Cleaning The Pond

After much deliberation, I finally decided to clean out my **ornamental wildlife pond** due to it being nearly overrun with **spiked water milfoil** and taking on a very noticeable green tint.

I've had my pond for about four years now and I've never had **green water** until this year, although I have battled with **submerged algae** and **blanketweed** in the past. It must've been a perfect storm that brought on the **planktonic** single-celled algae invasion. I'm guessing it was a combination of way too many nutrients in the pond coupled with ineffective filtering.

A while ago I watched a pond video on Youtube produced by a very credible source. It was advised that folk should think twice before filling their ponds with gravel and pebbles.

What's the problem with pebbles and gravel in a pond? I guess if done sparingly it is ok (and certainly looks very nice) but I got the general idea that the more gravel and pebbles there are in a pond, the more there are places where sediment can come to rest and not be filtered out.

I certainly found this to be the case with my pond. Although I have always used **sludge removers** of one type or another, it would appear that I had too much sludge in the pond for this **beneficial bacteria** type of product to remove. I had a big task on my hands cleaning the pond.

Like many interests in life, there's never a point where one stops learning. This past week or so has really helped me understand a bit more about how I **should** be maintaining my pond rather than how I **think** it should be done.

Here are the **three main mistakes** I think I've made during the time I've had my pond.

1) Island Plants Mistake

Up until this year, the rocky island roughly in the middle of my pond had four small openings on the top through the underlay and pond liner in order to allow standard garden plants to grow. They looked very nice and really did stand out. Unfortunately I didn't consider how when it rains and the plants get watered, some of the soil around the small openings would be washed into the pond as well. At least, that's what I have concluded.

It seems to have been a very slow process for this soil to end up in the pond. Nevertheless, soil = nutrients, nutrients = food for plants such as algae. This situation is often called **run-off**. I now know there are other areas where soil can find its way into the pond; I just look for where the grass is growing next to the rocks around the pond. Nevertheless, I think I've reduced the amount of **run-off** into the pond so that's fine by me.

I've now patched these holes on the island with some extra pond liner, taping them down with **gorilla tape** and also covering them with **stepping stones** to help prevent water ingress. I had intended to use a waterproof sealant for ponds but when the day came to sort this part of the pond out, I found the sealant tube had dried up completely. Luckily I had some gorilla tape spare and so used that instead. I hope it continues to do a good job.

2) Pond Filtering Mistake

I've come to realise that my pond pump was set way too high for the filter to handle properly. I thought generating the biggest current I could throughout the pond would both speed up the filtering process and look like a small stream in the more shallow areas of my pond.

In reality, I now believe that not only was I using more electricity than was necessary but that I also wasn't giving the pond filter a chance to do its job properly. As for the stream effect, I'd need a lot of help from gravity not to mention some hefty stones (think big waterfall).

I think the term is called **water duration** which defines how long it takes the pond water to travel through any type of filtration system. This slowly became clearer to me (no pun intended) when I was actually in the pond, using a plastic spade to carefully remove as many pebbles and as much gravel covered in a black goo as I could. Basically, dark grey water was entering the pond pump and dark grey water was being fed straight back into the pond, albeit only for a couple of minutes.

In order to provide more filtering for all of this pond sludge now kicked up by my precarious sloshings, I fitted an old gravity filter inline to the main pond filter to help catch even more sludge particles. This gravity filter (a **PondXpert FiltoBox 4500**) is filled with one thin slightly coarse foam and two layers of **wool floss**. I hope the slightly coarse foam helps prevent strands of the wool floss from entering the pond.

At the time the gravity filter was fitted, my Hozelock Aquaforce 8000 pond pump was running at almost full flow. As a result, the gravity filter kept on overflowing; not over the top of the unit but every 30 seconds or so a big burst of water would enter the pond, followed by a period of what I considered at the time to be a desired flow rate. Upon inspecting the gravity filter, I found that because the flow rate was so high, the level of the pond water in the gravity filter repeatedly reached the overflow level and was discharged into the pond. This is a similar idea to the overflow in a bathroom basin.

Simply turning down the flow rate on the pond pump eventually resolved the issue but it did take a few tries. Now the pond water coming from the gravity filter is doing so at a much slower rate, far lower than I previously would've thought useful.

I'm considering purchasing a larger gravity filter which can handle 6,000 lph (flow rate) so I can have the pump running faster.

3) Weed Maintenance Mistake

About once a month I would actually remove some of the spiked water milfoil from the pond, carefully inspecting it for eggs and creatures. I've either not been removing enough or this type of weed is far more invasive than I'd previously imagined. I did think the amount of milfoil in the pond was causing a lack of clarity. However it was actually the planktonic algae which was blocking the light, with the milfoil only slightly obscuring the bottom of the pond by comparison. Perhaps the level of sludge in my pond was super-charging the weed (and the algae), where it could fasten to pebbles and gravel at the bottom of the pond (which are now far less abundant).

I do think spiked water milfoil is a great addition to a pond but it needs regular maintenance in the hotter times of the year. On this note, I read recently that whilst pond weeds such as spiked water milfoil are often advertised as **oxygenators**, they offset this benefit by consuming oxygen again at night. I think this is a similar behaviour to algae, perhaps all aquatic plants?

Enough Cleaning Already

Bearing in mind the information I've gained over the past week or so, in time I should hopefully be able to repopulate my (much more barren) pond with plants but not necessarily those that were previously growing. The lillies are gone (self-seeders), the brooklime and spiked milfoil are almost gone. I think I've still got some **hornwort** in there somewhere.

I did have to drop the pond level in order to be able to see what I was doing but not so much that any area was without water. All of the water from the pond went into my small bog garden behind the pond so that's where all the green water ended up.

The image **directly to the left** is how the pond looked before these last few days and all of the rest below are how it looks now.

This project was difficult. Although I saw no casualties, I feel bad that I've disrupted the ecosystem of the pond's inhabitants. I won't be doing this kind of clean out again, so let's hope I've really learned something this time.

Thanks for reading.

Updated: 2023-09-05