

## Seeing Red and *only* red—in a Danish planted aquarium

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# SEEING RED

and *only* red—in a Danish planted aquarium



Emersed *Ludwigia repens* "Rubin."

article & images by Marie-Sophie Germain • Nano aquaria, and a new profusion of aquatic plants and aquascaping materials, have opened the doors to creative experimentation. More compact and affordable tanks and lighting lured one free-spirited aquarist to design an underwater world without the green.

Even as a curious young child I loved plants and aquariums, but this passion took on a totally new and unanticipated dimension a year ago, when I was recruited by a German company that sold aquatic plant and aquarium equipment to moderate online communications with their customers and other aquarium keepers. One of the unexpected perks of the assignment was being sent new items from their catalog to test in my own home in the town of Nykøbing in southern Denmark.

One early summer day, I received a big parcel full of aquatic plants for an experiment I had in mind. Among this batch of *Hemianthus*, *Hygrophila*, and *Rotala*, I discovered some *Alternanthera reineckii* Mini, a lovely reddish-purple plant that stays small and can be trained into dense foreground thickets or deep carpet. I excitedly added all these plants to my newly installed 13-gallon

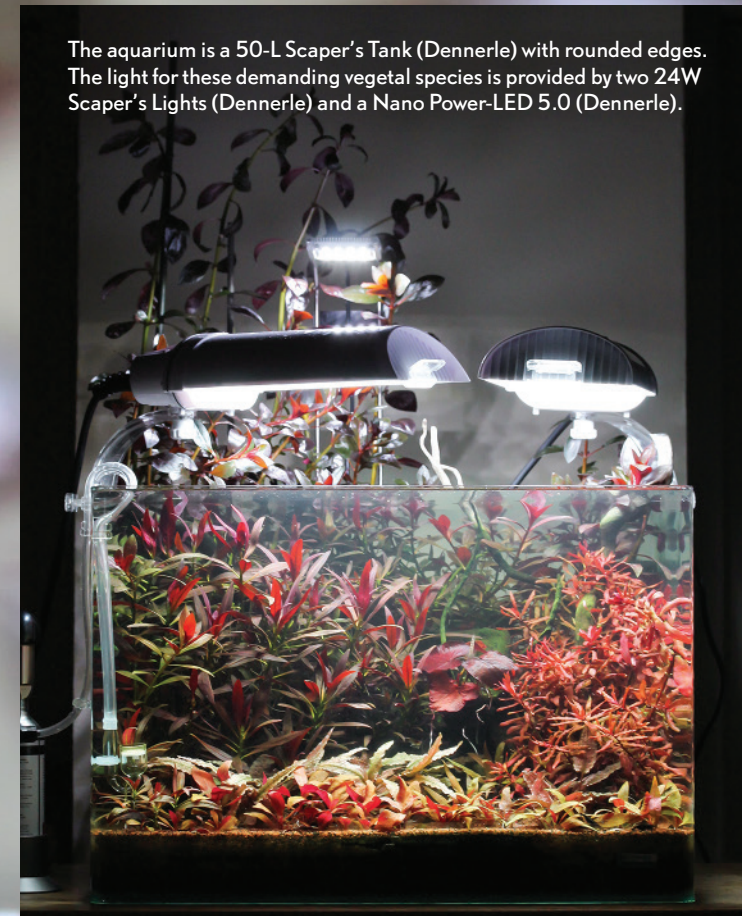
(50-L) Scaper's Tank, a compact nano system that was decorated with a few pieces of dragon stone. Japanese aquascapers creating classic iwagumi tanks are partial to this rugged stone and gave it that name because the pitted and eroded surface suggested the scaly hide of a mythical beast (small tanks, giant imaginations!).

I didn't really have any sort of formal plan. Far from an iwagumi master, I'm one of those people who like to start something and see what happens. But what began as a whim became a real-life love story in the following months.

## Beginnings

A few weeks later, the color red started to emerge in the leaves of the *Alternanthera*. I had no experience with this type of plant, but the unusual red leaves really warmed

The aquarium is a 50-L Scaper's Tank (Dennerle) with rounded edges. The light for these demanding vegetal species is provided by two 24W Scaper's Lights (Dennerle) and a Nano Power-LED 5.0 (Dennerle).



my heart in ways I can't explain. Psychologists say that red is the color of fire, blood, and passion, and that may explain it! Perhaps I simply liked the warm glow of reds in a land with long, cold winters, but I decided to add more red plants. I did my research and purchased some *Ludwigia glandulosa*, *L. repens* "Rubin," and *Cryptocoryne* sp. "Flamingo."

Freshwater aquascapers these days like to put names on their creations, and I called this tank "Dragons' Sunset" in reference to the dragon stones, as well as to the little "dragons" living in this aquarium—some black *Neocaridina davidii* shrimp—and the glowing colors of the vegetation.

I didn't plan to have any emersed plants, but it just happened—the *Ludwigia repens* wanted to explore above the water's surface. When I saw how fast the *Ludwigia* were growing out of the water, I had to think of a solution to provide them more light. I installed four LED spotlights (Dennerle Nano Power-LED 5.0) at different heights above the aquarium. My eyes had trouble adapting to the new yellowish color these 6,500K lights gave to the layout compared to the former lights, but the plants were happy and I eventually forgot about it.

### Final greenout

During the winter months, more than half a year later, as the plants grew more and more red, pink, and even purple, I started to be bothered by the fluorescent green color of the thick carpet of *Hemianthus callitrichoides* "Cuba." It was literally suffocating the *Cryptocoryne* sp. "Flamingo," and this overgrowing vegetation was also very tricky to tend. Every time I did a trimming session, I ended up

The inhabitants of Dragons' Sunset, a group of black *Neocaridina davidii*. These black shrimp appeared in my *Neocaridina* trash tank. I've isolated these individuals in my Dragons' Sunset aquarium, and they have developed into a nice little population. From time to time a few grey shrimps show up; they go back to the trash tank.

with a lot of tiny *Hemianthus* leaves floating at the surface and being trapped between the leaves of the numerous emersed *Ludwigia repens*. It was really hard to clean, and irritating to have to start all over again just a week later. Besides, this green carpet in the foreground was not the focus of the aquarium, not the reason I had 'scaped this tank. Therefore, I had to make the heartbreaking decision to remove it in order to focus my time and energy on the red plants.

That's how I ended up with an aquascape consisting of red plants on bare reddish gravel. With no green at all

to distract the eye, it became obvious that I had to keep it this way. I rearranged the existing plants, added a piece of tropical driftwood to give the composition more structure, and planted some *Nesaea* sp. A new style was born! A few weeks later, "Dragons' Sunset" was completed with the addition of two bulbs of *Nymphaea* sp. "Red" (sometimes called the Red Tiger Lotus) and some cuttings of *Alternanthera reineckii* Mini in the foreground. The



Above: Dragons' Sunset as it looked when I started it in June 2013. With no real plan, I just added the plants I received. The red leaves in the center are *Alternanthera reineckii*, the plant that gave me the idea to go all-red.



Dragons' Sunset in its final layout (May 2014).



brick-colored leaves, with their bright fuschia undersides, really gave a boost to the layout.

When I posted pictures of my tank online, several people wanted to know the name of this style, how I would categorize it. It's not a typical Dutch tank, because there are more than a few red plants and no contrasting green plants. This aquarium overfilled with scarlet leaves can't qualify as a Japanese-inspired style or a Zen layout. Since it was created in Denmark, and since the Danish flag is mostly red, I decided to call this new type of aquascaping the "Danish-style aquarium."

### Spreading the red

Why are red plants so rare in our tanks? In aquascaping contests there are always a few tanks with red plants, but usually there are only a couple of them and they are stuck in a corner or at the back. When aquascapers try to use more of these scarlet species, the judges tend to turn away with a scowl. I even heard one say, "Just because you can put a lot of red plants into a tank, it doesn't mean that you should."



Just after I switched from the LED lights to the Scaper's Light, the *Ludwigia repens* "Rubin" exposed a very intense blood red color.



*Ludwigia glandulosa perennis* in different shades of crimson.

But why not? According to some aquascaping guidelines, creating a contrast with green colors is the only way to use red plants. But what about all those carpets of *Hemianthus* covering the hardscapes of iwagumi tanks? This ocean of green doesn't offer a contrast with other colored vegetal species. So why is it that a 100-percent green scape, as seen in most competitive planted aquariums, is considered normal and acceptable, and a 100-percent red one isn't?

There is, of course, the question of taste: some people just don't like red. There are also some misconceptions about red-colored plants. Some feel that an aquarium looks natural only if it displays green plants. But there are actually some places in the wild where red vegetal species grow, like the fabulous river in Colombia called Caño Cristales or a place Chris Lukhaup found in Florida, where he photographed amazing red native *Ludwigia* species. And the red plants we have in aquariums are not fake in any way! Most of them are found in the wild as well; the red pigment is a protection against extreme conditions.

If we ask aquarists why they don't have red plants, most of them will answer, "It's too difficult and too expensive with high-intensity lighting." Indeed, a setup for these species can be more expensive than a low-tech tank containing *Anubias*, but not more than a tank with demanding green plants. A lot of aquarists have high-tech aquariums with good lighting fixtures and CO<sub>2</sub> systems. Besides, some red plants are very easy to keep compared to some tricky green ones.

### Red plant basics

Old-fashioned aesthetic criteria, the level of difficulty, and the cost shouldn't be excuses for excluding red plants. It's actually very easy to set up a red planted aquarium, as long as you follow some simple rules.

First of all, you should know a bit about aquatic plants and their needs, but the minimal research necessary is something that every considerate aquarist does for green plants as well. Most red plants actually start out being green; it's up to you to make them red, and the process can take some time. Some species in the trade are already reddish (*Alternanthera reinecki* Red, *Ammannia praetermissa*), so you can choose those if you want a colored 'scape right away. Some species take a long time to turn red (*Ammannia gracilis*, some *Limnophila*



### Why do some plants get red?

Some plants don't have much chlorophyll (the molecule that gives plants their green colors and drives photosynthesis). When they are exposed to extreme conditions, such as very strong tropical sunlight, they produce a red pigment in order to protect themselves. But producing this pigment requires a lot of nutrients and trace elements. That's why these two factors have to be reproduced in the aquarium to make the plants turn red: extreme conditions (a lot of light) and the abundance of nutrients (fertilizers and CO<sub>2</sub>).

Emersed *Ludwigia repens* "Rubin." At first, I cut the long stems and replanted them, but now I let them explore as much as they want.

spp.), while others turn nice colors very quickly (*Ludwigia* and *Rotala* species, for example). So just gather information about the plants in order to be prepared, and everything will be okay!

The other simple rule about red plants is: give them a lot of light, CO<sub>2</sub>, and fertilizer. They require at least twice as much light as green plants, and that's probably the only really costly aspect of keeping red plants. Choose a light spectrum with a lot of red and blue, because it makes the colors of your plants much brighter.

For the CO<sub>2</sub>, you don't necessarily have to take complicated measurements: just set up a CO<sub>2</sub> checker. This is a little transparent device filled up with a blue liquid that changes color. If it's blue, there's not enough CO<sub>2</sub>; if it's green, it's all right; if it's yellow, there's too much CO<sub>2</sub>. The checker makes it very easy to adjust the amount of CO<sub>2</sub> you provide to your plants.

### Feeding

When it comes to fertilizer, you can use the same rule: use twice as much as you do for green plants. If you do large water changes at least once or twice a week—every four or five days is a good average—your tank will not

have algae because of the large amount of fertilizer, and your plants will uptake CO<sub>2</sub> much better. In an aquarium with a lot of plants and/or without fishes, you might need to add a NPK product (nitrogen + phosphorus + calcium). This will feed your plants even better. Don't forget the iron, which you can add twice a month in the form of a pill that slowly dissolves in the water. So, with all these easy-to-handle products, don't you agree that keeping red plants is not that difficult?

### Species in red

Most of the aquarists who are into green have no idea about the incredible diversity of red plants. There are so many to choose from! You can make your choice according to the effect you want in your tank, the colors (pink? red? orange?), or the textures. If you want easy plants, just go for *Ludwigia glandulosa*, *L. repens* "Rubin," and *Rotala rotundifolia*. For those who don't like the weekly trimming job, there are *Cryptocoryne* sp. Flamingo and *Ammannia praetermissa*. If you like challenges, choose *Rotala macrandra*, *Ludwigia senegalensis*, or *Proserpinaca palustris*. If what you want is to see the slow metamorphosis of a green semi-terrestrial plant in a fully aquatic

### 'Scaping, Danish Style

I call a freshwater tank with 100-percent red planted 'scape a Danish-style aquarium. I created the first of these tanks in Denmark. The name refers to the country of origin, but also to the Danish flag, which is almost totally red. The rules are simple: have as many red plants as you want. The hardscape is not that important, as the focus is mostly on the abundance and colors of the layout. You can choose a monochromatic look ("red" plants range wildly in tones and hues) or mix different shades and textures. But don't forget, this is only about reddish plants; no green is allowed!

—Marie-Sophie Germain

[www.danish-style-aquarium.com](http://www.danish-style-aquarium.com)

red plant, choose *Ammannia gracilis*, *Rotala wallichii*, and *Cryptocoryne petchii* Pink. For aquarists who still want to keep some green, there's a solution! Several species of *Echinodorus* will develop burgundy leaves among the green ones (*E. Scarlet Snake*, *E. Dschungelstar*, and a lot of others). Some species of Crypts offer interesting rusty shades, like *C. Legroi*, *C. affinis*, or *C. wendtii* Brown. There's also an easy plant, *Lagenandra meeboldii*, whose leaves appear green when you see them from the side and metallic pink when you look at them from above.

There is also great diversity in red colors: burgundy (*Nymphaea Red*, *Hygrophila pinnatifida*, *H. lancea*, *Echinodorus* spp.), pink (*Ammannia preatermissa*, *Cryptocoryne* sp. Flamingo, *Rotala macrandra*), purple (*Ludwigia glandulosa*), blood red (*Ludwigia repens* "Rubin"), orange (*Ammania gracilis*, *Alternanthera reineckii*, *Myriophyllum tuberculatum*), and brown (*Cryptocoryne Legroi*, *C. affinis*, *C. wendtii* Brown).

The same goes for shapes and textures. You can fall for the curled leaves of the Crypts, the spiky leaves of *Hygrophila* and *Pogostemon* species, or the round, wavy leaves of *Rotala macrandra*. And there are also some plants suitable for the foreground, like *Rotala mexicana* Goias and the rare red algae *Caloglossa* cf. *beccarii*.

Thus, as you can see, red plants offer great diversity and incredible new possibilities in creative aquascaping. Why not in your tank? 🐟

Marie-Sophie Germain is a French author, journalist, and aquarium-forum manager.



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