

Rivista d'informazione sull'acquariologia

SCAPER^{mag}

Aquariums Information Magazine

5 EXCLUSIVE
INTERVIEWS

TOP
AQUASCAPER

NITROGEN
CYCLE

HARDSCAPE
ROCKS & WOODS

DR. GREEN THUMB

SECTION

FISHES

PARACHEIRODON

INNESI

FIRST ISSUE N° 1
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INTRODUCTION



Through the collaboration between SCAPER ROOM and the facebook group with over 8,000 users Aquario Tropicale Aquarium Tank is born the first Italian magazine, totally free, dedicated to the wonderful world of AQUASCAPING.

Let's introduce myself, my name is William Fantini, my passion for aquariums was born as a child when, back in 1996, my parents decided to buy a 200 liter aquarium to furnish the living room.

I was immediately fascinated by it; it was wonderful, educational and at the same time relaxing to be able to admire the wonderful liveries of the tropical fishes and their behaviours.

Growing up I kept alive the passion for aquariology, in 2010 I set up my first 60 liters aquarium, I made the classic newbie mistakes but informing me, studying, reading books and

watching several videos online I started to correct my mistakes improving both the aesthetics of the tank and the health of the fish.

2016 was the turning point for me because I discovered aquascaping that opened the doors of a new world, vast and wonderful, a combination of techniques, able to recreate a corner of nature in perfect harmony, between 5 sheets of glass.

Aquascaping intensified my passion making me totally dedicate to this discipline.

Currently I design, set up and maintain aquariums for my customers under the pseudonym of SCAPER ROOM, I have also recently joined to fluvio.net platform as an expert in aquascaping.




AUTHOR'S LETTER

One day I wondered why there wasn't an Italian Magazine dedicated to the amazing and fascinating world of Aquascaping, maybe because it's too much work to do? Perhaps because in Italy it is not yet spread like as in other countries? Or maybe no one had ever thought about it?

I still don't have the answer and it doesn't matter now, because I decided to put myself in the game, committing myself to create SCAPER MAG, a totally autonomous, self-produced and free magazine, quarterly entirely dedicated to aquascaping; inside you will find interviews with the best AQUASCAPER in the world, guides, an entirely chapter dedicated to the description of the rocks and woods to use for hardscape, a section dedicated to our beloved aquatic plants and a section dedicated to the description and care of fish.

My dream is to make this magazine grow more and more, receive your feedback and advice to improve and maybe one day manage to reach a level of quality that can be printed in paper format; but I can only realize this dream with you, through your support and help!

I wish you a good, exciting and engaging reading.



Fantini William – SCAPER ROOM

AQUASCAPING

Aquascaping can be defined as art, the art of creating through the use of rocks, woods and lush plants, a beautiful underwater landscapes.

The objective of the aquascaper is to study, design and finally reproduce these landscapes inspired by nature, evoking emotions and feelings such as harmony, tranquility, calm, majesty but also mystery, danger and darkness.

In the last decades, aquascaping, spread in all the nations of the world and by now it can be defined as a branch of the modern aquariology.

Aquascaping owes its birth to the techniques and installations performed in Dutch aquariums that, from 1930, became popular in Netherland and later in the rest of the world.

Subsequently, freshwater aquarium equipment became increasingly available and Dutch aquarists began experimenting with how and where to place the various plants, until 1956 the NBAT (Dutch Aquarium Organization) established and published the first guide rules, defining spaces, colors and heights to be exploited, for the creation of an aquarium in the Dutch style. These densely planted underwater gardens left only little space for rocks and/or woods.

In the 1990s, Japanese photographer and aquarist Takashi Amano introduced his "Natural Aquarium" to the world.

Amano masterfully exploited the aesthetic techniques of creating Zen gardens, using rocks and plants to create his first works, minimalist, but absolutely breathtaking.

Using only a few species of plants, rocks or woods, all carefully selected, Amano's creations reproduced miniature landscapes reminiscent of mountain ranges, boundless expanses of grass and majestic forests.

Finally, these wonderful landscapes were sweetened by schools of fish, of one or two species, that seemed to fly like flocks of birds.

Amano published a series of three volumes, called Nature Aquarium World, containing the amazing photographs of his aquascapes, thus triggering an irrepressible wave of interest in aquascaping.

The first to organize the contest were the Dutch aquarists, but with the increase of interest due to the publications of Amano, contest starts to spread all over the world,

Aquatic Gardeners Association in the United States, International Aquatic Plants Layout Contest in Japan, Aquatic Scapers Europe in Germany and many more.

JOSH SIM



IAPLC 2021 #6 World Ranking – EMBRACE – Size 150x60x60 (cm)

Josh Sim, the legend, Malaysian professional aquascaper of 49 years with over 14 years of experience in the world of aquariums.

He participated for the first time at the IAPLC in 2009 entering the TOP 10 ranking at #4, twice, one in 2017 and the other in 2019, reached the top of the ranking by winning the GRAND PRIZE



William: Hai! Josh how are you? First of all I want to thank you for giving me the opportunity to interview you, for me it is a real honour! From my point of view you are like a legend, you are a precursor, an innovator of the various techniques of creating aquatic layouts; a true myth to be inspired by!

Josh: Thank you William, the honour is mine. Thanks for the very generous words but I am actually just a normal aquascaper like everybody else, not a legend or anything. I just love this hobby so much that I put in a lot of time and effort. I believe if anyone spend the same time and energy into doing one thing, you can do it well too.

William: Tell us about yourself, When did you start approaching the world of aquariums?

Josh: First of all, I have to make a correction that I am not a professional aquascaper like what you mentioned in the beginning.
This is just my hobby, not my fulltime job. I have a day job that pays all the bills and support this hobby. I am 49 years old and I am from Malaysia. I am married to a supportive wife and I have 3 young kids.
I started this hobby in 2008 and started competitive aquascaping in 2009.

William: What fascinates you most about the aquascaping world?

Josh: The ability to create nature and the joy of sharing my creation to the world, is what motivate me in this hobby.



IAPLC 2020 #3 World Ranking - PURE - Size 150x60x60 (cm)

William: Who or what inspires you when you create an aquascape?

Josh: Anything, anyone, any places. I believe for every layout to shine, it must have its own soul or story and every tank is different in this respect. Even the smallest thing that happens in our life or our surrounding, can be an inspiration. Use that inspiration to create the layout and it will have a soul and a story to tell.



CIAC 2017 #1 World Ranking - CONGO



William: How long does it take to create a hardscape?

Josh: It really depends. The longest time I spend on a hardscape (for contest) is probably few weeks to 1 month, the shortest time is few hours. It really depends on many things but most importantly, whether I feel satisfy with my work. If I do not feel satisfy, I will keep changing it until I am happy, but if I am satisfied, it can be done in a very short time.

William: How do you the choose the plants for a hardscape, by follow your feelings or it's everything designed in detail?

Josh: I usually don't plan for the plants **BEFORE** I finish my hardscape. I do not think of what plants to use or what plants is suitable. I will finish my hardscape concept first, after that, i will find plants that is best suited to the concept i created. There are hundreds and thousands of aquatic plant choices, so there is really no need to worry about what plants to use before the hardscape is done, do not let the plant choice limit your imagination. No matter what hardscape or concept you created, there will definitely be plants that will be perfectly suitable for it, so do not have to worry about it from the beginning.



William: Since many fans and hobbyist think that aquascaping is a relaxing and not tiring hobby, Tell our readers fourth constancy, effort and passion do you need to have to be able to cure and maintain a tank that will have to participate to **IAPLC**?

Josh: Aquascaping is **relaxing**, that is true, but aquascaping competition is not. If you really want to take aquascaping contest seriously and aiming for the highest honour, it normally takes a lot pressure, time and energy to perfect your layout. The stress and hardship did not come from the physical side, but it is more like a mental burden. I am happy to say that the stressful contest journey is over for me, I am in a stage where I can really enjoy this hobby now, even if I am still going to competition.



IAPLC 2017 #1 World Ranking – CONGO – Size 120x60x50 (cm)

William: What advice can you give to those who would like to attend the **IAPLC** for the first time to have an impact aquascape?

Josh: Do something crazy, you have nothing to lose. Whether you get 500 or 1000 or 2000 ranking, it does not matter. Do not do something "safe", because if you attempt a "safe" or common layout as a beginner, you are actually competing with many that have better experience than you and doing the same thing, you cannot beat them. But if you do something "crazy", you are not competing with anyone so even if you do not have the skill or experience, you have a chance to get a breakthrough. If you want to beat the other participants in a contest, do not do something that they are good at or better than you. If you are a beginner, you cannot beat the Brazilian using Brazilian style layout, you cannot beat Indonesian using an Indonesian style forest layout, you cannot beat the Japanese with a NA layout. **If you want to beat Michael Jordan, don't play basketball with him, play football maybe. Do something different.**

William: What's your favourite tank and why? Could you describe this tank including the techniques? Filtration, lightings, ferts and so on or it's a secrets?

Josh: Before this year, my favourite tank is **"Faith"** in 2018. It is a transformation for me, an evolution from my usual forest layout to an underwater and NA style layout. This tank holds a very special meaning to me as it is a personal "breakthrough" for me and I think I have done something different. But, I have a new favourite tank this year, which will be release in IAPLC 2022 again. I think this is another transformation. I could not reveal too much info about this tank yet but hopefully you will get to see it in August. There is no secret in my technical specification (filtration, lightings, ferts and so on), I think these technical aspects are all very standard. I use what everybody is using, nothing special. I am not a technical guy or a scientist, I would like to consider myself more as an artist. My success so far does not rely on science or technology, but mainly how i make good use of my artistic sense.



IAPLC 2018 #20 World Ranking – FAITH – Size 120x60x50 (cm)

William: Is it easy to find the correct material for hardscapes in Malaysia?

Josh: For wood yes, we are blessed with abundance of natural driftwood that you can find them in the wild or from the shop with affordable price. But not so much for rocks, the rocks that we can find locally here in Malaysia are quite limited and we depend on the imports from other countries.

William: Your favourite aquatic plants?

Josh: Not really a favourite plants but I think mosses are the most versatile and useful plant in this hobby. I don't use it as my main plants but I think it can be used in any aquascape to make it look nature and fill up all the empty spaces.

William: Your favourite fishes?

Josh: No favourite fish – haven't found one yet.

William: Your favourite substrate?

Josh: The most common and famous one.

William: Your favourite rocks and woods?

Josh: Wood: Malaysia natural driftwood. Rock: No favourite.



IAPLC 2019 #1 World Ranking – DREAM ON – Size 120x60x50 (cm)



IAPLC 2015 #6 World Ranking – A HUNTING GROUND – Size 120x60x50 (cm)

William: What advice can you give to a newbie?

Josh: Try to enjoy the hobby!

Joke aside, I have this to share with the beginner of this hobby:

1) On equipment and all material use in this hobby: as a beginner, DO NOT DIY. Use all the proven equipment and material from the beginning.

As a beginner, if you DIY, once things go wrong, you do not what is the problem and you will end up spending more money and effort to get it right, if you have not given up the hobby yet.

DIY is for those who already knew what they are doing.

2) On designing a layout: "Copy" is a great form of learning for beginner.

Don't be afraid to imitate a successful layout from another aquascapers, by copying a high rank layout, you are leaning the layout technique, the process and even understanding the thinking of another experience/skilful aquascaper.

This is a very good learning process. But this "copy" process has to stop at some point, once you have learn the basic, you should progress to creating your own layout.

3) On Aquascaping contest: set a target for yourself and don't look back.



IAPLC 2013 #4 World Ranking – DESTINY – Size 120x60x60 (cm)



IIAC 2019 #4 World Ranking – DREAM – Size 120x60x60 (cm)



IIAC 2019 #2 World Ranking - DREAM ON - Size 120x60x45 (cm)



IIAC 2017 #1 World Ranking - CONGO - Size 120x60x45 (cm)



IAPLC 2009 #4 World Ranking - AWAKENING - Size 90x45x45 (cm)

JUAN PUCHADES



Juan Puchades, Spanish professional aquascaper of 38 years, 3 times awarded at the IAPLC with the HONOUR PRIZES in the last ten years has always ranked in the top 50.

William: Holà! Juan, how are you? Tell our readers a little about yourself?

Juan: I am Juan Puchades, 38 years old. I am a dentist, I am specialized in periodontics and I have my own dental office. I am married with a super woman called Amparo and we have two precious daughters. Although my Facebook page seems like i expend all my day long into my tanks, that is far away from reality. My aquascaping time starts when my work and my family time has been finished. That is why I love to work with my contest tank during the night. Actually my contest tank lights turn off at 21pm!!



William: What fascinates you most about the aquascaping world?

Juan: It is extremely hard to answer a question like this when you are so passionate. I must say I love this hobby and I really like almost all about it. If you make me choose...yes! I have it!! Firstable I will say that aquascaping made me know people from all over the world and nowadays I have good friends in all the countries. And from a more competitive viewpoint, I love to have blank canvas in front of me. The stage of the year when I am searching and thinking about my next idea, and the time I expend creating the hardscape I consider the stages that I am really focused and my mind is always thinking about it (sometimes even while I am working).



William: Who or what inspires you when you create an aquascape?

Juan: Inspiration is something very curious, because many times there are elements that inspire you that are far away from Nature. But more tan inspiration, I will talk about what influences me.

1) My tanks must be as natural as posible, so it is very important to keep dayly watching and analizing Nature (everywhere you go, media potos, videos, films.... Everything could help you).

2) Sometimes my tanks are influenced by human structures, like in my 2021 tank I tried to reproduce the emotion that you feel while you are getting into a catedral.

3) Other aquascapers: By my side I am extraordinarily influenced by Luca Galarraga from Brazil, Long Tran Hoang from Vietnam, Masashi Ono from Japan and Josh Sim from Malaysia. Bute ven they are very close friends and they always give me their advices, I enjoy analizing every tank of every aquascaper of every contest of the year... yes! I analyze hundreds of aquarums every year. This is not a hard task, it is just something you do gradually and that you enjoy while learning.



IAPLC 2020 #17 World Ranking – TWILIGHT. AFRICAN NIGHTS – Size 120x60x45 (cm)

William: How long does it take to create a hardscape?

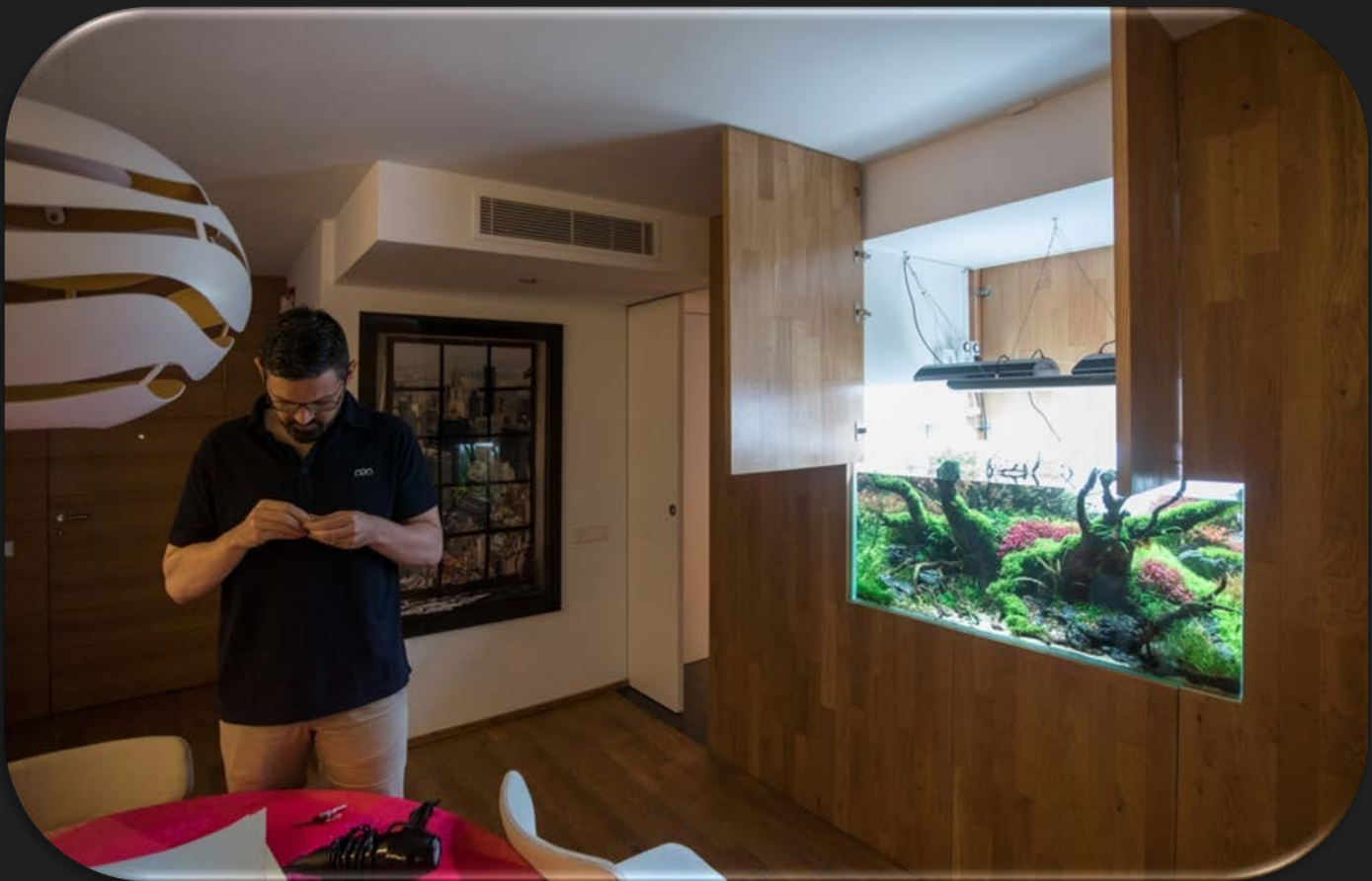
Juan: Oh wow... it depends. As I said it is one of the stages that I love best. So I am sure that in some of my tanks I have expended more than 200 hours to finish it (building, destroying horrible ideas, rebuilding....) 2021 was a "hardscape tank" where the structure was the mainpoint, so I employed lots of hours. This year my tank is not as worked in terms of structure. I am exploring new ways, something more simple but also with impact.

William: How do you choose the plants for a hardscape, by follow your feelings or it's everything designed in detail?

Juan: It always starts with a detailed idea, but I promise I always add new plants during the maturation process. If you want to achieve a top placement into the international contest you should analyze daily your plants, to understand if they are growing properly or not, and then take the right decision for them (sometimes the right decision is to avoid using one species that is creating you some headache). About this issue it is of main importance to understand what are the needs of the plants to make them grow nicer and healthy. This is a very common newbie mistake. Plants must be placed where they can grow healthy, and plants must save the proportions of the scale that you are using for your tank. Ohh and something really important, plants will give you the color of your tank, it is very important to study which colours and where do you want them. Please take a look of my **GREENAQUA** video about this.

William: Since many fans and hobbyist think that aquascaping is a relaxing and not tiring hobby, Tell our readers fourth constancy, effort and passion do you need to have to be able to cure and maintain a tank that will have to participate to IAPLC?

Juan: Well, for me is so relaxing. Many years ago I got quite pressured and stressed about competition. I was the first spanish aquascaper to achive a top27 placement in the IAPLC (2014), since there I though I need to be every year in the top27 and I got sometimes happy and many times upset. Now it will be my 11st applycation to the IAPLC and I enjoy nowadays much more than before (even after 11 years I have much more responsibilities in therms of family and business). There is no pressure, there is no expectatives, just in the end of August I will know if judges liked or not my tank, thats it!! About the time expended... there is no way to give you the right answer. I expend during at least 5 or 6 months a year at least two hours almost every day. So thats lots of time...but I use it as a relief. The ending of the day doing what I love best.



William: What advice can you give to those who would like to attend the IAPLC for the first time to have an impact aquascape?

Juan: Many things... too many maybe. Let's start:
1) Do you want to increase your skills... learn from the experienced ones. Find people who could help you to increase your level.
See Josh Sim's Greenaqua tutorial.
[Click to see Josh Sim's video](#)
And if you are crazy enough then just take a look at mine.
[Click to see Juan Puchades's video](#)
2) No expectations, there are nowadays many experienced guys working really hard for it. Don't worry if you do not achieve it from the very first minute Be humble and do not think about the result, just enjoy the way. Good placement will arrive if you work hard for it, but maybe not the first year.
3) Please focus on healthy plants, I got very sad everytime I see a great structure with poor or unmatured plants.



Hardscape details- ORIGIN. DAWN LIGHT

William:

What's your favorite tank and why? Could you describe this tank including the technique? Filtration, lightings, ferts and so on or it's a secrets?

Juan:

I really don't know which is my best tank... I feel my last year's tank is the one that created more impact into the aquascaping community, maybe because it got a nice placement into the IAPLC (7th).

You have a detailed description of how it was done in this video

[Click to see video.](#)

About my all time favourite tanks I have no doubt IAPLC winner in 2014 from **Wolinsky** and IAPLC winner 2015 from **Fukada San**.

I have no problem in talking about what I use, I love **ADA** ferts system associated with **AMAZONIA SOIL**. I feel I am not going to change for a long long time. About lighting in the last 5 years I am using RGB led from **ADA** and also from **Maxlite**. Both brands are of extreme quality. For me lighting is one of the most important aspects into aquascaping.



William:

Tell us about your water parameter: Kh, Gh and so on?

Juan:

I am a lover of soft waters. 23 degrees, 120 TDS, very frequent water changes (almost daily), kh 2-3 GH 2-4.

William: Is it easy to find the correct material for hardscapes in Spain?

Juan: In Spain nowadays it is quite easy!!! 11 or 12 years ago it was not. But nowadays we have at least 10 aquascaping shops. By my side I have very good friends that are distributors, so I have the privilege to go and select one by one my materials. Finding the right material for your idea is another **MUST** for aquascaping contest.



Hardscape - ORIGIN. DAWN LIGHT



Hardscape - ORIGIN. DAWN LIGHT

William: Your favorite aquatic plants?

Juan: None and all.

William: Your favorite fishes?

Juan: None and all. I try to use a different species almost every year.

William: Your favorite substrate?

Juan: ADA AMAZONIA I.

William: Your favorite rocks and woods?

Juan: The right one for your idea....

William: What advice can you give to a newbie?

Juan: Read this interview.... I feel you will find some lines that will open your eyes a bit!!!.



Hardscape detail - ORIGIN. DAWN LIGHT

fluvio PRESENTS

ITAC

THE FIRST ITALIAN CONTEST OF

AQUASCAPING

REGULATION

- The material must be sent **by 23:59 of 10 November 2022**;
- It is possible to participate with **only one tank per competitor**, it must have been created between **2021 and 2022** and can be registered at the same time in other contests;
- **Only one photo with central perspective** of the tank must be sent, accepted formats: **JPG** or **JPEG**, maximum size **5MB**;
- Send the photo to **info@fluvio.net**, indicating:
name, surname, tank set-up date, tank measurements, lights, CO2 system, set-up technique, fauna, flora.

Speaker
PIERO BALLARINI
Mr. Rio Channel

with an
exceptional jury!



? Doubts or questions about the contest?
mister.riochannel@gmail.com



HOW TO PARTICIPATE: THE STEPS

1 Sign up on
FLUVIO.NET

2 Send the email
following the instructions
in the regulation to
info@fluvio.net

3 The photos will be
evaluated live on
26 NOVEMBER 2022
AT 18:00

STAY TUNED AND FOLLOW THE UPDATES ON OUR SOCIAL NETWORKS!



NITROGEN CYCLE

The nitrogen cycle plays a fundamental role for the success of an aquarium.

Knowing it and understanding the various steps is very advantageous, it could make you avoid unpleasant inconveniences such as the death of the fish.

The water inside our aquariums tends to accumulate many organic substances derived from excrement, not consumed food, decaying leaves and many times, unfortunately, also from dead animals.

All these organic substances present in water tend to degrade gradually becoming ammonia (NH_3), this first phase is commonly called AMMONIFICATION.

Ammonia is highly toxic to aquatic fauna even at very low values, fortunately for us if we keep a pH value below 8.0, ammonia is almost absent as it is transformed into ammonium (NH_4) which is the primary source of nourishment for aquatic plants. (See table below)

**Table 1 Percentage Un-ionized Ammonia in Aqueous Solution by pH Value and Temperature
Calculated from data in Emerson, et. al***

pH	Temperature (°C)														
	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32
7.0	0.11	0.13	0.16	0.18	0.22	0.25	0.29	0.34	0.39	0.46	0.52	0.60	0.69	0.80	0.91
7.2	0.18	0.21	0.25	0.29	0.34	0.40	0.46	0.54	0.62	0.82	0.83	0.96	1.10	1.26	1.44
7.4	0.29	0.34	0.40	0.46	0.54	0.63	0.73	0.85	0.98	1.14	1.31	1.50	1.73	1.98	2.26
7.6	0.45	0.53	0.63	0.73	0.86	1.00	1.16	1.34	1.55	1.79	2.06	2.36	2.71	3.10	3.53
7.8	0.72	0.84	0.99	1.16	1.35	1.57	1.82	2.11	2.44	2.81	3.22	3.70	4.23	4.82	5.48
8.0	1.13	1.33	1.56	1.82	2.12	2.47	2.86	3.30	3.81	4.38	5.02	5.74	6.54	7.43	8.42
8.2	1.79	2.10	2.45	2.86	3.32	3.85	4.45	5.14	5.90	6.76	7.72	8.80	9.98	11.29	12.72
8.4	2.80	3.28	3.83	4.45	5.17	5.97	6.88	7.90	9.04	10.31	11.71	13.26	14.95	16.78	18.77
8.6	4.37	5.10	5.93	6.88	7.95	9.14	10.48	11.97	13.61	15.41	17.37	19.50	21.78	24.22	26.80
8.8	6.75	7.85	9.09	10.48	12.04	13.76	15.66	17.73	19.98	22.41	25.00	27.74	30.62	33.62	36.72
9.0	10.30	11.90	13.68	15.65	17.82	20.18	22.73	25.46	28.36	31.40	34.56	37.83	41.16	44.53	47.91
9.2	15.39	17.63	20.08	22.73	25.58	28.61	31.80	35.12	38.55	42.04	45.57	49.09	52.58	55.99	59.31
9.4	22.38	25.33	28.47	31.80	35.26	38.84	42.49	46.18	49.85	53.48	57.02	60.45	63.73	66.85	69.79
9.6	31.36	34.96	38.38	42.49	46.33	50.16	53.94	57.62	61.17	64.56	67.77	70.78	73.58	76.17	78.55
9.8	42.00	46.00	50.00	53.94	57.78	61.47	64.99	68.31	71.40	74.28	76.92	79.33	81.53	83.51	85.30
10.0	53.44	57.45	61.31	64.98	68.44	71.66	74.63	77.35	79.83	82.07	84.08	85.88	87.49	88.92	90.19
10.2	64.53	68.15	71.52	74.63	77.46	80.03	82.34	84.41	86.25	87.88	89.33	90.60	91.73	92.71	93.58

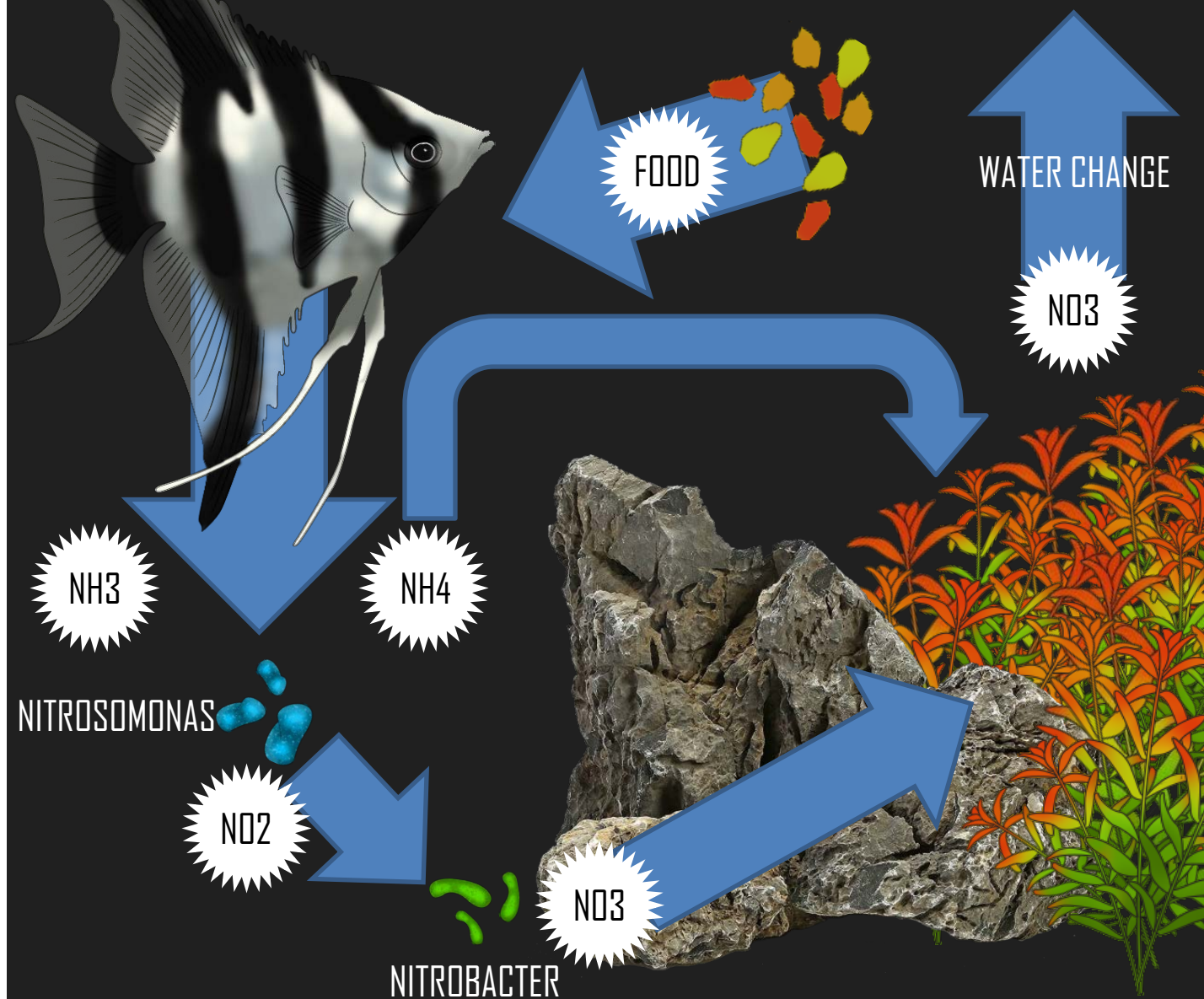
Emerson, K., R. C. Russo, R.E. Lund, and R.V. Thurston. 1975. Aqueous ammonia equilibrium calculations: effect of pH and temperature. *J. Fish. Res. Board* 32:2379-2383.

Table percentage of ammonia free in water in relation to pH and temperature

Then we enter a phase called **NITRIFICATION**, and it is that phase in which ammonia and ammonium are transformed into nitrite (NO_2) by a genus of bacteria called **NITROSOMONAS**. Nitrites have a high percentage of toxicity and could create problems already at values of 0.5 mg/l.

Then nitrites (NO_2) are further transformed into nitrates (NO_3) thanks to the action of the type of bacteria called **NITROBACTER**.

Nitrates unlike nitrites have a much lower toxicity and can be tolerated up to 50mg/l.



Finally, most of the nitrates, being part of the macro fundamental elements for the growth of plants, will be absorbed by the latter or eliminated by water changes.

MATTHEW ISRAEL MANES



Matthew Israel Manes, professional aquascaper from Philippine 26 years old, 1 time awarded at IAPLC with honour prizes 2021, ranking 5th.

William: Hello!! Matthew how are you? ? First of all I want to thank you for giving me the opportunity to interview you, it is a great pleasure.

Matthew: I'm doing good. Really excited about this year's competition.

William: Tell us about yourself, When did you start approaching the world of aquariums?

Matthew: I'm an Aquascaper artist, photographer, painter, dancer, and businessman. I started aquascaping 10 years ago when my mom bought me a small aquarium with fake plants and one goldfish. To which the fish died after a week. Weeks had passed, and I looked around pet shops near our area. Then, I found a store that sells aquatic plants. From that very moment, my journey has begun.



William: What fascinates you most about the aquascaping world?

Matthew: Aquascaping is an instrument to express my love on nature and to let my creativity into a piece of art.

William: Who or what inspires you when you create an aquascape?

Matthew: I always look up to all the **MASTERS** in this hobby, hoping someday I can do what they can do. And most of my creations were inspired by multiple ideas I studied and photos gathered on the internet.



AGA 2017 #1 World Ranking – ONE FAITH – Size 28l

William: How long does it take to create a hardscape?

Matthew: It depends on my mood and for what purpose of the scape I made, but the fastest was 1 day - 1 week, while the longest- 2 weeks to 1 month (mostly for competition tank).

William: How do you the choose the plants for a hardscape, by follow your feelings or it's everything designed in detail?

Matthew: For me it depends on the idea I want to achive, I would need to study every aspect on planting my tank, but one thing is, I don't overplant my tanks. It **MUST** show some parts of the hardscape, so it won't waste the details and design.



CIAC 2019 #20 World Ranking – THE HOLE OF NATURE – Size 120x45x45 (cm)

William: Since many fans and hobbyist think that aquascaping is a relaxing and not tiring hobby, Tell our readers fourth constancy, effort and passion do you need to have to be able to cure and maintain a tank that will have to participate in the **IAPLC**?

Matthew: No doubt this is one of the most relaxing hobbies; you can enjoy the view and be part of nature, but it requires a lot of patience, determination, sacrifice, and passion to be good for **IAPLC**.



William: What advice can you give to those who would like to attend the IAPLC for the first time to have an impact layout?

Matthew: The first step is to try whether you're new in this hobby, no one starts a master, every master once was a newbie.
When creating impact make sure your tank shows some interesting and new ideas.



IAPLC 2020 #161 World Ranking – ANCIENT STUMP – Size 120x45x45 (cm)

William: What's your favourite tank and why? Could you describe this tank including the technique? Filtration, lightings, ferts and so on or it's a secrets?

Matthew: My favourite one is "SYNERGY". It gives me hope. I won many times with that one tank. I would have almost given up, but many of my friends helped, and motivated me to push and compete in this tank and I have learned that you will never know unless you try.
Boosted with **APT** fertilizer, light is 2 pcs **week aqua L series** and 2pcs canister filter



IAPLC 2021 #5 World Ranking – SYNERGY – Dimensioni 120x45x45 (cm)

William: Tell us about your water parameter: Kh, Gh and so on?

Matthew: I don't test my water parameter

William: Is it easy to find the correct material for hardscapes in Philippines?

Matthew: For me every thing we have in our so...yes!

William: Your favorite aquatic plants?

Matthew: Hemianthus callitrichoides (CUBA),
Bucephalandra,
Micranthemum (MONTECARLO),
Riccardia chamedryfolia (CORAL MOSS).



William: Your favorite fishes?

Matthew: *Hemigrammus erythrozonus* (GLOWLIGHT TETRA),
Hyphessobrycon pulchripinnis (LEMON TETRA),
Petitella bleheri (RUMMY NOSE).

William: Your favorite substrate?

Matthew: ADA AMAZONIA top with silica sand

William: Your favorite rocks and woods?

Matthew: Local slate stone and local woods

William: What advice can you give to a newbie?

Matthew: Find a mentor, innovate and enjoy!







DENNIS WONG



Dennis Wong, well-known aquarist and aquascaper of Singaporean origin is the founding member of **2hr Aquarist**, began in 2015 by opening a YouTube channel where he shared the various techniques of cultivation and maintenance of aquariums.

All this led to the development of 2hr Aquarist, an organization dedicated to providing the tools and resources for enthusiasts around the world to achieve mastery of a plantaquarium.

They have grown to become a diverse team with over 20 years of combined experience in research, product development, international sales and distribution, marketing and communications.

They are avid aquarists and enjoy the art and science of the freshwater aquarium. Based on empirical facts and findings, they use what they sell and practice what they write.



William: Vanakkam Dennis, tell us about yourself, When did you start approaching the world of aquariums?

Dennis: Hello, William, good to meet you!

I started with aquariums as a kid, though both equipment and techniques were not so advanced then. As I got older, I enjoyed the environmental design and ecology aspect of planted aquariums.

I like the idea of creating a miniature world and having a slice of nature at home, where you can observe the behavior of the fish as they interact with each other and the environment.

Later on, my focus shifted to the more technical aspects of planted aquarium upkeep; how do I grow certain difficult plant species? How do I make red plants redder? Tanks became an experiment where I could test out various horticulture techniques and chemistry.





THE 2HR AQUARIST

William: I know that you started by opening a YouTube channel and you had many positive feedback as many people have started to ask you for advice on the care, setting up and management of their aquarium, tell us more in detail that period of your life.

Dennis: I got into youtube because I met another youtuber on a planted aquarium forum who encouraged me to start making videos. I wanted to cover some more technical aspects of the planted aquarium hobby that were not covered by other channels. I was surprised that my channel gained a small following of enthusiasts that found the technical videos useful.

As a follow up to the youtube channel, I started the **2hr Aquarist** website (then called Advancedplantedtank.com).

While even amateurish youtube videos took a lot of time to construct, I could get a lot of information down in written format more quickly and the **2hr Aquarist** website grew in size fast.

The website drew a much larger audience than the youtube or the rest of my social media, and till today, is still the main platform from which we reach the world.

I became well-known in the industry as a planted tank expert this lead to several other opportunities;

I wrote articles for magazines such as **Aquarium Hobbyist** and **AGA**, and was invited as a speaker for **Aquatic Gardener's Association** conference in America (which is one of the largest and oldest aquatic plant groups in the world).

I was also featured in local newspapers and TV on the topic of underwater gardening. I also did some work for the local zoo. Eventually, I also got invited to be on the judging panel of several aquascaping competitions, both regional and international.

All these opportunities further allowed me to meet aquarists from different parts of the world and examine techniques from different regions; I try to record the techniques I learned on the **2hr Aquarist** website.

William: When did you decide to open your company 2hr Aquarist?
Was there a particular event that made you think that you could open a company in the aquarium industry?

Dennis: As the 2hr Aquarist website grew, there was increasing interest in the techniques I used on my own tanks. Folks began asking what did I use for fertilizer and I found that there was not any great commercial solutions available locally then that I could recommend to others. Many of the existing aquarium brands had very conservative approaches and I felt like their offerings were outdated. So I started a small company to supply local plant shops with liquid fertilizer under my own brand name. From supplying local shops, the brand has now grown tremendously we export our products to more than 20 different countries across the globe.



William: Tell us more about 2hr aquarist, what is it? Which target do you aim for?

Dennis: 2hr Aquarist proposes the notion that tank maintenance and upkeep should not be a tedious task for average hobbyists tanks at home of sizes between 2ft to 4ft, it should not take more than 2 hours a week to keep the tank in good shape. We write about good planted tank practices and the optimal way to get results in the shortest time.

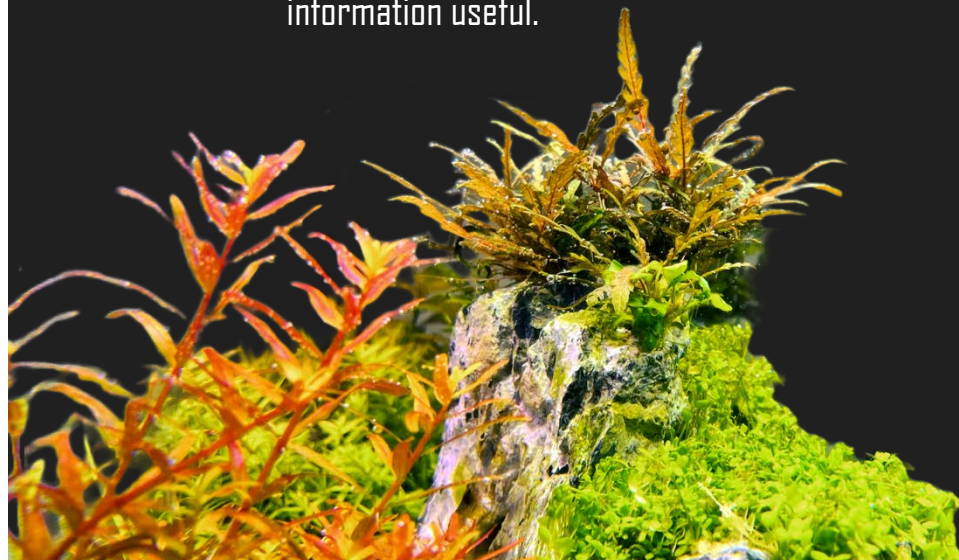
The website also has a focus on accurate aquarium science, and I constantly update the writing there as new knowledge or techniques are discovered in the hobby.

Many of these techniques and information are drawn from my discourse with fellow expert aquatic plant cultivators and collectors such as **Dr. Tom Barr**, and **Vin kutty**. I think what makes the information from the 2hr Aquarist website convincing is that not only can we demonstrate growing difficult plant species well, but we also write down the precise instructions for achieving success - and many aquarists have replicated our success by following the instructions there. I am also glad to see that the information from the website has reached people from all places of the globe; its great seeing the hobby grow.

The website has a lot of articles that cater to more technical hobbyists trying to more difficult species. We also try to address the major pain points that most hobbyists encounter at some point of their aquascaping journey; such as how to manage algae, how to tune CO2 well.

Our website tends to be very detailed in its explanations, so I guess we cater to the crowd that want more in-depth information about how things in a planted aquarium work.

I do think that the hobby can be quite challenging so there are many fine details to cover, however, we get feedback from readers that they find the in-depth information useful.



William: Explain in detail all the products you offer for aquarium hobbyists and what means APT?

Dennis: **APT** stands for **Advanced Planted Tank**, which was the original website name. **APT Complete** and **APT EI** are liquid fertilizers; they are all **All-in-one** fertilizers and contain all elements required for aquatic plant growth. Rather than split the bottles into Macro/micro elements, **APT** contains all elements in one bottle for easy dosing. The difference between **APT complete** and **APT EI** is that **EI** contains much higher Nitrogen levels and is designed for giving maximum growth speed in very densely planted tanks. **APT complete** works across a wide range of tanks and is designed to be slightly N limiting to produce better color reds in certain species. **APT Zero** has all nutrients except Nitrogen and Phosphorous it caters to tanks with heavy fish load where there is plenty of N and P in the water column already due to livestock waste. **APT Pure** is our water dechlorinator - we designed it to do the same things that **Seachem prime** does, except that it is 50% more concentrated and better value for money. **APT Fix** is our algicide.



William: I imagine you have spent years studying in detail the products offered by ADA and the studies on the El Tom Barr to formulate high quality products like APT right?

Dennis: I think that there are many things to learn from the two different approaches (**ADA** vs **Estimative Index**).

Though people tend to only look at those two methods through the lens of fertilization levels; with **ADA** being on the lean side of water column fertilization and **Estimative Index** generally saturating the water column with high levels of nutrients, there is a lot more things that differentiates them. For example, the **ADA** dosing approach (lean water column fertilization dosing, coupled with rich soil) is suitable for low demand tanks.

ADA nature style aquascapes use easy plants such as **Java fern**, **Mosses** and **Anubias** these species take well to lower nutrient levels, while the easier colored stems and carpets can feed off the rich substrate for a long time; thus the **ADA** dosing approach works well for such aquascapes where plant load is lighter and easier accompanied with substantial hardscape.

However, you will almost never see densely grown **Dutch tanks** with a lot of fast growing stem plant bushes and more demanding plants use the **ADA** dosing approach long term.

The **Estimative Index** approach is favored by that crowd that want a wall of colored stem plants to fill the tank's space.

When constructing **APT**, I wanted to have products that cater to aquarists at both ends of the spectrum; we have **APT EI** that caters to folks that want to have **EI** levels of nutrients in their water column, while **APT complete** is much leaner and is designed to produce a slight nitrate limitation effect bringing out brighter reds in some plant species.

Lastly we have **APT I** that leaves out **N** and **P**.

APT I caters to folks that already have a lot of **N** and **P** in their water column due to livestock and do not want to add more **N** and **P** through fertilization.

APT I also allows very lean water column levels allowing plants to be mainly root fed for **N** and **P**; this produces very steep nitrate limitation effects on the tank. Growing plants **EI** style gives super fast growth rates with larger more robust forms, while going leaner on dosing gives smaller more compact forms and increased redness in some species which may be more aesthetic in some aquascapes.



William: What do you have in store for the next future?
Any secret things that you can spoil?

Dennis: We are coming out with several new products that will be launched this year in the coming months.
We are also going to start doing videos once my time table eases up a bit.

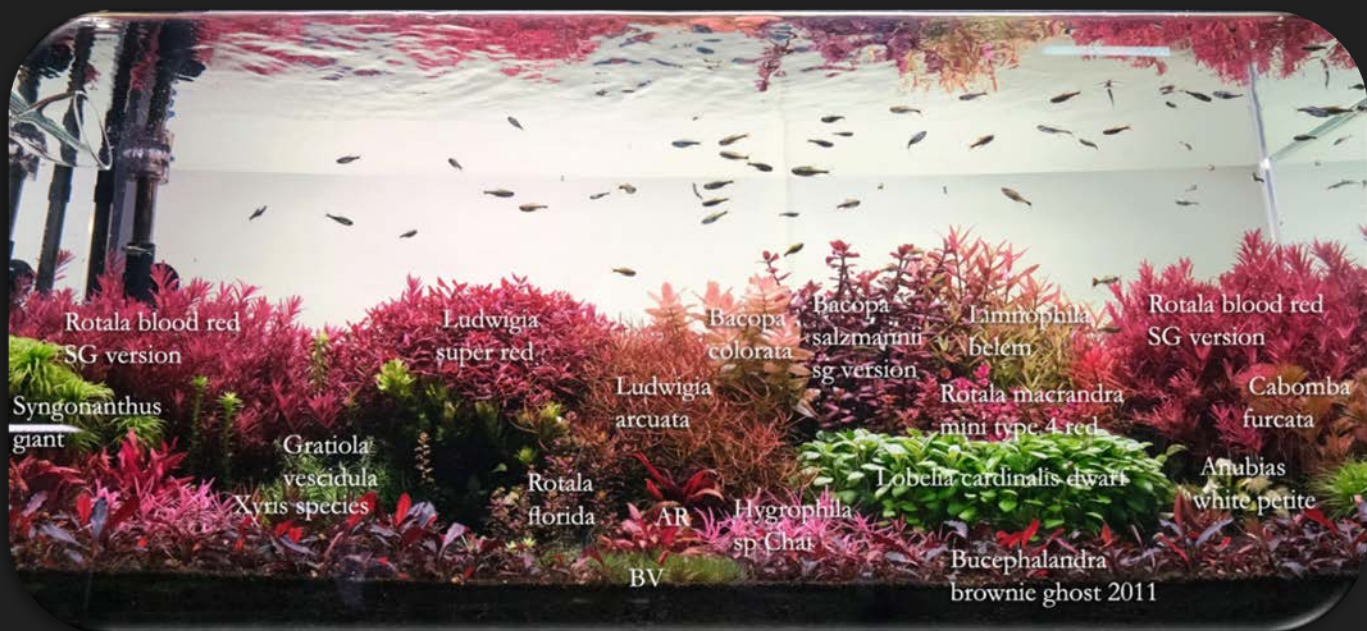
William: Who or what inspires you when you create an aquascape?

Dennis: Great hardscape; seeing rock or wood with interesting shapes and textures makes me want to use them in the construction of an aquascape.
As someone that enjoys treks in nature, I sometimes come across scenes that make me want to recreate them as aquascapes, but this is generally much harder, you would have to hunt for pieces of hardscape that fit and do a lot of working shaping the hardscape to fit.



William: What's your favorite tank and why?
Could you describe this tank including the technique?

Dennis: This is my recent farm tank.
It is run on 2x **Week Aqua a430** leds and a single **Dase 850** with attached inline CO2 diffuser.
Dosed with **APT EI** daily. I tried out something different in this tank, using *Bucephalandra* as a foreground/carpet.
The light system gives high contrast color without an overly purple back ground; so I like this light series a lot.
Substrate **PAR** is around **250** which allows for good density in the stem plant bushes.
In the mid and foreground I try to use slower growing species to reduce trimming and replanting work in the tank.



William: Your favorite aquatic plants?

Dennis: I don't think I have a favourite plant.

Depending on the design and layout of a particular tank, a certain species will work better to compliment the aquascape.

A tank should be viewed as a holistic experience.

I like certain rare, colorful species such as *Hygrophila Chai* and *Rotala florida* for their strong color hues, however, neither species are good for most nature style type aquascapes as the pink and purple coloration stands out too much in an artificial way.

They can only be used well in Dutch style or plant collector type tanks.

On a whole however, I really like *Bucephalandra* for their huge variety of leaf shapes, colors and sizes and also relative ease of care. They can be used in most aquascapes and add a lot of variety to tanks.

William: What advice can you give to a newbie?

Dennis: Hmm... it depends on what style tank the person is starting with.

For folks starting on aquascaping, I would advise them to try hardscape construction without rushing to flood the tank.

Having more time to practise hardscape techniques is the faster way to level up aquascaping.

Once the tank is flooded it is difficult to make changes.

For folks whose focus is on collecting rare/pretty plant species, I think they should focus on learning how to tune CO₂ accurately, because it is the biggest impact factor especially for difficult plants.

There are comprehensive articles on the 2hr Aquarist website on this topic.

Lastly, it is important to have fun in aquascaping, and enjoy the process of discovering new things.

Plants can take quite awhile to react to changes and the tank ecosystem takes time to stabilize and mature, so patience is good trait to have.



GLORIA CIRIELLO



Gloria Ciriello, Italian professional aquascaper, entered the TOP 100 at IAPLC 2021 ranking at #95 place with her tank CLODIA.



William: Hi Gloria how are you? First of all I would like to thank you for giving me the opportunity to interview you, for me it is a real honour!

Gloria: You're very kind, the honor is mine.

William: Tell us a little about yourself, at what age and how did you approach the world of aquarium and aquascaping?

Gloria: The first time I heard about aquascaping was in 2015, but I was already passionate about aquariums for several years. The change took place with a gradual evolution. In fact, initially my attention was focused only on fish, then over time, trying to recreate the best environment suitable for them, I began to include also plants and then I became more interested in the aesthetic aspect. It was thanks to this long and continuous research, which led me to visit many shops, that I met people in the world of aquascaping that I have made me discover and they introduced me.



William: What fascinates you most about aquascaping?

Gloria: I find it very fascinating to be able to create a small, submerged world within your own home. I really like to observe and take care of it, for me it is a moment in which I can relax and completely disconnect the mind from work and other everyday matters.

William: Who or what inspires you when you create a layout?
Do you have an inspirational muse?

Gloria: No other muse inspires other than nature, in fact this type of staging is nothing more than the attempt to reproduce a glimpse or a natural landscape submerged, therefore created only by learning from nature, observing it and drawing inspiration.



William: How long does it take to finalize a hardscape?

Gloria: It depends. The time required varies according to the size of the tank, to the material used and complexity of the project, which changes depending on the purpose for which the aquarium is designed. For example, for a contest tank, it requires much more time compared to the others because it must be taken care of in every detail. It is also not uncommon for me to make changes in the process, so for me an hardscape can never really be considered finished.

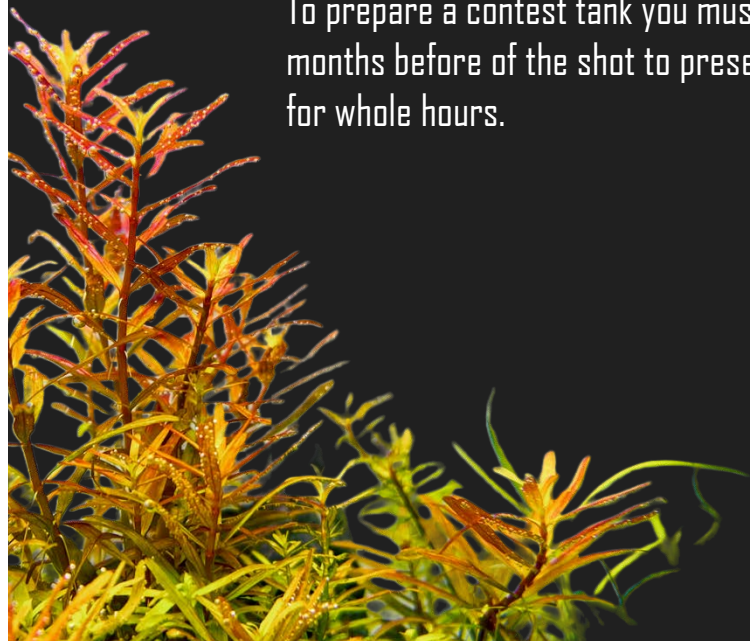


William: How do you choose the plants for a hardscape, by follow your feelings or it's everything designed in detail?

Gloria: As for the hardscape, also for the plants I usually start with an idea in mind but then it is a continuous work in progress and often I get to detach considerably from the initial project, making some additions or replacements, or radical cuts or displacements. So I could say that everything are studied but also very flexible.

William: Since many fans and hobbyist think that aquascaping is a relaxing and not tiring hobby, Tell our readers fourth constancy, effort and passion do you need to have to be able to cure and maintain a tank that will have to participate in the **IAPLC**?

Gloria: I think without a doubt the aquascaping is very relaxing, but as for any other hobby, if you want to practice at best and get satisfactory results requires a lot of perseverance and commitment.
To prepare a contest tank you must take care of it daily for at least a few months before of the shot to present, sometimes only for a few minutes, others for whole hours.



William: What advice can you give to those who would like to attend the IAPLC for the first time to have an impact layout?

Gloria: I think a good starting point is to try to create a composition as much as possible harmonic, therefore more than on the complexity of the hardscape is to focus on the balance of all the elements and proportions, also balancing the amount of light and shadows.
You must also always keep in mind that the contest evaluate what shines through the picture of the tank, which is not always the same as what we see with the naked eye.



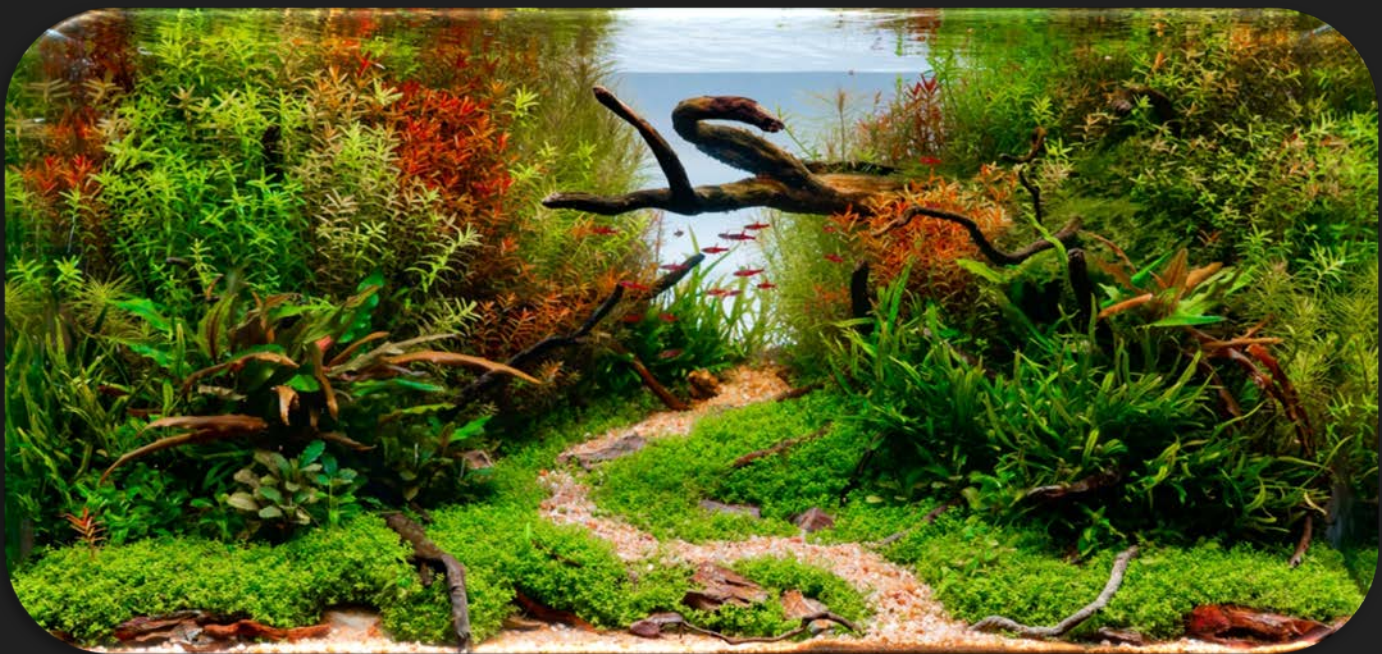
William: What's your favorite tank?

Gloria: I don't think it's fair to talk about a favorite tank, but without a doubt the one for which I have dedicated more energy and time, but also the one that has given me the most satisfaction is **CLODIA**, which you have already mentioned in the presentation.

William: Can you describe the tank including the technique?
Filtration, lighting, fertilization or is it a secret?

Gloria: No secret, but I want to clarify that I tend to change often products because I like to try new ones and experiment different techniques, it is not rare in fact that on different tanks do not use the same products or accessories. So this description is not what I think is best today, but just how **CLODIA** was when it was set up.

The tub, which I asked to build several years ago, is crafted with dimensions 75x35x40 cm, and I created the hardscape using **Red Wood** and **Dragon Stone**, **Terra ELOS** and **Colorado Sand Ada**, the filter I had fitted was a **EHEIM experience 150** and the lamp an **Aquatlantis Easy LED 742 mm Freshwater**. As for fertilization, I used mainly **Easy Life** products, instead for the reconstruction of water **Seachem Aquavitro**.



IAPLC 2021 #95 World Ranking - CLODIA - Dimensioni 75x35x40 (cm)

William: Is it easy to find the correct material for hardscapes in Italy?

Gloria: This is a bit painful, because it is always a challenge to find the right material. The well-stocked shops are not many and are often very far from where we live. But personally I prefer to see and touch the material for the hardscape instead of buying it online in a closed box, so the only thing I have to do is go many miles, but I do it with pleasure, also because so I get to know other fans and exchange opinions and experiences.

William: What's your favorite fish?

Gloria: I don't have a favorite fish ever, let's say that in my tanks I prefer to include a few small fish because first I think that they must live in an environment appropriate to their well-being and my tanks are not so large to keep many fish or large, which require much higher litres. I admit that I am a big fan of Betta Splendens.



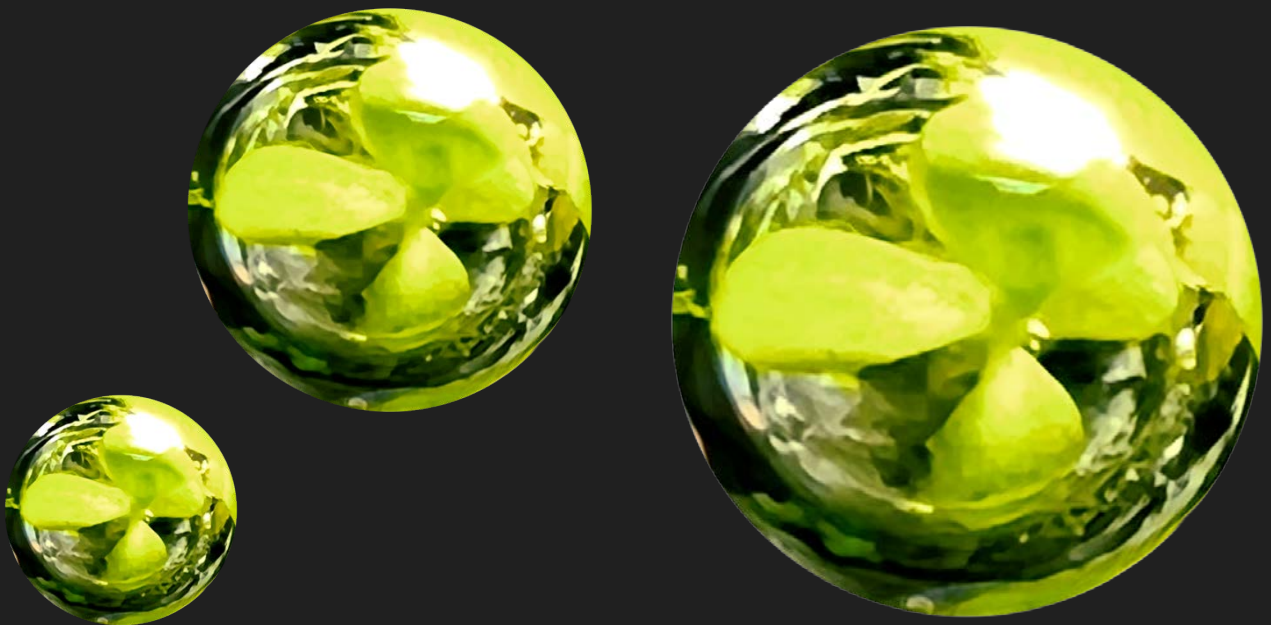
William: What's your favorite substrate?

Gloria: I always use active soil. I often also use sand in some small parts, but only for an aesthetic question, such as to draw paths.



William: What advice would you give to a newbie?

Gloria: I say that passion is definitely a key to this hobby, so turning to all aquarium enthusiasts I say to continue to feed their passion and, to those who want to become an aquascaper I suggest to arm themselves with patience and not to fall in the face of the initial difficulties because everyone has gone through and it is precisely those who provide the best teachings and lay the foundations for good future results.





Dr. GREEN THUMB

Welcome to the Dr. Green Thumb column!

At each issue, you will find this section dedicated to our beloved aquatic plants. Before we throw ourselves headlong to analyze the first plant, let me list the benefits that plants bring to our aquariums.

Plants are absolutely necessary in an aquarium because they offer a number of countless benefits both from the aesthetic point of view and from the biological point of view. They provide shelters and hiding places, giving a sense of safety and protection to the inhabitants of our aquariums. The latter feeling more safe will be inclined to swim freely showing off the colorful liveries and showing signs of greater vitality and fertility, in fact many fish lay their eggs right on the plants or between them.

Aquatic plants, like all plants, exploit light and carbon dioxide to develop, releasing oxygen through a process called **CHLOROPHYLL PHOTOSYNTHESIS**.

Oxygen is essential for all life forms in the aquarium, from microscopic bacteria, essential for biological filtration, to fish and invertebrates.

An aquarium with high rates of oxygen produced by fast growing plants, will ensure a healthy and lush environment.

Plants and algae are competing with each other, they need the same things to grow and develop. Having healthy and lush plants is most efficient and natural method to counteract the emergence and proliferation of algae.



Rotala rotundifolia

The *Rotala rotundifolia* is a true classic, a true icon of tanks around the world, can have several colors that go from acid green to carmine red.

It is an easy plant with exceptional vigour and one of the best selections a beginner can make.

Tolerates a wide range of water parameters, also grows in aquariums without CO₂; However having enough light and CO₂ will allow the plant to thrive thick and with better pigmentation.

Rotala rotundifolia is a plant that can be found throughout Southeast Asia up to the Far East. It grows spontaneously in the swamps, on the banks of the rivers and many times also inside the rice fields; it develops from low altitude up to altitudes of over 2700 meters above sea level.

Rotala rotundifolia was first introduced as an aquarium plant in 1960.

Its Latin name of the species 'rotundifolia' means "round leaves" but the round leaves that characterize this plant are found only in its emerged form; in aquarium the leaves of the *Rotala rotundifolia* acquire an elongated oval shape or in some even needle-like varieties.



Several varieties of *Rotala rotundifolia* can be found on the market, they differ both in their coloring and, in a lesser way, in their morphology.

Rotala sp. *Colorata*, *Rotala* sp. *Green*, *Rotala* sp. *H'ra* or *Gia lai*, also belong to the species *Rotala rotundifolia*.

Compared to other species of aquarium plants, the *Rotala*, is an undemanding plant that grows well even under a light of medium intensity.

However, it shows its full potential and reddish color only under strong light (0.66 W/l).

In some cases, with a strong intensity illumination tends to propagate horizontally rather than vertically.

The plant shows more beautiful colors with low levels of nitrates (5 mg/l) and high levels of phosphates and iron/micronutrients.

The propagation of the *Rotala rotundifolia* is very easy, it is practiced by cuttings of lateral shoots or apices that will simply be buried again in the substrate.

When pruned, the plant will grow two new lateral jets and as it grows, it will take on a more dense and bushy shape.

Older stems can be simply replaced replanting only the apical part, renewing the the vigor of the plant.



DATA SHEET

ORDER:	Mytrales	POSITION:	Middle - Background
FAMILY:	Lytraceae	DIFFICULTY:	Very Easy
GENUS:	Rotala	GROWTH RATE:	Veloce
SPECIES:	Rotala rotundifolia	PROPAGATION:	Cuts

HEIGHT:	20-80 cm	LIGHT:	Medium - High
WIDTH:	2-5cm	OPTIMAL TEMPERATURE:	22 - 26 °C
TYPE:	Stem	KH:	0 - 22 °dKH
		pH:	4.5 - 8
		CO2:	10 - 40 mg/l
		No3:	10 - 50 mg/l
		Po4:	0.1 - 3 mg/l
		K:	5 - 30 mg/l
		Fe:	0.01 - 0.5 mg/l



The image is a collage of various natural materials against a solid black background. In the upper half, there are several pieces of rock. On the left, a large, dark grey rock with a rough, crystalline texture. In the center, a cluster of dark, layered rocks, possibly sedimentary. To the right, a piece of reddish-brown, fibrous material, likely a type of wood or mineral. Below these, there are more dark, angular rocks. In the lower half, there are two prominent pieces of driftwood. On the left, a piece of light brown, gnarled wood. On the right, a larger, more complex piece of reddish-brown driftwood with many thin, branching, and bleached sections. The text 'HARDSCAPE' is centered in the middle of the image in a large, white, sans-serif font. Below it, the words 'ROCKS & WOODS' are also centered in a smaller, white, sans-serif font.

HARDSCAPE

ROCKS
&
WOODS

SEIRYU STONE



DESCRIPTION

Seiryu Stone is a bluish grey stone of Japanese origin.

These stones are characterized by particularly marked grooves and very interesting whitish veins.

They are the most used stones to create hardscape, their popularity is due to the Sensei Takashi Amano who used them in his Iwagumi.

The popularity and consequent demand for these types of rocks is so high that currently exporting the Seiryu Stone from Japan has become illegal.

In fact, there are many rocks labeled as 'Seiryu Stone', but they are not.

Seiryu Stone are rocks with a limestone component that release gradually increasing the hardness of the water and consequently also the pH.

To overcome this problem, a substrate should be used that has a buffer effect towards the increase in pH, the so-called active soil.

DATA SHEET

NAME:	Seiryu Stone
ORIGIN:	Japan
COLOR:	Bluish Grey
DENSITY:	1.93 – 2.9 g/cm ³
HARDNESS:	2.5 – 4 Mohs
TYPE:	Sedimentary rock

SPIDER WOOD



DESCRIPTION

Spider Wood is a root that has North American or Asian origin, these roots are taken from various types of plants, usually the roots of the azalea and rhododendron are used.

It has a color that varies from beige to dark brown and can have reddish shades.

It's characterized by a series of intricate branches that intertwine, giving the typical look of a spider.

It's a very light wood can be used by combining various pieces to get very interesting compositions.

As most woods could release tannins in water therefore it would be better to keep it in water for at least 2-3 weeks before inserting it in the aquarium.

DATA SHEET

NAME:	Spider Wood
ORIGIN:	Nord America - Asia
COLOR:	Beige, dark brown, red
TYPE:	Azalea or rhododendron roots



Paracheirodon innesi

The *Paracheirodon innesi*, better known as Neon Tetra, is definitely the most famous freshwater fish in the world thanks to its colorful livery, its small size and its serene and calm character.

It populates the waters of the Amazon area that includes Peru, Brazil and Colombia; it is particularly widespread in the basins of the Amazon River.

It thrives in very numerous groups both in dark waters, rich in peat and tannins with a pH close to 5, and in clear waters, with pH values close to 7.

It can withstand a wide temperature range from 20 to 25 °C.

It is part of the immense family of the Characoids and divides the genus with the *Paracheirodon axelrodi* and the *Paracheirodon simulans*.



Neon Tetra has a slender, slender body, large eyes and transparent fins.

The color of the Neon Tetra is characterized by an electric blue stripe that from the eye crosses the lateral line up to the adipose fin (second dorsal fin), from half trunk up to the caudal peduncle is red while the abdomen has silvery white shades.

Despite their small size, they need to have large spaces to swim, in fact it would be appropriate to place them in a tank with a minimum size of 60x30x30 also you have to insert a group of at least 8 specimens being a gregarious fish.

Clearly, the ideal would be to form a beautiful bench of 20-30 specimens and have an aquarium of minimum 100cm in length.

They are very peaceful with other species of fish and it is an ideal fish for community aquariums, it can be bred together with other small species without any kind of problem.

It's an omnivorous species, and in nature, it eats worms, insects, algae, and tiny invertebrates. Like most fish it would be advisable to administer a varied menu that includes dry food in flakes, micro pellets live and frozen food such as Chironomus, Daphnia and mosquito larvae.

SCHEDA TECNICA

CLASS:	Actinopterygii	DIMENSION:	3 - 5 cm
FAMILY:	Characidae	TYPE:	Gruppo
GENUS:	Paracheirodon	TEMPERATURE:	20° - 26°
SPECIES:	Paracheirodon innesi	Ph:	5 - 7



THANKS

First of all I have to thank my family, my wife and my two daughters for having endured and supported me in these months;

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To send feedback, requests for collaboration and any advice on what to treat in the next issues send the email to: scaperroom@hotmail.com

I invite you to follow all my social channels to stay updated on future projects:



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