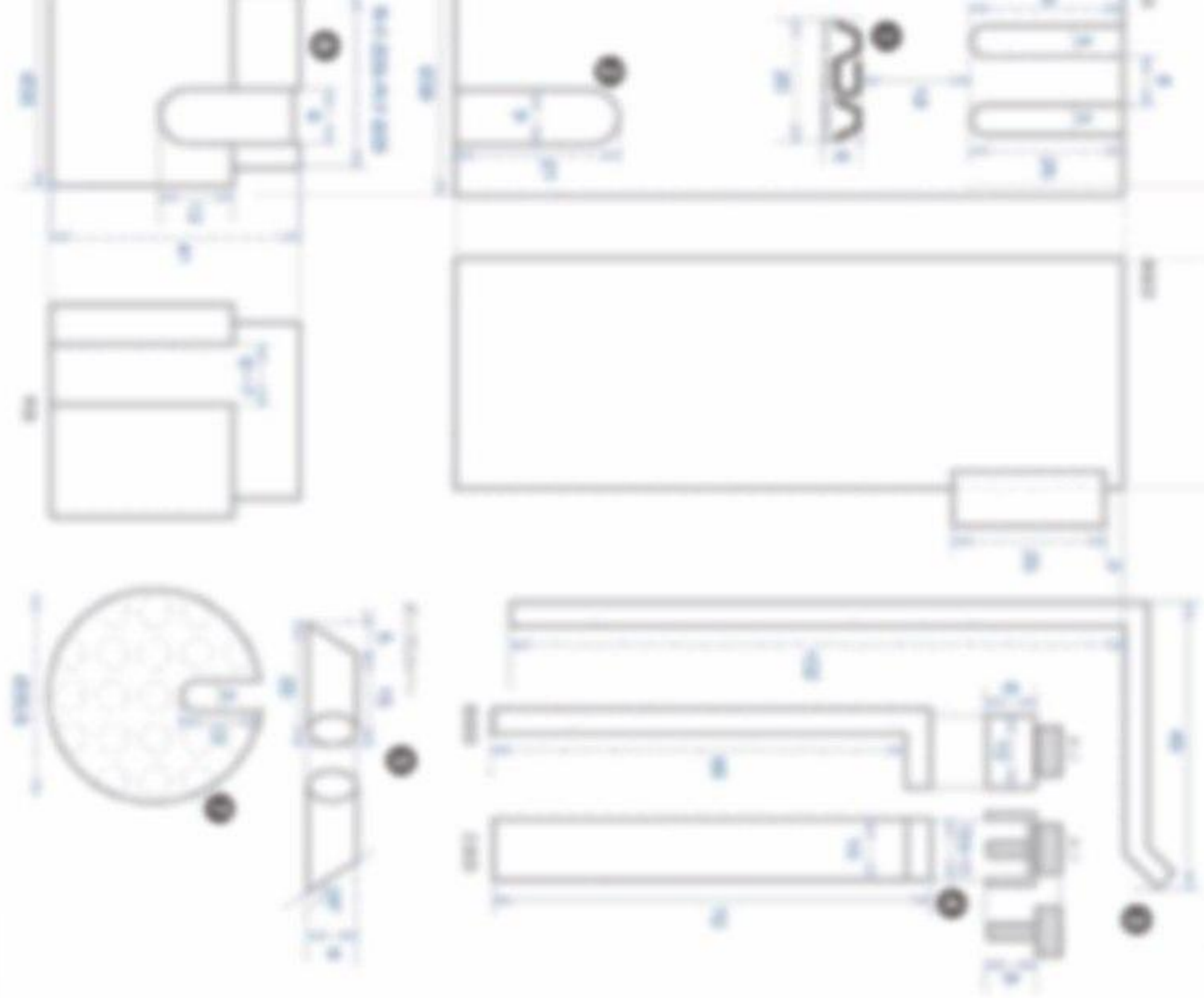
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3



4



Water surface extractor VUPPA-I

Adoption of exceptionally small submersible pump made the very compact main unit possible. Simple design made of stainless steel is a signature piece of ADA.

Trial and Error.



5

1: The prototypes in the initial stage with a wide slit had a problem of excessive water inflow. 2: Simply narrowing the slit only resulted in lower oil removal efficiency. 3: The number of slits was increased to three, but they were too far apart and caused difficulty in allowing oil film into the filter. 4: At last, the optimal efficiency was achieved by providing two adjacent slits to the unit. 5: There was a bit of trial and error in the installation method, too. This is the prototype that regulates the height with a screw.

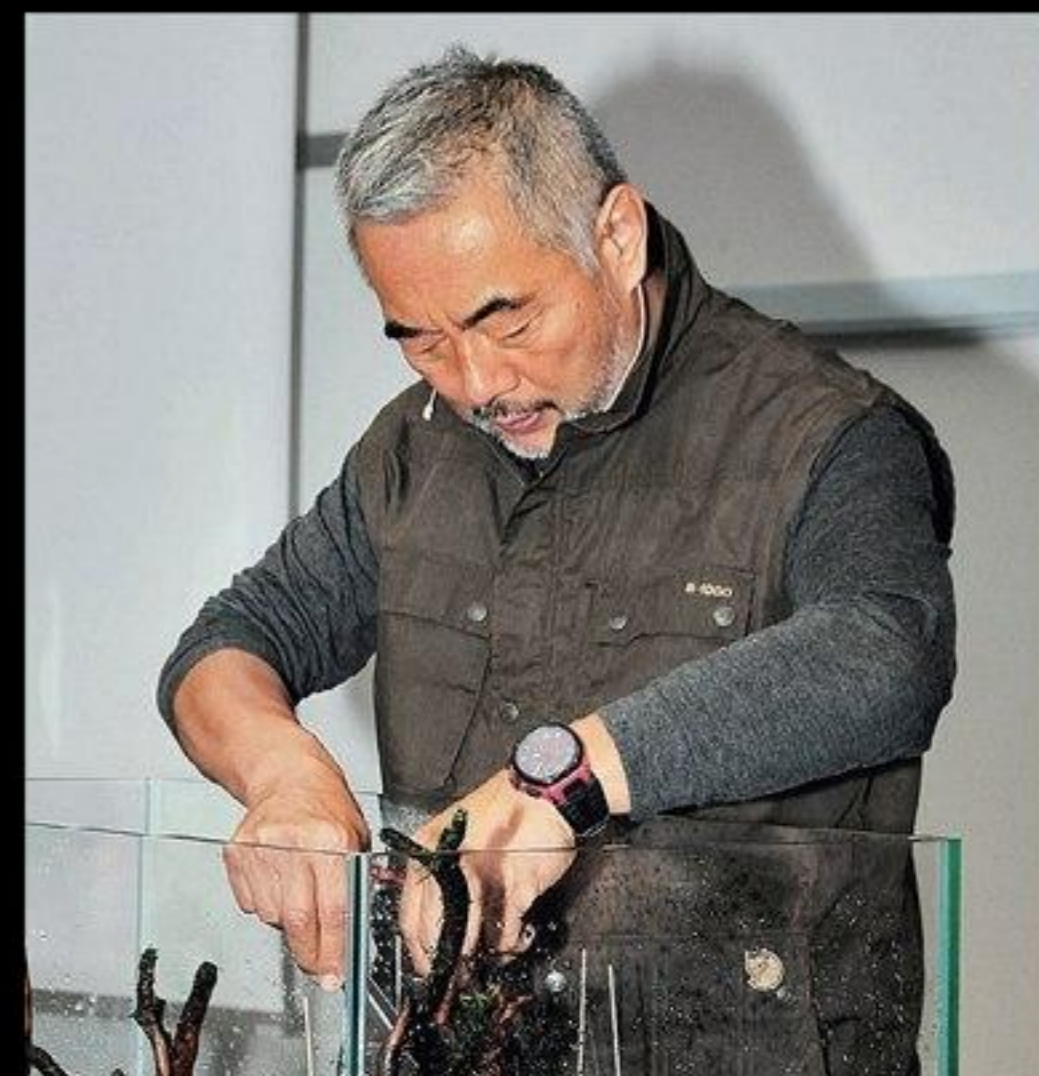


Seminar & Workshop by Takashi Amano in Denmark
"Danish Aquarium Fair"
The Event Marking the 75th Anniversary of the Aarhus Aquarium Society

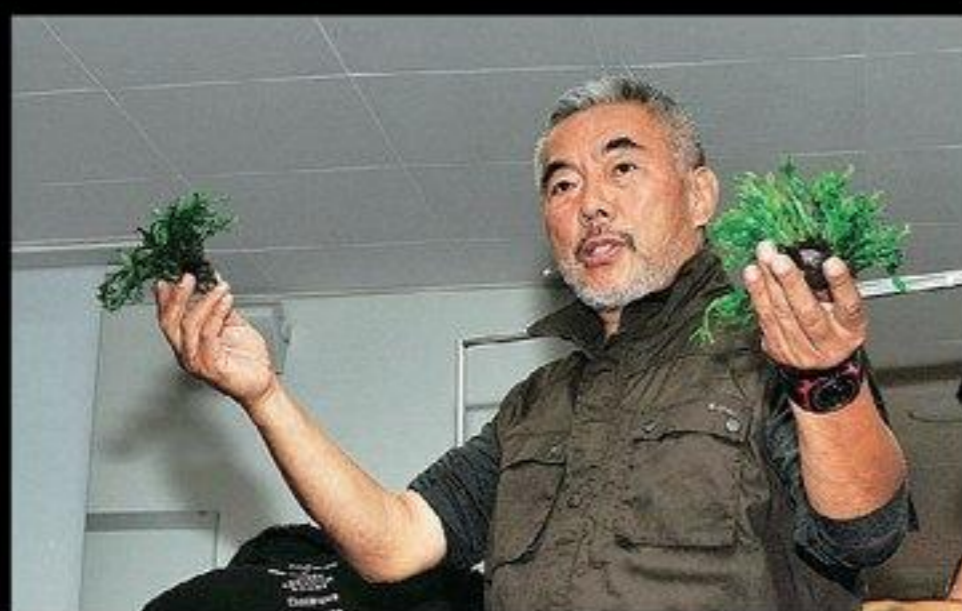
Reported by: Nozomi Hayakawa, International Marketing Department, ADA



More than 150 participants from Europe and Middle East gathered at the venue.



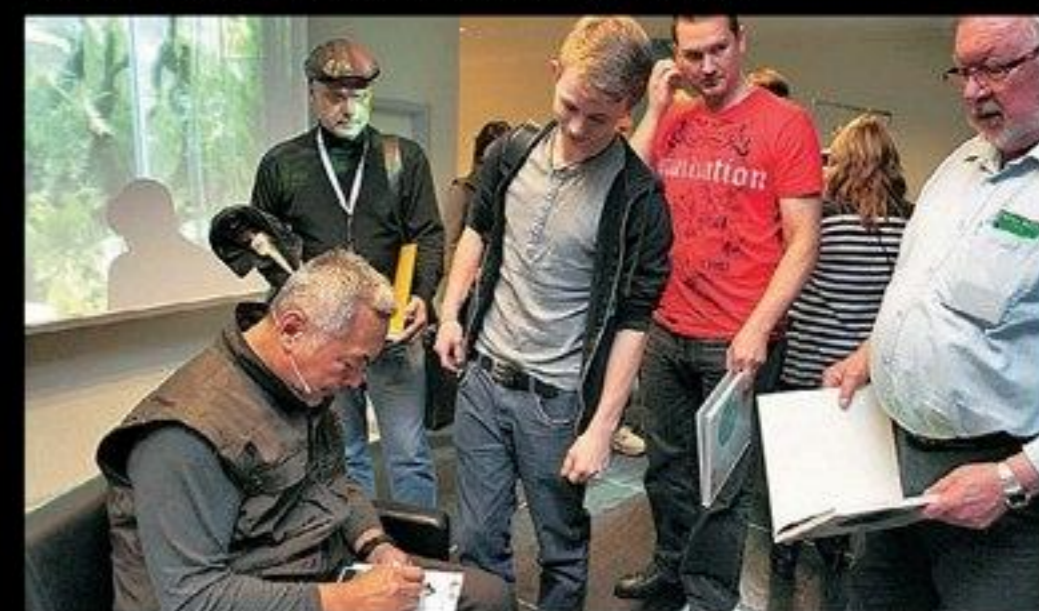
Takashi Amano steadily planting the aquatic plants under the watchful eyes of the participants.



Microsorium pteropus 'Windeløv' was used upon request.



Participants keep looking at the completed aquascape.



A long line to get Amano's autograph after completion of the layout.

Denmark is a relatively small country in Europe. In Aarhus, its second largest city, there is a huge aquatic plant farm run by Tropica Aquarium Plants, where quality aquatic plants are shipped to all over Europe. The Aarhus Aquarium Society is an organization of aquarium hobbyists comprising about 100 members and celebrates its 75th anniversary this year. Their main activities include information exchanges during their monthly meetings and promotion of friendship among members through events including seminars on aquarium fish and aquatic plants. To celebrate its 75th anniversary, the Society organized the "Danish Aquarium Fair" for two days on October 23 and 24, 2011 in Aarhus, inviting prominent professionals in the field of aquarium fish and aquatic plants from all over the world. More than 150 participants gathered from 12 countries worldwide. From Japan, Takashi Amano was invited for the seminar on Nature Aquarium and workshop to give a demonstration of

layout production. With global hobbyists including those all the way from Saudi Arabia and Hawaii, the proceedings of this international fair were conducted in English, representing the many countries of the European region speaking different languages. Besides Takashi Amano, this fair invited many other persons of world renown as speakers, including, to name a few, Mr. Christel Kasselmann from Germany who has published many books on aquatic plants, Mr. Hans-Georg Evers also from Germany who is an editor of the German aquarium magazine AMAZONAS as well as Mr. Claus Christensen who is the former managing director of Tropica Aquarium Plants and is now actively engaged in seminars, writing books and providing guided tours to tropical rainforests all over the world. Since the seminar given by Takashi Amano was organized in Europe (except for Russia) after two years, a number of groups of aquarists gathered not only from Denmark but

also from Germany, UK, Norway, Sweden and other countries. Some of the participants were so enthusiastic that they car pooled to come to the fair to attend Takashi Amano's seminar and workshop or took a flight but slept in a sleeping bag in the adjacent gymnasium to save accommodation costs. The activity of an organization of hobbyists including inviting a speaker from as far as Japan and the running the events by the members' efforts as a volunteer should be highly regarded. In the seminar held during this fair, Takashi Amano spoke about the method of slicing a scene from the natural landscape and planting with the use of the framework of layout materials, taking his extensive past works as an example. Amano also delivered the slide-show presentation with his comments on the world's three major tropical rainforests he has visited and also shared great tips for the layout composition from the dynamic landscape observed in those

More than 150 aquarium hobbyists from all over Europe gathered in Aarhus, the second largest city in Denmark, to participate in the seminar and workshop given by Takashi Amano. From this city, a variety of aquatic plants are shipped to a number of global aquatic plant layout enthusiasts.



The work created in a tank of 90x45x45cm for this workshop. A dynamic aquascape was made using Branch Wood and Bright Sand.



Preparation for "tissue culture" at Tropica Aquarium Plants.



The frames documenting the achievements of Mr. Holger Windeløv are displayed on the wall of his private residence.



"Open sandwich", a Danish specialty, was served.

forests. At the beginning the European participants looked very quiet compared to the participants of other overseas seminars, but they were gradually enchanted by Amano's talk and finally put a lot of questions to Amano.

During the workshop following the seminar, Amano produced a layout in a 90cm tank using pieces of Branch Wood and also the Bright Sand as the cosmetic for the foreground. Amano used *Microsorium pteropus* 'Windeløv' around the driftwood as requested by the organizer and planted *Vallisneria nana* and *Cyperus* in the background. He explained about the effective use of red aquatic plants and also about layout composition by taking a balance of the aquatic plants while demonstrating his planting of aquatic plants. With the planting completed, water was poured into the tank and the lighting turned on. The audience gave a big applause to the completed layout and all the participants gathered around the tank to have a close view and take

pictures of the freshly completed aquascape.

Lastly, it is worth noting that Takashi Amano met Mr. Holger Windeløv who is the founder and currently adviser to Tropica Aquarium Plants again and had the opportunity to visit Mr. Windeløv at his private residence in a suburb of Aarhus 15 years later. Mr. Windeløv has visited Niigata, Japan many times since his first visit to the place in conjunction with the International Aquatic Plants Summit organized by Aqua Design Amano in 1995. They met again at overseas exhibitions in Singapore, Paris, Moscow and many other places and renewed their friendship. Mr. Windeløv was formerly a crew member on a cargo vessel and travelled from port to port around the world. He then founded the aquatic plant farm "Tropica" in Denmark and has been deeply committed to popularizing aquatic plants. His personal history is in line with the history of aquatic plant hobbies of the world. Mr. Windeløv

has been visiting tropical rainforests to discover and introduce new species of aquatic plants. In his private residence, which is an old farm house with a stable built in the 19th century and then converted into a house, the picture panel of Nature Aquarium layout presented by Amano is hung on the wall together with many frames documenting Mr. Windeløv's brilliant achievements. It seems that even Mr. Windeløv who has been engaged in the cultivation of aquatic plants since the late 1960's was tremendously amazed to see Amano's "Glass no Naka no Daishizen" for the first time. During the visit to Denmark, the sight of many aquarium hobbyists, along with Mr. Windeløv and Mr. Christensen, asking for Amano's autograph on their "Glass no Naka no Daishizen" in different language editions once again reminds us of the fact that this publication has had a great impact on the world's planted aquarium scene.



Amazingly clear water was running down the streams that eventually flow into the ocean. (Tributary of Naeroy River)



Rich natural environment including many streams and waterfalls remain in the surrounding of the fjords. (Tributary of Naeroy River)

The West Norwegian Fjords have been listed as a UNESCO World Heritage Site. In the surroundings of the fjords with their distinctive landforms, the rich natural environment still remains undamaged. Takashi Amano visited Norway to capture its natural beauty.

In Norwegian, fjord means “complex bay that penetrates inland”. The fjord is a U-shaped valley deeply carved by glacial activity and filled with sea water. Its aerial view shows many fine fjord branches just like the branches or roots of a tree. The fjord is bordered by steep cliffs, from which countless streams and waterfalls flow directly into the ocean. The West Norwegian Fjords represented by Nærøyfjord have been listed as a UNESCO World Heritage Site for their unique landforms and rich natural environment. In late October last year, I visited Norway to capture the beautiful

landscapes of the fjords. When I saw a fjord with my own eyes, I felt, frankly speaking, it was like a gigantic dam as the landscape of steep cliffs along the fjord reminded me of a dam lake in Japan. This must be a sad tendency of Japanese who live in the world-famous “dam country”. Of course, the scale of the fjord was incomparable and the landscapes unfolding before my eyes were absolutely spectacular and perfect for the format (6x12cm) of the panoramic camera mainly used during this trip. Besides the splendid landscape, I was also truly amazed by the clear, pristine water.

On the hills along the fjords streams and waterfalls with crystal clear water abound. Clear water is a proof of the rich natural environment, which creates a beautiful landscape. During this trip, I very often stepped into the cool water of the streams and had a waterfall splash during shoots.



Slice of a fjord landscape with a panoramic camera.



Good mobility is essential for visiting many places in a limited time.



Sognefjord, the largest and deepest fjord in Norway.



Magnificent landscape in a valley. Snow-capped mountains are the source of the streams of crystal clear water. (Surrounding of Anestøls River)



Withered trees in soft, gentle sunlight in early winter. Hoping to visit the same place in spring or summer next time. (Flåm River)



Reflection of snow-capped mountains on a calm water surface. Buildings also have a pleasing Scandinavian style. (Fjaerland)

Norway is blessed with a rich natural environment with its fjords and countless streams and waterfalls. In early winter, this country shows various faces in the soft, gentle sunlight. I moved around Western Norway to look for beautiful natural landscapes.

Time just flies when I am hooked on shooting from early morning. The fjords in early winter have totally different looks depending on how the sun casts its light on them. The landscape in the shade looks really bleak, which might be typical of Scandinavian scenery, but in contrast, we can feel the warmth of the landscapes in the gentle sunlight that is filled with the harmonious colors of dry leaves and trees. This time, I could visit many places during my short stay, thanks to the wonderful arrangements made by the local tour guide.

While visiting various places, I noticed that the water is surprisingly clean and uncontaminated even though there are houses around the fjords and streams. When I asked the tour guide how the

water is kept so clean, he explained that every household must keep its domestic wastewater and is not allowed to discharge it into the rivers and oceans. In Norway where wastewater is collected and disposed of in the central treatment facility, the water is clean and clear everywhere. Furthermore, I did not see any rubbish thrown outside. It could be because of fewer containers and waste packaging in proportion to the fewer convenience stores present, but more than that, the key factor must be the Norwegian citizens' high level of environmental awareness. This level of awareness is totally incomparable to that of Japanese who believe that the clearing of rubbish is a natural environmental activity. It is certainly inconvenient not to

have convenience stores, but at the same time we can feel more of the human touch in such an environment. In Norway, homemade hotdogs and sandwiches were served for lunch daily and, even someone like me who seldom eats bread, I also found them quite tasty. I captured a lot of beautiful landscapes in early winter during this trip. I left the country looking forward to the opportunity to visit this country again to see the landscapes in spring and summer.



Stepped into cool water of streams from time to time.



Figuring out how to get the optimal slice of spectacular landscape.



Crystal clear water of Flåm River despite the houses alongside.



Beautiful moss on the rocks over which water gently slips down. It is cold when the valley is in the shade. (Suppel River)

VIDA CAFÉ

Takashi Amano's way of living

“Leather Shoes and Sneakers”

Takashi Amano is fond of fashion and often goes shopping for clothes. He is the person who cares for what he and the people around him wear. In VIDA CAFÉ for this issue, we introduce Amano's unique perspective on fashion. Through this topic, we can see what Amano thinks of “creation” and “showcasing”.

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The Reason for Checking Weather Forecast

Amano always checks on the weather forecast. He usually does not make any shooting plan but decides the on location for landscape shooting depending on the daily weather. Knowing Amano is like this, it is no wonder that he very often says, “Treasure every landscape you encounter”. Among a wide range of options which could be a moist beech forest on a rainy day and a terraced rice field on a sunny day with intense back lighting, Amano selects the best location where he thinks he can take the best pictures after carefully considering weather and season.

The same goes for what he wears. As mentioned in this column before, Amano values novelty in fashion as an artist and decides what to wear everyday in the morning depending on weather and personal mood. Says Amano, “I choose what I wear according to my mood and also depending on what work I intend to do on that day. I dress, not because someone is looking at me but because I want to wear that particular set of clothes. What I wear influences my mood on the day. So I try not to repeat the same selection of clothes as much as I can. On top of it, I have some particular clothes for special occasions... (LOL).”

Finally Recognized as the Boss

“Come to think of it, ADA used to have a uniform for the staff before,” says Amano. Yes, in some old pictures we can find the staff wearing a uniform or white coat. Now ADA basically does not impose any uniform and the staff can freely wear even T-shirt and jeans as long as it does not affect their work. Thinking about it, Steve Jobs, the late CEO of Apple Inc, had his hallmark of black turtlenecks and jeans, which was deemed in those days a far cry from the symbolic dress code of a CEO. Amano says, “ADA has invited participants from Europe and America to its International Aquatic Plant Summit. These participants attend very important meetings in casual wear without a tie while in contrast for dinner on the same day, they wear a classy suit and tie. I was really surprised to see them doing so as it was totally opposite to what we normally do in Japan. And then I realized that European companies usually do not have uniforms and their staff choose their own clothes as it pleases them. I think that fashion is a culture for them.

Seeing all this, I discontinued the use of uniforms in ADA as I thought the uniform would take away the individuality of my staff. Of course, some female staff were opposed to my decision, saying they would need to spend more time and money on clothes. They even said they would have a lot of trouble getting

dressed and deciding what to wear every morning, but I think it would be great. I feel it would be meaningless to just grab and put on the nearest thing around, so I think it must be good that my staff should think a lot about what they wear. As for me, I personally don't like to wear a tie and most of the time you find me in casual wear like sweater and jeans. Even the courier people didn't recognize me as the boss and only recently, they finally realized that I am the head of the company (LOL).”

Aquarium or Art Gallery?

When I first visited the Nature Aquarium Gallery, I somehow felt something strange. The staff standing in the Gallery were all in suits. Some of those who have visited the Gallery might have had the same feeling as me. Amano commented that this was because I was visiting the Nature Aquarium Gallery with the mindset of seeing an ordinary aquarium. He says, “We would feel a little strange to see the staff in an aquarium wearing suits. But the Nature Aquarium Gallery has been designed on the concept of an art gallery rather than aquarium. You wouldn't feel it odd if you saw the staff in an art museum or art gallery wearing suits, right?” True enough, each aquarium displayed in the Nature Aquarium Gallery was like a painting in a glass and I, in fact, felt like I was enjoying the works of art in an art gallery. I had

"VIDA" is the Portuguese word for "life". This corner introduces you to Takashi Amano's way of life through topics around us.



Interviewer/Editor: Miyuki Yamamoto (International Marketing Department, ADA)

the preconception that the Nature Aquarium Gallery was an ordinary aquarium simply because they have aquarium tanks, tropical fish and aquatic plants - until I actually stepped in. Those who are not familiar with aquariums might often have this kind of misconception. You may discover another attractive side of the Nature Aquarium Gallery when you visit it the next time with the mindset that you are visiting an art gallery.

About Showcasing

Amano was very surprised to see the attire of the staff in the aquarium shops he visited in France and Germany several years ago. He said, "The staff there looked cool in jackets and ties and the shop seemed like a fashion boutique. In Japan in those days, we could not imagine the staff of an aquarium shop wearing a tie. At the shops in France and Germany, I felt that fashion was a culture in Europe and people there were enjoying it. I was worried about their suits getting dirty during work, but they didn't seem to mind." Indeed, we feel happy when we dress up.

And there may be some people who feel interested in aquariums through the fashion image. Amano says, "Image is important in selling products. As ADA is still not very well known among certain areas and people, I am now thinking of doing advertisements that promote the ADA image. I think the high-end shops in Japan should care more about how to showcase them by paying closer attention to fashion and interior design." When Amano was running his shop 30 years ago, he displayed many aquariums in the shop just to showcase the fish - quite rare in those days. It seems most of the fish in the shop was not for sale and people jokingly called the shop "Amano, the shop handling products not for sale". However,

the style of showcasing the actual aquariums and the great customer service of Amano's shop was highly regarded by customers.

Merely Shoe Shining?

Amano was impressed by the simple fashion tastes of the local people when he visited Denmark for the seminar in October last year. He says, "The people there wore simple, casual clothes but they were very sophisticated in the way that they have different shoes every day. Not many Japanese care about fashion for less noticeable points like shoes, but I personally feel that shoes of high quality are really great. I have about 20 pairs of shoes, including the custom-made ones I bought from Eduard Meier who is said to be the oldest existing shoemaker in Munich, Germany. I had them make black and brown leather shoes, casual

shoes and mountain-climbing boots based on my own foot patterns. All of them are still as good as new even after heavy use for 18 years... "Can you see it (he asked while showing the shoes he was wearing)?" This episode reminded me of Amano saying, "Please do not talk to me. I am doing something important now," to someone who was trying to engage Amano while he was polishing his shoes during break time. The person might think Amano was doing something very minor, but polishing his shoes was actually important to Amano. Taking care of the things for which we have with affection and making the best use of them makes the things meaningful. The same goes for aquariums. Amano says, "I like to use quality things for a long time. And things of high quality cannot be made without our own strong value and perspective." So, which pairs of shoes would you wear today, leather shoes or sneakers?

Amano decides what to wear depending on the type of work he intends to do for that day. He wears special clothes for special occasions like interviews by magazines and foreign media.



Filming of a talk show in Italy (top) and the article of "CARREL", a local information magazine published in Niigata, Japan, featuring the interview with Amano (right)

Setting up of Substrate for Nature Aquarium

In Nature Aquarium, the substrate is a very important component. This is where the aquatic plants are planted and then spread their roots for growth. In the substrate, the roots of the aquatic plants and the microorganisms have a kind of symbiotic relationship and thereby support the ecosystem of the aquarium. Excessive accumulation of dirt in the substrate can cause lack of oxygen and result in deteriorated water quality and excessive algal growth leading to the collapse of the aquarium ecosystem. The substrate is alive if aquatic plants are growing healthily on it. The Nature Aquarium Notes of this issue discusses the building of the substrate to achieve a "living substrate".

● Ecosystem within the Substrate

In Nature Aquarium, the beautiful layout is maintained with the support of a small ecosystem in which aquatic plants, fish and microorganisms including bacteria coexist. Among the components of Nature Aquarium, the one of the greatest significance is the substrate. The substrate serves as the place where aquatic plants are planted and spread their roots to support them. At the same time, the substrate is also the place where decomposition of organic matter by bacteria takes place. The decomposed organic matters will eventually be absorbed by the aquatic plants through their roots. The microorganisms and aquatic plants have a symbiotic relationship within the substrate, which means there is a small ecosystem in the substrate under the ecosystem of the entire aquarium.

Prior to the establishment of the Nature Aquarium system, the substrate existed mainly for the purpose of holding the roots of aquatic plants with the sand laid on the bottom of the tank to prevent the plant from floating up. After much trial and error, Nature Aquarium now offer a living substrate that promotes the building of bacteria colonies and the healthy growth of aquatic plant roots with particular focus on the symbiotic relationship between microorganisms and plant roots. The beneficial bacteria in the substrate decompose organic matter as their food and convert them into mineral nutrients that can be absorbed by aquatic plants via their roots. These beneficial bacteria are aerobic bacteria that require oxygen to survive and have a tendency to colonize the places with abundant oxygen. Since aquatic plants carry the oxygen generated in the course of photosynthesis to their leaves and their roots, a lot of aerobic beneficial bacteria are present around the aquatic plant roots where the oxygen level is relatively high. As seen from the above, aerobic bacteria and the roots of aquatic plants are inseparable partners in this symbiotic relationship. Without the presence of aerobic bacteria, organic matter is not decomposed into organic nutrients and absorbed by aquatic plants. On the other hand, if there were no aquatic plants in an aquarium, the amount of oxygen to be supplied to the substrate would be very limited and this will result in the dominance of anaero-

bic bacteria in the substrate. The "living substrate" cannot be attained in such a circumstance as harmful substances including hydrogen sulfide are generated in the decomposition process of organic matter by anaerobic bacteria.

To achieve a healthy, functioning ecosystem within the substrate, we first need to plant aquatic plants to increase the aerobic bacteria in the substrate. Nature Aquarium includes some innovations to achieve this "living substrate", including Power Sand and Aqua Soil-Amazonia which contain organic nutrients that serve as food for aerobic bacteria. These innovations, combined with an adequate level of bacteria and abundant oxygen, promote the effective growth of beneficial bacteria within the substrate. In order to attain this, the building of the substrate for Nature Aquarium involves the use of substrate additives.

● Additives to Help Make the "Living Substrate"

When making a new Nature Aquarium layout, the first thing to do is to sprinkle substrate additives to the bottom of the tank. There are five types of substrate additives for Nature Aquarium, each of which has different benefits, and they are usually used in combination. The key purposes of using these additives include the effective growth of beneficial bacteria in the substrate and keeping the roots of aquatic plants in a healthy condition.

Bacter 100 is a substrate additive containing more than 100 kinds of substrate bacteria in a dormant state. These bacteria quickly become active once they are exposed to water. Since the dominant bacteria vary reflecting slight difference in substrate conditions, it is ideal to add bacteria of as many different types as possible in the very initial stage of the aquarium so that a stable ecosystem will be established in the substrate.

Clear Super is a substrate additive made from activated carbon with organic acid that serves as initial food for bacteria. It promotes the healthy growth of beneficial bacteria brought to the substrate by Bacter 100. The bacteria that have increased to an adequate level by application of Clear Super will actively decompose the organic nutrients contained in Power Sand and

Aqua Soil-Amazonia. Taking the functions of these additives into account, the combined use of Bacter 100 and Clear Super is highly recommended.

PENAC W and PENAC P are the substrate additives that help improve the substrate environment and promote the activity of bacteria as well as healthy growth of plant roots. More specifically, PENAC W prevents a low oxygen level in the substrate and promotes the activities of aerobic bacteria, while PENAC P prevents root rot and enhances the growth and nutrient absorption of aquatic plants. For Nature Aquarium in which aquatic plants grow, it is advisable to use PENAC W and PENAC P together at the same time. Sprinkling these additives under the substrate helps the formation of the "living substrate" where beneficial bacteria grow rapidly and the roots of aquatic plants spread smoothly.

Meanwhile an anaerobic substrate leads to an increase in putrefactive bacteria. This may result in disruption of the substrate ecosystem and eventually the collapse of the entire aquarium ecosystem. Tourmaline BC prevents the generation of putrefactive bacteria within the substrate and maintains a stable substrate environment for a long time by the purification effect of the tourmaline and bamboo charcoal powder contained in this additive. Tourmaline is also effective in promoting the growth of aquatic plant roots. It helps the aquatic plants spread their roots deep into the substrate, thereby preventing the hardening of substrate soil, and promotes the circulation of oxygen throughout the substrate. Although the grains of Aqua Soil gradually crumble over long-term use of 2-3 years, the hardening and lack of oxygen can be prevented as long as the aquatic plants have adequately spread their roots in the substrate as these roots break up the soil and help to distribute oxygen.

● Selection of Aqua Soil That Determines the Growth of Aquatic Plants

Nature Aquarium uses Aqua Soil as the main substrate material. As discussed in the feature article of this issue, there are various types of substrate in a natural environment, including sand, pebbles and mud. Aquatic plants grow densely on some types of substrate while there

are no plants grown on others. Usually, aquatic plants grow well on muddy (or soil) substrate but they do not grow well on sand or pebbles. Except in the case where a non-plant growing place is reproduced using cosmetic sand or Aqua Gravel, the Nature Aquarium uses Aqua Soil for the sections in which aquatic plants are to be planted. Made from natural soil, Aqua Soil contains rich nutrients such as nitrogen and trace elements found in natural earth as well as abundant organic matter such as organic acid. This series of soil effectively promotes the healthy growth of aquatic plant roots and activities of beneficial bacteria. Aqua Soil-Amazonia made from black soil contains particularly abundant nutrients and organic matter. This feature makes the Aqua Soil-Amazonia the most effective soil in aquatic plant growth among the Aqua Soil series, which is why this soil is used the most in Nature Aquarium layouts.

The typical way of setting up the substrate currently used by the Nature Aquarium Gallery is the combined use of substrate additives including Bacter 100, Power Sand Special and Aqua Soil-Amazonia. However, use of Aqua Soil-Amazonia may lead to cloudy or discolored (yellow) water during the initial stage of the aquarium due to the abundant nutrients and organic matters contained in it. These problems will be improved through frequently repeated water change and eventually be solved by the time the entire substrate is covered with aquatic plants. Nevertheless, beginners who do not have much experience in aquarium layout may get anxious about these problems. Moreover, the problems of cloudy or yellow water may not be improved if the substrate is left unplanted.

To address these challenges, Aqua Soil-Amazonia II has been developed as the substrate material which is manageable for aquarium beginners. Aqua Soil-Amazonia II has lower amounts of nutrients and organic matter compared to the original Aqua Soil-Amazonia; instead it decreases the chance of causing cloudy or yellow water by its characteristic of effectively making the tank water slightly acidic. These features have been further enhanced for the current version of Aqua Soil-Amazonia II and, on top of it, an improvement was made for this soil to make its grains less crumbly. For the applications of Aqua Soil-Amazonia and Aqua Soil-Amazonia II, it is recommended to use Aqua Soil-Amazonia if you have some experience with aquariums and wish to give first priority to the growth of the aquatic plants, while Aqua Soil-Amazonia II is recommended for those who want to leave the substrate bare and make the tank water slightly acidic. Of course, most aquatic plants grow well just with Aqua Soil-Amazonia II which is therefore suitable for those who are producing the Nature Aquarium for the first time. Meanwhile, Aqua Soil-Africana has a higher water acidifying effect but fewer nutrients than Aqua Soil-Amazonia II. This tendency is further enhanced for Aqua Soil-Malaya, which lowers the pH level of the water but contains only a limited amount of nutrients. It is recommended to choose the type of Aqua Soil to

be used based on each user's priority, i.e., the whether the user places priority on acidic water or the growth of aquatic plants, rather than based on the color of each soil.

● Power Sand, The Key to Long-Term Maintenance of Aquarium

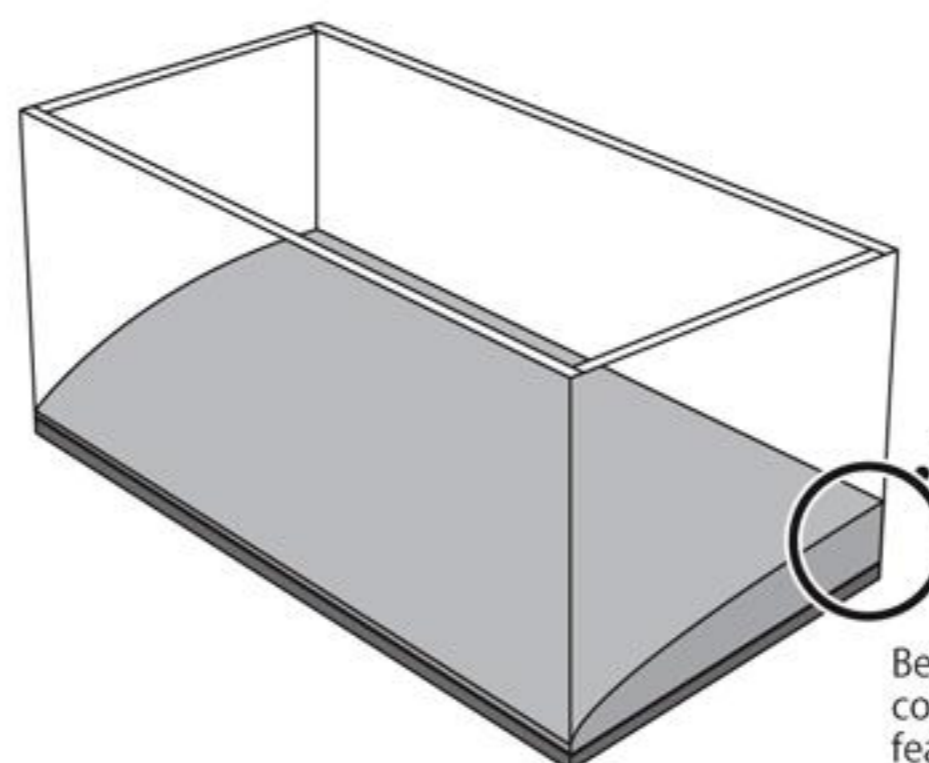
The substrate suitable for growing general types of aquatic plants can be made just by sprinkling substrate additives such as Bacter 100 onto the bottom of the tank and then pouring Aqua Soil-Amazonia II. The substrate so made is sufficient in the case where the layout together with the substrate is to be remade almost on an annual basis. If you wish to maintain the layout for a long period, which is one of the best parts of Nature Aquarium, or want to use any plants which vigorously absorb nutrients through their roots such as Cryptocoryne and Echinodorus, it is recommended for you to put some Power Sand under the substrate. Power Sand contains rich organic nutrients which will be consumed by bacteria as a food source, and the decomposed organic matters

will become the nutrients to be absorbed by the aquatic plants through their roots. Porous volcanic stones, the base material of Power Sand, have a very uneven surface where organic nutrients are trapped. This characteristic attracts and grows bacteria for a long time on the Power Sand.

Some other features of these porous stones include relatively large grain size and irregular shapes, which help prevent clogging and ensure smooth water circulation even when these stones are placed at the very bottom of the tank which is subjected to the highest hydraulic pressure. These features of Power Sand make it an essential substrate material for long-term maintenance of the layout particularly in a large aquarium tank. The most basic substrate structure for Nature Aquarium is the combination of this Power Sand, various substrate additives and Aqua Soil-Amazonia. Try this combination for the layout you wish to maintain for a long time. You will certainly feel the astonishing speed of growth of aquatic plants and their roots spreading.

Successful Setting up of Substrate

- 1 Sprinkle substrate additives such as Bacter 100 and Clear Super thinly and evenly all over the tank bottom.
- 2 If you use the Power Sand, put it in at this stage. You may put the Power Sand first and then sprinkle substrate additives on its top.
- 3 Lay Aqua Soil and then level its surface with a tool such as the Sand Flattener. The front-back depth can be expressed in an aquarium by making the substrate slightly slanting from front to rear.
- 4 If you use a powder type of Aqua Soil, lay it at this stage. Lay it thinly on the substrate surface, mainly in the foreground.
- 5 Make the composition on the substrate using composition materials such as driftwood and stones. Pour some powder type Aqua Soil to make a soil mound as necessary.
- 6 Pour water until the overall substrate is just covered with the water, and then plant the aquatic plants with Pinsettes or tweezers. Adequate planting of aquatic plants at this stage is a key to the successful set-up of an aquarium.
- 7 Fill the tank with water. If the water gets cloudy at this stage, remove and pour in the water again until the tank water becomes clear. Then, turn on the filter. If the filter is started when the water is still not clear, the cloudy water problem may persist.
- 8 Once the aquatic plants have grown and cover the substrate, the problem of cloudy or yellow water seldom occurs.



- A Aqua Soil series
- B Power Sand
- C Substrate additives
Bacter 100, Clear Super, etc.

Besides the above, there is a method using cosmetic sand. Refer to the contents of the feature article.

Q&A

Hairgrass is now drawing attention due to its unique characteristics of absorbing radiation. This news once again reminds us of the astonishing power of (aquatic) plants. In recent years, we might have underestimated the presence and power of small plants and living organisms.

Q I planted *Blyxa novoguineensis* in the mid-ground of my small aquarium. One month has passed since this plant was planted and it is growing well. How I should prune and maintain it?

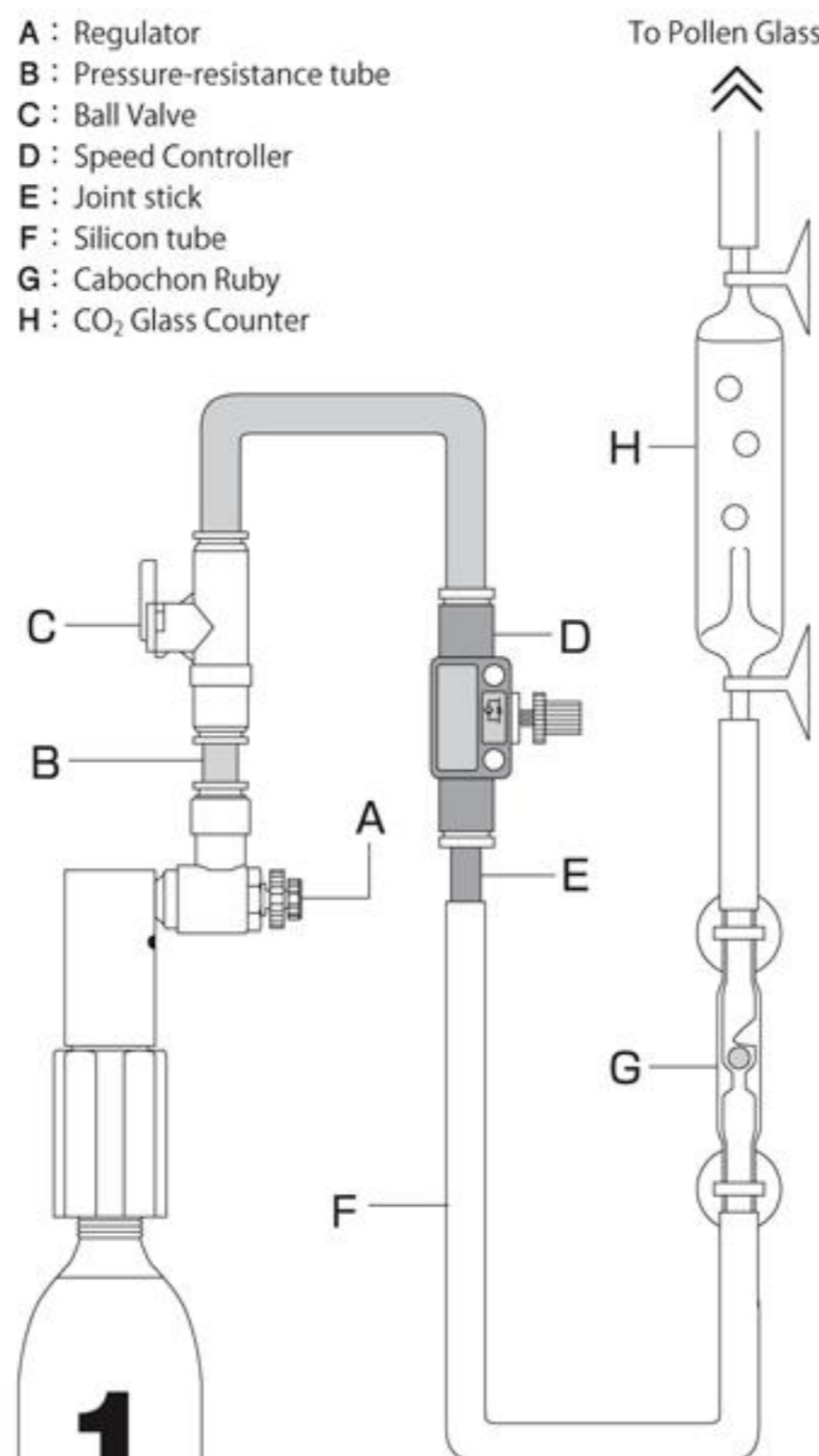
A When purchased, *Blyxa novoguineensis* looks like a rosette plant in a small clump. However, it actually grows fast like stem plants and requires trimming the same way you would trim stem plants. After trimming, it develops smaller leaves densely. Repeated pruning of *Blyxa novoguineensis* can cause some of its roots to grow in water. Make sure that the roots are still lodged in the substrate before trimming. If some of the roots are almost not covered by the substrate, remove the whole plant from the tank, cut it into small clumps with its roots and then replant the small clumps on the substrate.



Q I am a CO₂ Advanced System user. I would like to know the connection example when using the Speed Controller and Cabochon Ruby. I am not sure how I should connect each piece of equipment and how I should use the pressure-resistance tube and silicon tube.

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- A : Regulator
- B : Pressure-resistance tube
- C : Ball Valve
- D : Speed Controller
- E : Joint stick
- F : Silicon tube
- G : Cabochon Ruby
- H : CO₂ Glass Counter



Q I feel that the rate of water inflow of my VUPPA-I has decreased. What is the cause? How can I solve this problem?

A If the rate of inflow has decreased even though the two slits are not clogged with plant leaves or rubbish, the front casing of the internal motor might be clogged with some particles. In a tank in which many aquatic snails are present, a small snail can easily be sucked into the filter and get stuck at the front casing of the motor, causing a decline in flow rate. Remove the motor from the unit according to the instructions on the user manual and clean the particles or snail on the front casing.



Q There is a description "Turn on the lighting during the day and perform aeration during night" on ADA catalogues and the tank data on "Aqua Journal", but the website of a shop says "Do not carry out aeration to avoid algal growth". Which is true?

A As you know, aquatic plants perform photosynthesis using light and carbon dioxide during the day while they respire at night by taking in oxygen and releasing carbon dioxide. Particularly in a planted aquarium with a lot of stem plants, the oxygen consumption by the plants during

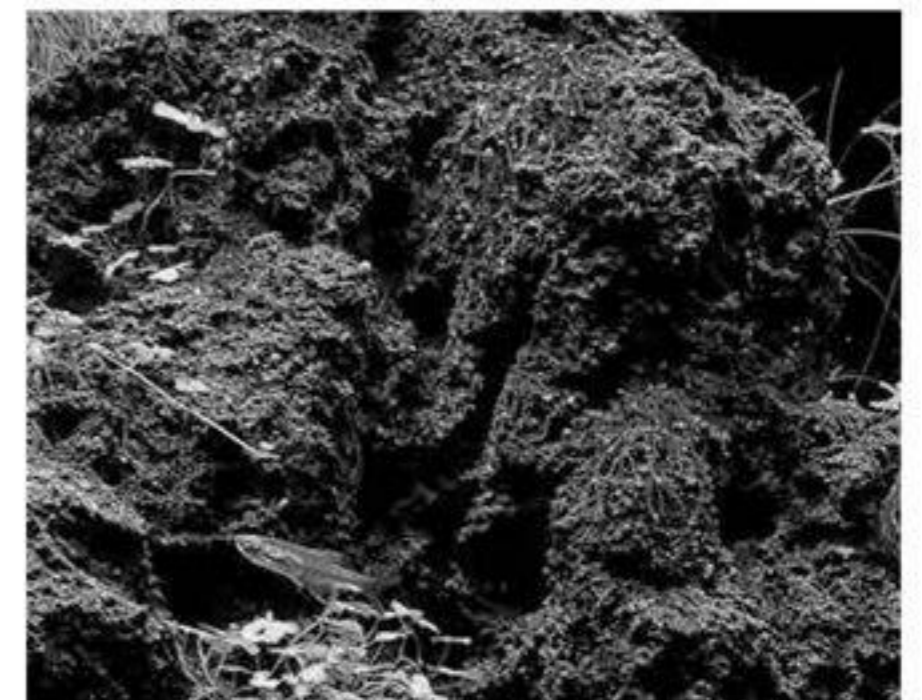
Send us your questions!

We welcome your questions and inquiries on Nature Aquarium. Please feel free to send your questions to ADA to our email address (ada@adana.co.jp).

their respiration process at night is high and this may cause lack of oxygen to the shrimps and fish. In the case of an excessively low oxygen level, it can be observed that the shrimps are inactive near the water surface. A lower dissolved oxygen level at night also leads to an extremely low oxygen level within the filter, which affects the beneficial bacteria in it. As a result, the balanced environment in the tank will eventually be lost resulting in slightly cloudy water and excessive algal growth. To avoid such a situation, it is advisable to perform aeration during night for the planted aquarium. You may use the Pollen Glass for AIR for aeration. With the Lily Pipe, you can carry out aeration with ease just by installing it in a position in which the outflow port of Lily Pipe is partially above the water surface.

with a brush such as grooves and dents on the stone surface. Nevertheless it is seldom used in Nature Aquarium because it lays small white eggs on the stones, which are hard to remove and also unsightly. Other species of shellfish that grow easily in the tank may spoil the beautiful landscape if there are too many young shells within the tank. For these reasons, ADA recommends the use of *Caridina japonica* (Yamato Numa Ebi), *Otocinclus* and Siamese Flying Fox for algae control. The "Window Type" released by ADA in the summer of 2011 includes pond snails which are effective for algae control and water purification. In this "Window Type", you can have pond snails with ease as you may remove excessive numbers of them easily unlike Nature Aquarium tank.

magazine, some of them will naturally stay on the stone and start growing. Please take note that this way of attaching willow moss cannot be used for stones with a smooth surface. This is a method of attaching willow moss making use of the features of Unzan Stone.



Q ADA recommends the use of *Caridina japonica* (Yamato Numa Ebi), *Otocinclus* and Siamese Flying Fox for algae control. Why doesn't ADA use shellfish?

A Many aquarium shops sell *Clithon retropictus*. It eats and removes algae on the stones and driftwood, even in the places that are hardly reachable

Q "Aqua Journal" Vol.193 introduced the attaching of willow moss that has been finely chopped with a knife to the stone. Will the willow moss really attach to the stone by this method?

A The layout introduced in the "Aqua Journal" uses Unzan Stone which has been newly released recently. This volcanic stone has a rough surface and holds fine pieces of willow moss easily. Although not all the willow moss pieces will be attached to stone by the method introduced in our

Q I purchased Drop Checker the other day. The pH level of my tank water was 6.4 before CO₂ injection. ADA explains that the blue reagent turns green and then yellow as CO₂ is added, but it's always yellow on my Drop Checker. How can I know the correct CO₂ level?

A If the pH level is 6.4 before CO₂ injection, it can be assumed that the reagent of your Drop Checker did not change color because the impact of water acidification from Aqua Soil is greater than the change of CO₂ level. In this case, it is advisable to do a water change to bring the pH level of the tank water closer to neutral, and then add the tank water to the reagent for installation of the Drop Checker.



NEW

Water surface extractor

VUPPA-I

ADA NATURE AQUARIUM NEW GOODS

Simple and compact design

Original water volume adjustment function

Robust stainless body with high durability

Removes contamination on the water surface such as oil film effectively

Having oil film on the water surface spoils the allure of an aquascape. VUPPA-I developed with ADA's original structure eliminates such film effectively. And all hand-crafted stainless body does not spoil the appearance of the aquarium.

SIZE : Ø38×H110mm ※Excluding the projection parts.

※The picture only shows the image of the product.
Actual product has the electric cord from the top of the main body.

