

[Special Feature]

A fresh water stream

NATURE IN THE GLASS

ENJOY DOOA

ADA Review

ADA layout materials – Stones

MAKE & KEEP

NA WATER and CATION FILTER

Mizukusa FOCUS / Plant Art Studio

Amano's View 'The Ideal Algae Muncher'





NATURE IN THE GLASS

“A fresh water stream”

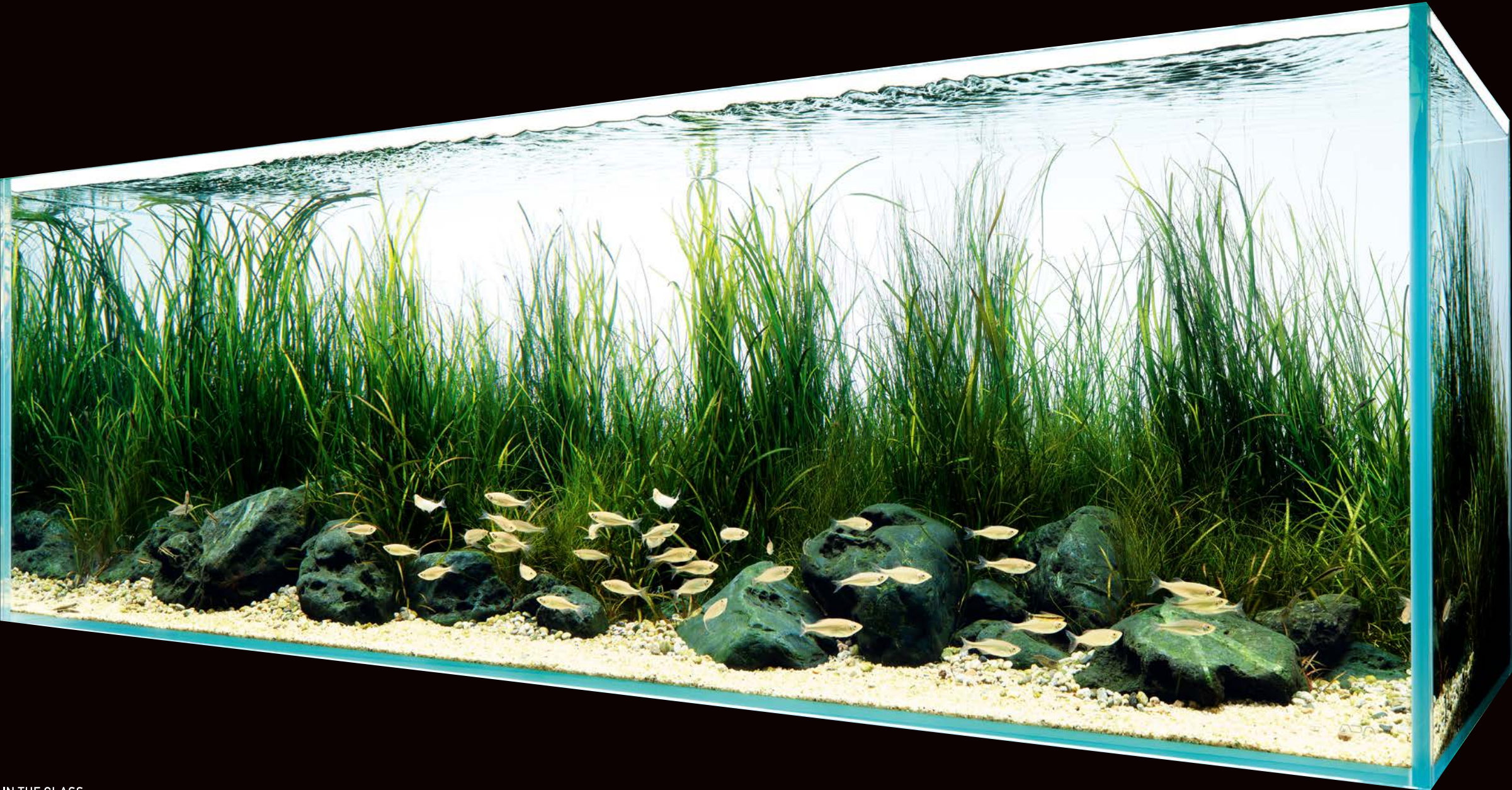
Daisuke Inoue

AQUA JOURNAL vol.275

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Giant Danio reminiscent of Japanese river fish play in the aquascape created with stones and gravel to depict the life-size bottom of a limpid stream.



NATURE IN THE GLASS

The image of a refreshing limpid stream in summer created with aquatic plants with tape-shaped leaves, river stones, gravel, and sand.

Although typical layouts often recreate a miniature image of nature in an aquarium, this layout was created based on the idea of depicting a life-size natural river bottom. Therefore Hakka Stones, which are river stones, were selected as the primary layout material and placed randomly across the aquarium. Gravel was placed next to the stones where coarse sand tends to collect, creating the impression of the water flowing from left to right. Combining a few types of aquatic plants with tape-shaped leaves added the depth and breadth to the aquascape. I created this aquascape hoping that the viewers can visualize the scenery that extends beyond the aquarium. (Daisuke Inoue)

DATA

Shooting date	June 22nd, 2018 (ADA)
Creator	Daisuke Inoue
Aquarium	Cube Garden W180 x D60 x H60 (cm)
Lighting	Solar RGB x 3, turned on for 10 hours per day
Filter	Super Jet Filter ES-2400 (Bio Rio L)
Substrate	Aqua Soil Amazonia, DOOA Tropical River Sand, Power Sand Advance L, Bacter100, Clear Super, Tourmaline BC
CO ₂	Pollen Glass Beetle 500, 5 bubbles per second via CO ₂ Beetle Counter (using Tower)
Aeration	14 hours after the light is turned off using Lily Pipe P-6
Additives	Green Brighty K, Green Brighty Mineral, Green Brighty Iron
Water change	1/3 once a week
Water quality	Temperature: 24°C; pH: 6.8; TH: 50 mg/L

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Aquatic Plants

- Eleocharis acicularis*
- Vallisneria neotropocalis*
- Vallisneria nana*
- Helanthium bolivianum*
- Eriocaulon* sp.

Fish & Invertebrates

- Danio malabaricus*
- Crossocheilus oblongus*
- Otocinclus* sp.
- Caridina multidentata*

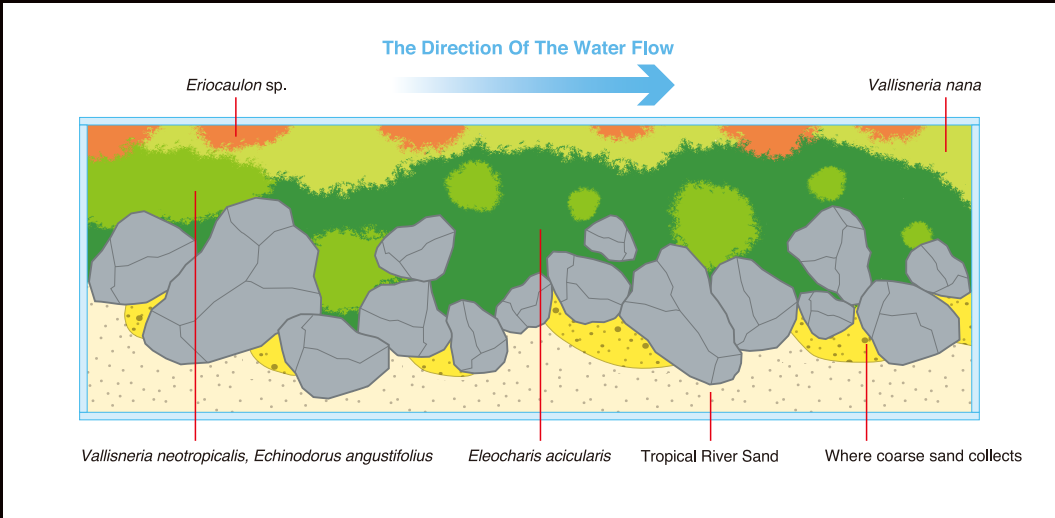
A Life-Size Limpid Stream Layout

The method to create the atmosphere of a river bottom and multi-tiered planting of aquatic plants

This layout depicts an actual size river bottom based on the theme of a “refreshing summer stream.” Therefore, the stone arrangement and the method of expression that are different from those of a standard Iwagumi layout were employed. The stone arrangement appears zigzagged when viewed from above. Gravel was laid, imagining the locations where it tends to collect due to water current, thereby invoking the ambience of a river bottom. Although the planting looks simple at a glance, it is multi-tiered, and the tape-shaped aquatic plants were arranged so that their leaf blades become thinner as they get close to the background, enhancing depth.



The scenery of a natural river bottom was created with a seemingly random looking stone arrangement. The water flow and unadulterated, natural appearance were produced with the stones in various sizes and orientation.



The stone arrangement and the planting viewed from above. It shows the zigzag stone placement and multi-tiered plants.



Aquascape Planting

This photo of the layout shortly after planting shows that the tape-shaped plants were selected for different purposes based on the width of their leaves. Some were planted in the front and some in the back.



Striped Giant Danio, which resemble Japanese fish that live only in clean water, were added to the aquarium. The somewhat large fish goes together well with the life-sized aquascape.



Eleocharis acicularis was planted in front of the tape-shaped aquatic plants in the background. The plant with the moderately long leaves plays the important role in the middle ground to tie the foreground and background.



Eriocaulon sp. with slender leaves was planted to be visible in-between other tape-shaped plants. Multi-tiered planting rendered depth to the aquascape.



Tropical River Sand and gravel were used in the foreground. Keeping the implied water flow in mind, the gravel was placed upstream of the river stones to appear that they accumulated there naturally.



Aquascape Completion



I revisited a limpid stream in northern Niigata prefecture to reacquaint myself with the natural scenery that gave me a hint for this clear stream layout. Going into the field reconfirmed the orientation of river stones and accumulated gravel relative to water current.



Inspiration

NATURE IN THE GLASS

Let's play in the river!
Being in the field gives you
inspiration for a layout.

Photo / Yusuke Homma Author / Daisuke Inoue



I got a hint for the planting of aquatic plants (planting tape-shaped aquatic plants sporadically) in the clear stream layout from a colony of reeds at the water's edge.

Planting Expression



The scenery reminiscent of the clear stream layout. Rounded river stones interspersed in the stream and the colony of reeds invoke the image of the layout.

Expression of Details

The river bottom in nature gave me a hint to create the layout with the impression of water flow using the gravel and sand.



Playing in a river and reliving one's childhood helps to create a Nature Aquarium layout.

Incorporating natural elements into a layout is fundamental to Nature Aquarium. Although people have their own way of creating a layout, what we see in nature in the field often gives us inspiration for a layout. The clear stream layout described in this article was inspired by the actual scenery of a clear stream. I focused on recreating a scene in nature into an aquarium rather than focusing on the technical aspects, such as composition and color balance of aquatic plants. This is one of the basics of Nature Aquarium that I learned from my teacher, Takashi Amano. Going out to the field and accumulating information on nature help to widen the range of layout expressions. There are many hints hidden in nature, not only in a clear stream but also in mountains and oceans. Take a camera or a fishing pole and go out into nature, rather than worrying about a layout. It seems to me playing casually in nature is probably better for finding inspiration.

Discern the feel and the texture of each type of stone first.

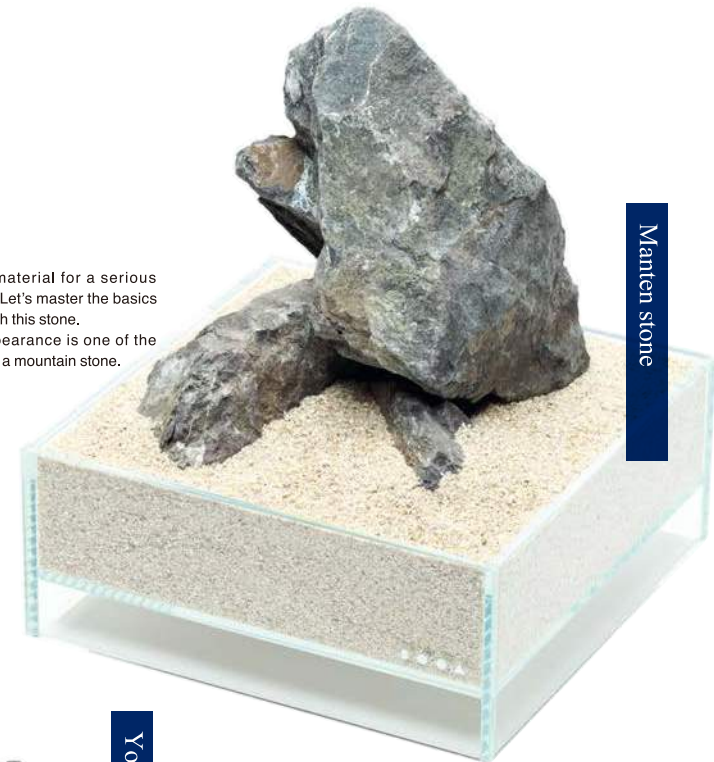
Stone and driftwood are essential composition materials for creating a Nature Aquarium layout. In particular, stone is a familiar material that we often see when we go outside. We believe many aquarists have produced a layout with stones and gravel that he or she picked up. Since various regions produce characteristic stones, it would be fun to look for some stones in your own area that fit your liking. ADA introduced many types of stone along with various

layouts based on our experience. The ten stones featured in this article are sold, currently or in the past, by ADA. Some of the stones may look familiar to you from ADA's Nature Aquarium style aquascapes. These are ADA's flagship stones from the standpoint of color, shape, texture, solidness, and character, and are selected based on our know-how of Iwagumi materials. You can select a stone that fits the image of your layout or select a stone and let your imagination soar. So, let's look at the stones first.



Ryuoh stone

A lot of white striation and grooves are found on the surface of Ryuoh Stone in characteristic cool coloration. These characteristics are suggestive of the image of a steep mountain range.



Manten stone

ADA's classic material for a serious Iwagumi layout. Let's master the basics of an Iwagumi with this stone. The rugged appearance is one of the characteristics of a mountain stone.



Yogan Stone

Yogan Stone is porous and lightweight. Microbes easily colonize it. This is an interesting stone that can be used for various applications besides the landscape use.



Unzan Stone

This is an artificially processed natural stone. Simply placing it in an aquarium can create a nice scene. It is a layout material highly recommended for a beginner.



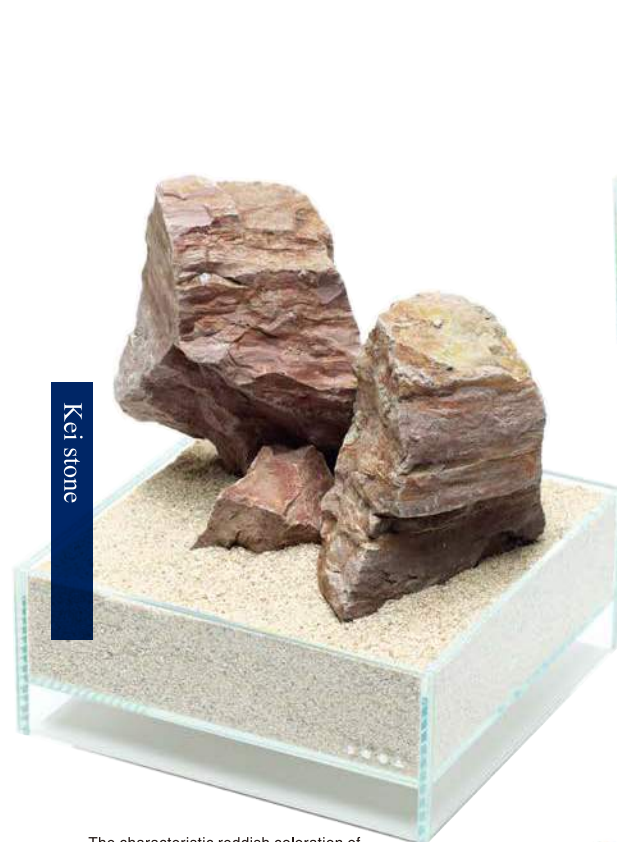
ADA LAYOUT MATERIALS

ADA layout materials – Stones

Passionate about Iwagumi layouts, ADA recommends ten different types of stone as layout materials. A few small stones of each type are arranged and presented in this article so that you can visualize the image of a layout.

Basics For Selecting A Stone

- Select the Oyaishi (the largest stone) suitable for the size of the aquarium first.
- Select the rest of the stones for the layout from the same type of stone.
- Look at the selected stone from all angles and find the best-looking side.
- Arrange the stones in-situ to examine the impression of the arrangement.
- An odd number of stones are used in a full-scale Iwagumi layout as a general rule.



The characteristic reddish coloration of the stone can produce a unique layout when used well in contrast with green aquatic plants. A combination with Anubias might produce an interesting layout with an African theme.



It is useful for random stacking because of its relatively small size. For example, it can be used to produce an appearance of a rocky terrain.



Ouko Stone with many depressions on the surface is great for creating a landscape-like layout. The stone has regained popularity in recent years.



Although Sansui Stone looks similar to Koke Stone, it is distinguishable by its stratified appearance. The characteristic layered appearance should be used to its advantage in a layout.



Aquatic mosses, such as Willow Moss, attach themselves easily on the adequately rough surface of Koke Stone. Enjoy the atmosphere of Wabi with moss-clad stones.
*Discontinued.
*Available only in store.



Hakkai Stone is a river stone with a stately appearance, and those with cavities called "Mushikui (a worm hole)" are very valuable. It is a renowned stone that Takashi Amano favored. It requires skill and experience to use it well in an aquascape.
*This stone is not available for purchase.



DOOA, an inspiring brand, helps you enjoy aquatic plants more freely. Minimal and easy, and designed as a platform allowing everyone to nurture plants indoors. Feel closer to nature, and bring beauty into your life.

Refreshing Aqua Terrarium With A Natural Appearance Expressed With Vining Aquatic Plants

We try many different aquatic plants in layouts to see which one is most suitable for an aqua terrarium, which features emerged grown leaves primarily. The family of *Hydrocotyle*, which is used in this layout, is quite an interesting plant for use above water. Since it is a vine that spreads by runners, it grows vertically from top to bottom above water and produces a distinct natural appearance and a refreshing impression. *Hydrocotyle* sp. spread by clinging to the upper surface of the driftwood and strengthened the natural appearance of the layout over time. In addition, the cute leaves of *Hydrocotyle verticillata* added a variation to the planting on the wall. The advantage of an Aqua Terrarium is that its maintenance is quite easy and you can enjoy the layout for a long time.

DOOA SOL STAND G ■
DOOA SOL STAND G Mounting piece ■
DOOA SYSTEM TERRA 30 ■
DOOA MISTFLOW ■
DOOA BASE STAND 35 ■
CO₂ Forest Bottle ■
CO₂ System 74-YA/Ver.2 ■
Clear Stand for CO₂ System 74 ■
DOOA CO₂ MINI COUNTER ■
DOOA CO₂ MINI DIFFUSER J Ø10 ■
NA Control Timer II ■
DOOA TROPICAL RIVER SAND ■
DOOA WABI-KUSA MIST ■

[Aquatic Plants]
BIO *Hydrocotyle verticillata*
BIO *Hydrocotyle* sp.
BIO *Anubias barteri* var. *nana*
Moss Rock Mini
[Fish]
Oryzias woworae
Tateurndina ocellicauda

Shooting date: April 4th, 2018 (ADA)
Creation & Text: Yusuke Homma
©AQUA DESIGN AMANO





The appearance of *Hydrocotyle* sp. that hung down from the driftwood. Sciophytic Anubias nana and Moss Rock Mini were placed in the area shaded by the driftwood.



Swimming space for the fish was created among the Moss Rock Mini without using many aquatic plants. The blue shimmer of *Oryzias woworae* stands out in the shade.



While the runners of *Hydrocotyle verticillata* on the wall hung downward, the leaves grew facing upward interestingly. The contrast with *Hydrocotyle* sp. added a variation to this planting.

The key point of this layout is the Willow Moss that was grown on the driftwood. The Construction Of The Layout For Growing Vining Aquatic Plants

The foundation to grow *Hydrocotyle* sp. over the surface of the driftwood was created with Willow Moss (*Taxiphyllum barbieri*) in this layout. Willow Moss was placed over the driftwood to direct the water from the upper part of the cascade section onto the upper end of the driftwood. The water runs down over the entire driftwood via the Willow Moss that was grown on the surface of the driftwood. The flowing water supplied moisture to the roots of *Hydrocotyle* sp. and enabled the plant to spread runners over the driftwood surface.

Driftwood and Moss Rock Mini were used as the framework of this layout. Willow Moss was grown on the driftwood so that water would flow downward over the driftwood.

©AQUA DESIGN AMANO

MAKE & KEEP

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NA WATER and CATION FILTER – Condition the water suitable for aquatic plant growth and long-term management.

ADA NATURE AQUARIUM

NA WATER

NA WATER + CATION FILTER



Two NA WATER, installed in the back of the 7m wide tank, were interlinked for corresponding with high amount of water-change; one is loaded with a sediment pre-filter, and a carbon filter, and the other with two Cation Filters.

*Picture shows an old model of NA WATER.

Why growth of Glossostigma so slow? Tap water condition was the key factor.

Sumida Aquarium's 7m wide tank with a title "Grassland and stone landscape" has been long maintained for 6 years since opening of the Aquarium. Glossostigma, forming the grassland, is a standard undergrowth plant of the Nature Aquarium, but its slow growth rate was a source of anxiety for ADA aquarium maintenance staff. There are many factors involved in deciding the growth rate of aquatic plants; nutrient condition in substrate, lighting, and CO2 concentration in the water, for example. Glossostigma, especially, grows slowly in high TH (Total Hardness) level. Normal tap water has been used for the aquarium, but its total hardness level was always unstable. It showed TH: 20-50mg/L time to time, but sometimes reached over TH: 100mg/L.

So we decided to install CATION FILTER, which has an effect of lowering Total Hardness level.

Then TH level was controlled below 20mg/L and the condition of Glossostigma got improved significantly. If you live in area with high Total Hardness level, try ADA's Cation Filter!

MAKE & KEEP

From a small nano-tank to supersized tank; Nature Aquarium aquascapes are produced in various sizes of aquarium tanks. Remaking of a large-size aquarium is not so easy, and long-term management is a precondition for success in making a large-size aquarium. In this issue, we deal with the 7m wide, long-maintained aquarium, "Grassland and Stone landscape" in SUMIDA AQUARIUM to showcase a typical supersized aquarium.



Cardinal Tetra is especially sensitive to changes in water condition. You can make water replacement free of anxiety, with NA WATER, loaded with Carbon Filter which removes residual chlorine.



Unzan Stone, a type of lava, used for "stone landscape," does not raise the total hardness level. So the growth of Glossostigma improves significantly just by lowering the total hardness level of tap water.

Mosses are indispensable for an aquarium. They can grow both terrestrially and under water. Their beautiful appearance attracts many hobbyists. A number of mosses are currently available in Wabi-Kusa Mat and Bio Mizukusa No Mori formats. Although they look identical at a glance, their differences will become evident with a closer look. Let us introduce the five different types of mosses here.

“The Comparison Of Emerged Grown Mosses And Submersed Grown Mosses”

Several aquatic mosses are used in Nature Aquarium and Aqua Terrarium layouts. There are some differences among them. An observation from a distance reveals the differences among them in terms of the brightness and hues. The appearance has a lot to do with various factors such as the way they branch, the direction of growth, and the shape of their leaves. They have different preferences in terms of a growing environment as well. You can grow beautiful mosses by using these characteristics to your advantage. Some mosses have different leaf shapes depending on whether they are grown underwater or above water. How about challenging yourself by growing various mosses to get to know them? You will be able to tell which mosses do well based on the location and the growing condition or which ones to select based on the impression of a layout.

Taxiphyllum barbieri (Willow Moss)

The most common type of moss. It grows fast and attaches well to driftwood and stones. It will develop bright green leaves and enhance the natural appearance of a layout. Since the tips of its leaves tend to dry out quickly, it is easier to maintain them underwater.



Vesicularia montagnei (Christmas Moss)

This moss develops triangular leaves that resemble a Christmas tree underwater. It develops rhizoids and attaches easily to driftwood or stones. On the other hand, it develops translucent, light green leaves above water, and its short leaves hardly branch out. Since it is resistant to drying and low light conditions, it is recommended for the use in Wabi-Kusa Wall and System Terra 30.



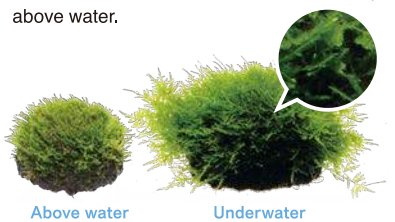
Vesicularia ferriei

This moss grows in a weeping form. It grows underwater by spreading in a more downward direction than other mosses. While it develops fine leaves above water and appears delicate, it is not very resistant against low humidity.



Taxiphyllum sp. 'Peacock Moss'

This moss grows by branching beautifully into a fan-shape like a peacock's tail. Its leaves curve as they grow, and the thick layers of leaves produce a voluminous appearance. The leaf of this moss has a triangular shape when viewed from above, but the moss has much softer and smoother leaves than those of Christmas Moss. It is also easy to grow above water.

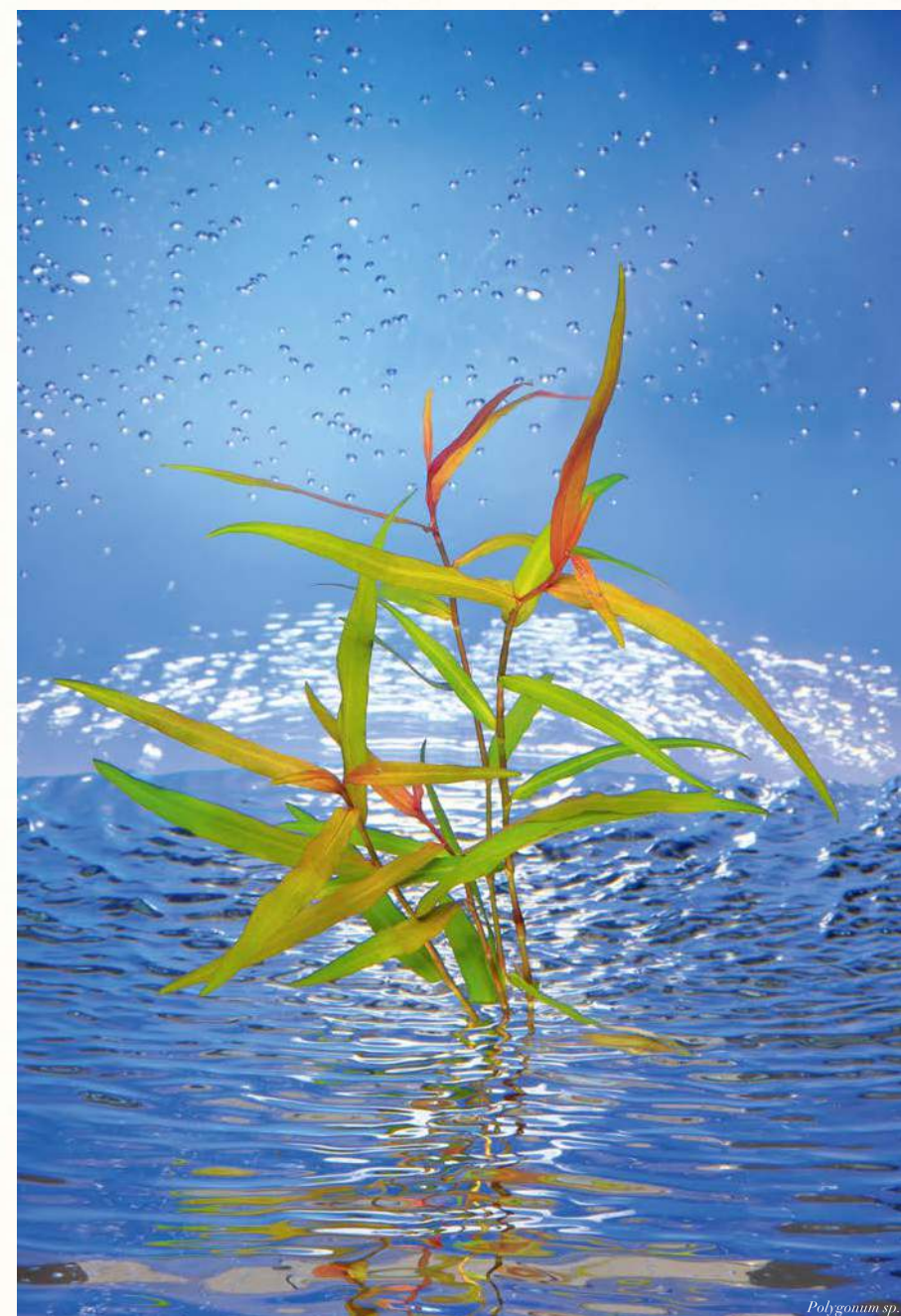


Taxiphyllum sp. 'Spiky Moss'

This is a moss with “spikey” tips. It develops large leaves underwater and tends to grow more upwardly than horizontally unlike other mosses. When grown completely emerged, it becomes resistant to drying. Since it does not take well to low light conditions, we recommend placing the moss to an upper section when grown in a wall setup, such as System Terra 30.



Plant Art Studio



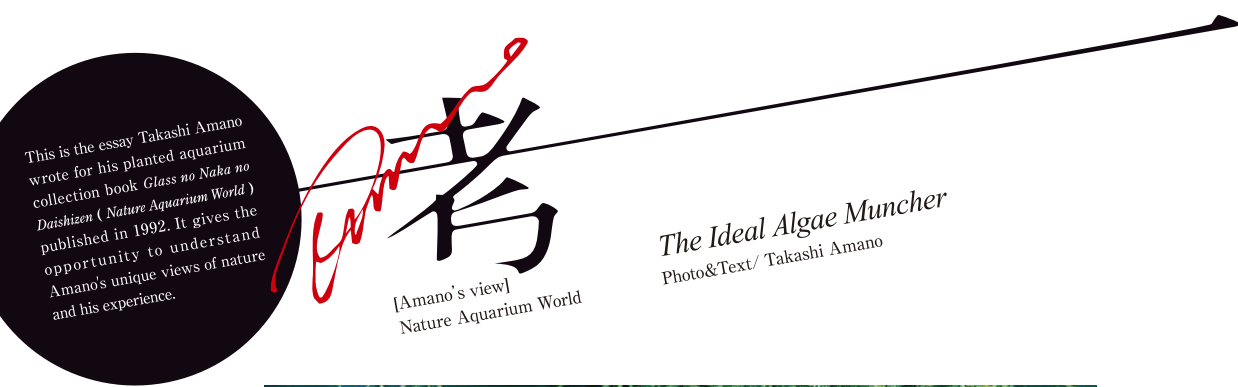
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While having an unusually hot summer this year, autumn is quickly approaching after the Bon season*. In cool, refreshing water and ripples, I placed *Polygonum* sp., that is often associated with the autumn season, to represent the passage of seasons.

Photo / Yusuke Homma



* A Japanese Buddhist custom honoring the departed spirits of ancestors.



Before the yamato-numaebi (*Caridina multidentata*) appeared in tropical fish aquaria as an algae-control agent, the algae that invariably infested the tank after planting was a great pain in the neck. The aquarium in the photo is clear now, but when I had first set it up, it looked like an algae exhibition tank.

I like to experiment with different combinations of organisms in aquaria. I've learned that viviparous fishes, like the black molly or swordtail, take care of the soft algae-like tangle; scats best handle hard, calcareous algae; *Otocinclus* or dappled shell is great for light brown algae. By trial and error I learned how to deal with algae, and shrimp are easily the most effective animals. At first I was amazed at the way they would dig into even hard algae.

Then one day I met a freshwater fish dealer and asked him if he could send me specimens of all of the species of shrimp native to Japan. It was a pretty tall order, and nothing came of it for a long time. I'd almost forgotten about it when a package arrived containing seven species, from the rare nihon-zarigani (*Cambaroides japonicas*) and yamato-tenagaebi (*Macrobrachium nipponense*), to the widespread suji-ebi (*Palaemon paucidens*) and mizore numa-ebi (*Caridina leucosticta*).

I put all but the rare specimens into tanks to test and observe them. I learned their various flaws: suji-ebi's claws grow too long and hurt the fishes, nuka-ebi is too sensitive to heat. But there was a special, beautiful shrimp in a plastic bag with the name yamato-numaebi written on it in red marker. That shrimp averaged nearly a hundred on my tests. On its report card I wrote, "The best living thing for dealing with algae in an aquarium," and sent a fax asking the dealer to collect a few thousand more for me.

The dealer was not enthusiastic. He said that that shrimp didn't sell, that he had just recently unloaded a few hundred old-terms, and now I was asking him to collect a few thousand more? I had to convince him. I told him he would soon be selling so many thousands of yamato-numaebi that he'd be going crazy. I told him I would buy whatever he collected until word got around, because I could definitely sell them. I asked him not to sell to any other dealer no matter how good their offers were.

He was wary of my advice, but as everyone knows, yamato-numaebi became a top-seller and remains so today. The aquarium in the photo is a kind of monument, since it was the first to use yamato-numaebi, algae-control agent number one.

Nature Aquarium World (TFH, 1992)

INFORMATION

NATURE AQUARIUM PARTY 2018

YOUR GREEN, OUR WORLD

2018.10.13.SAT-14.SUN

Venue: ANA Crown Plaza Niigata / ADA HQ

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未来のミライ

小さな世界の、大なる命の物語。

すみだ水族館

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**ADA WABI-KUSA MAT, a wide variety of aquatic plants
with mats, usable in many ways**

WABI-KUSA MAT

ADA WABI-KUSA Mat is aquatic plants of new generation, with mosses and epiphytes grown on plastic mat, pulling water easily. It can be directly used on Wabi-kusa Wall, or is also usable for aquatic plants layout by taking off the plants from the mat. Now WABI-KUSA Mat is available at stores near you, displayed in a new sales stand.

* WABI-KUSA Mat is packaged with a plastic cover for preventing drying of the plants.



Visit the DOOA website to see some photos of amazing
aqua terrariums using ADA WABI-KUSA Mat: <http://dooa.jp/en/>