

YOUR FREE READER'S COMPANION

The Planted Tank Setup Pack

A companion to The Planted Aquarium & Aquascaping Bible · by Elliot Marsh

Thanks for picking up the book. This is the companion you keep open on the phone at the fish store and tape to the wall beside the tank while it grows in: the gear-and-substrate chooser so you buy the right foundation once, a beginner plant shortlist of species that will actually live in the tank you have, a planting-day walkthrough with the dry-start trick for a clean carpet, an algae first-response chart that tells you what each kind is trying to say, and a simple dosing-and-maintenance rhythm with a week-by-week timeline for a brand-new tank. Print it, keep it near the tank, and check it before you buy anything or panic about anything.

You're not decorating a fish tank - you're growing a living picture, and plants come first. Almost every beginner heartbreak comes down to one of three things: too much light, not enough CO2 or flow, or an impatient cycle. Get those three in balance and plant heavily from day one, and the tank mostly runs itself. Healthy plants out-compete algae - everything else is detail. — Elliot

1. The Gear & Substrate Chooser

Before a single plant goes in, you make a couple of decisions that shape everything after: what your plants root in, how much light you point at them, and whether you're going low-tech or high-tech with carbon. Get these matched to each other and a planted tank is genuinely easy. Mismatch them - high light, no CO₂, hungry plants - and you've built an algae farm. The whole game is one idea: light, CO₂, and nutrients rise and fall together, or not at all.

The substrate - what your plants stand in

Substrate	What it buys you	Best for
Aquasoil (baked-clay planted soil)	Feeds plants through the roots, softens/acidifies water a touch, the default foundation for a serious scape. Leaches ammonia early (do frequent water changes the first weeks).	Any planted tank, especially carpets and stem plants
Inert gravel/sand + root tabs	Cheap and neutral; no nutrients on its own, so you push root tabs in near heavy root-feeders (swords, crypts).	Low-tech tanks, epiphyte-and-hardscape scapes
Lava rock / base layer under soil	A cheap bottom layer to build slopes and terraces and save on aquasoil.	Building depth under any substrate

A beginner-safe start: a layer of aquasoil, sloped front-to-back so it rises toward the rear (it makes a shallow tank feel deep). Cushion heavy rock with a thin base so a sharp point never sits against the glass.

Light and carbon - pick a lane and match your plants to it

Setup	Light	CO ₂ / carbon	What it buys you
Low-tech	Low-to-medium, 6-8 hr photoperiod on a timer	No CO ₂ - skip it entirely, or a little liquid carbon at most	Easy plants, slow steady growth, very forgiving. The right first tank.
High-tech	Medium-to-high	Pressurized CO ₂ (cylinder, regulator, drop checker reading green)	Fast growth, tight carpets, red stems, pearling - and far less room for error

The one combination that never works is high light with no CO₂: it doesn't grow demanding plants faster, it just grows algae faster while the plants starve. If you're not ready for a CO₂ cylinder, keep the light low and pick easy plants (Section 2). Both paths are valid. The middle - blasting light with no carbon - is the beginner trap.

A sane starting point: a 10-to-20-gallon (38-76 L) tank, aquasoil on a slope, a low-to-medium light on a timer at 7 hours, no CO₂, and a shortlist of easy plants planted heavily from day one. Nail that and you can earn the high-tech toys later.

2. The Beginner Plant Shortlist

Almost every plant heartbreak comes from buying a high-light, CO2-hungry plant and dropping it in a low-tech tank. Choose right and plants are the easiest part of this hobby. Two rules make it simple: match the plant to the tank you actually have, not the one you wish you had, and plant by zone - short in front, tall in back - so even a beginner's tank looks intentional.

Everything on this list lives in low-to-medium light with no CO2. Keep your list to three-to-six species, grouped and repeated - a botanical sampler of fifteen singles never looks like a scape.

Plant	Zone	Difficulty	Light	CO2	Notes
Anubias (nana, nana petite)	Mid / hardscape	Very easy	Low-med	No	Epiphyte - glue to rock, never bury the rhizome. Shade it or it gets spot algae.
Java fern	Mid-back / hardscape	Very easy	Low-med	No	Epiphyte on wood; sprouts baby plantlets you can re-attach.
Bucephalandra	Mid / hardscape	Easy	Low-med	No	Epiphyte, the jewel - iridescent blue/purple leaves. Same rhizome rule.
Cryptocoryne wendtii	Midground	Easy	Low-med	No	Will "melt" (drop leaves) when planted, then regrow tougher. Don't pull it.
Java moss	Hardscape detail	Very easy	Low	No	Tie a thin layer to wood; a thick wad rots brown in the middle.
Dwarf sagittaria	Foreground	Easy	Med	No	The honest low-tech "carpet" - spreads by runners, no drama.
Marsilea hirsuta	Foreground	Easy-med	Med	Helps	Little four-leaf-clover carpet, stays low.
Amazon sword	Background centerpiece	Easy	Med	No	Gets big; heavy root feeder, give it root tabs.
Vallisneria	Background	Easy	Low-med	No	Tall grass curtain that spreads fast - almost too fast.
Hygrophila / Bacopa (green)	Background	Easy	Med	No	Stem plant; trim the top to make it bush out.
Dwarf hairgrass	Foreground	Medium	Med-high	Helps a lot	Best low-tech carpet shot - expect a loose meadow, not a putting green.
Monte Carlo	Foreground	Medium	Med-high	Strongly prefers	Lush carpet, far easier with CO2.

Epiphytes are the beginner's best friend. Anubias, java fern, and buce grow attached to rock and wood, ask for almost nothing, and are nearly impossible to kill. Glue them into the hardscape and the tank looks established on day one. If you're low-tech and want a green foreground, carpet with dwarf sag or Marsilea, not the demanding fine carpets. Buy tissue-cultured cups when you can - no pest snails, no pesticide - and buy more carpet than you think, because density fills faster and starves algae of bare substrate.

3. Planting Day & the Dry-Start Method

Planting is where the picture in your head meets a pair of tweezers and a tank of water that wants to undo your work. Spend the \$10 on long aquascaping tweezers - bare fingers crush stems and can't reach the back glass. Work with the water lowered to just above the substrate; less buoyancy, better reach.

The order I plant, every time

1. Hardscape and substrate done and settled - slopes shaped, rock and wood stable and glued if needed.
2. Lower the water to just above the substrate.
3. Prep all plants: rinse gel off tissue-culture plants, tease all the rock wool off roots, trim roots to about half an inch (12 mm), strip the lower leaves off stems. Keep them on a damp towel.
4. Glue/tie epiphytes to the hardscape first - a small dot of cyanoacrylate gel on the rhizome (never the leaves), press onto rock or wood 10-20 seconds. Glue the rhizome to the surface, never bury it. Cotton thread works too and dissolves once the roots grip.
5. Plant the background - stems and tall rosettes, spaced individually, lower leaves stripped so they don't rot.
6. Plant the midground - crypts and bushy plants, working forward.
7. Plant the carpet last - pinch off small tufts, push in at a slight angle about half an inch deep, then open the tweezers and withdraw in one motion so the plant stays. Space tufts about 1 inch (25 mm) apart.
8. Fill slowly - pour onto a plate or your hand so you don't uproot or cloud everything.

Spacing for grow-in

A freshly planted tank should look a little sparse. Carpets are the one exception - plant them dense and tight so they fill fast and leave algae no bare soil. Everything else needs room: a thumbnail crypt is a fist in two months. A tank that looks slightly bare on planting day looks full in six weeks; a tank that looks full on day one looks like a jungle disaster in six.

The dry-start method (for a clean carpet, no CO2)

The best trick for a flawless carpet, because algae spores need standing water to take hold and a dry-start keeps the tank drained while the carpet roots:

- Set up hardscape and substrate, then add only a little water - enough to soak the aquasoil and pool at the surface, never above it. Wet, not flooded.
- Plant the carpet (Monte Carlo, hairgrass, baby tears) directly into the damp soil with tweezers.
- Mist with dechlorinated water until everything glistens, then seal the top with plastic wrap or a glass lid to trap humidity. You're building a terrarium.
- Light on a normal 6-8 hour photoperiod. Mist every day or two, and vent for a minute every few days so it doesn't mold.
- Wait 4 to 8 weeks, until the carpet has clearly spread and rooted.

- Flood slowly. Expect a short transition as the plant swaps its "land" leaves for water leaves, and start your normal water-change routine right away.

It only works for carpets and low plants, and it asks for a month of discipline - but for a dense carpet with almost no algae, nothing beats it.

4. The Algae First-Response Chart

Here's the mindset that changes everything: algae is a symptom, not an enemy. The spores are already in your tank - in the tap water, on the plants, on the fish. You can't kill your way out; if you don't fix the cause, it comes right back. Think of it as a seesaw between your plants and the algae, both competing for light and nutrients. When your plants are healthy and fed, they win and the algae stays invisible. When something knocks the plants back - too much light they can't use, not enough CO₂ to use it, dead spots with no flow - the surplus light and nutrients have nowhere to go, and algae mops up the leftovers.

So when you see algae, don't ask "how do I kill this?" Ask "what is this telling me?"

Algae	What it looks like	What it's telling you	First response
Brown diatoms	Brown dusty film over everything in a new tank; wipes off easily	"You have a new tank." Silicates leaching from fresh substrate. Completely normal.	Wait - it vanishes on its own in the first month or two. Wipe glass if it bugs you; nerite snails/otos once cycled.
Green spot (GSA)	Hard little green dots on glass and old anubias leaves	Often low phosphate and a bit too much light in one spot	Dose a little more phosphate; scrape glass with a blade on water-change day.
Hair / thread	Bright green stringy stuff draping off plants	Too much light for the available CO ₂ , or a fresh spike of excess nutrients	Dim/shorten the light, twirl it out on a toothbrush, let amano shrimp finish. Check CO ₂ and flow reach the spot.
Black beard (BBA)	Dark fuzzy tufts on leaf edges and filter outflow	Unstable or low CO ₂ , and low flow. The classic.	Stabilize CO ₂ , boost flow, clean the filter. Spot-treat with liquid carbon - it turns red then dies.
Cyanobacteria (blue-green, "green water" cousin)	Slimy blue-green sheets with a musty smell, or pea-soup green water	Ammonia/organics plus strong light; dirty substrate or a stalled cycle	3-day total blackout (cover the tank), then fix the cause - don't overfeed, don't churn the soil, finish the cycle.

The one rule under all of it: balance light against CO₂ and nutrients. When in doubt about any outbreak, the protocol is boring and it works - cut the photoperiod to 6 hours first (too much light is the number one cause), stabilize CO₂ and flow, do a 50% water change, stop overfeeding, remove what you can by hand, and then wait three to four weeks before you judge. The mistake is changing five things every two days. Pick your fixes, hold them steady, and let the tank rebalance. The algae-free tank isn't the one with the most chemicals or shrimp - it's the one in balance.

5. Fertilizing & the Maintenance Rhythm

A beautiful tank stays beautiful through small, steady care - not through occasional heroic rescues. Thirty minutes every week beats a frantic four-hour intervention every three months, every time. The little-and-often tank thrives; the neglect-then-panic tank lurches from crisis to crisis.

Feeding the plants - keep it simple

More fertilizer is not better. A stalled plant usually isn't short on ferts, it's short on light or CO₂ - so check those first and only adjust ferts if light and carbon are already dialed in. Match your dosing to your light tier:

Tank type	Dosing rhythm
Low-tech, easy plants	All-in-one liquid 1-2× per week, or just root tabs for root-feeders. Full EI here is overkill and feeds algae.
Medium-tech	All-in-one 2-3× per week
High-tech CO ₂ (EI)	Macros (NPK) 3×/week, micros (trace) 3×/week on alternating days, 50% water change weekly to reset

EI-lite for a low-tech tank: dose a modest all-in-one once or twice a week, push root tabs in near the crypts and swords every couple of months, and let the weekly water change keep everything honest. Consistency beats precision - plants would rather have a steady modest supply than a feast-then-famine swing. Tie dosing to a day you'll remember.

The weekly rhythm (~30 minutes)

1. Look (2 min) - fish acting normal? new algae? any sad plant? Reading the tank is half of maintenance.
2. Trim (5 min) - a light trim of anything overgrown; net out floating clippings. On stems, cut the top third; the plant sends two new shoots from below the cut, and that's how you make it bushy. Replant the healthy tops for free plants.
3. Clean the front glass (3 min) - scraper or pad, before you drain so the debris siphons out.
4. Water change (10 min) - 30-50% (low-tech leans 30%, high-tech CO₂ leans 50%). Dechlorinate, temperature-match, siphon the substrate surface only (don't deep-vacuum planted soil), refill gently onto a plate or your hand.
5. Dose ferts (2 min) per your schedule.
6. Check the gear (3 min) - heater temp, drop checker green, filter flow. Top off evaporation.

Clean the filter only when flow noticeably drops - every 4-8 weeks, on its own day, never the same day as a big water change. Rinse the media in old tank water, never under the tap; chlorine kills the beneficial bacteria you're growing.

A new tank, week by week

Week	What's happening	What you do
1-2	New plants switching from land to water leaves; aquasoil leaching ammonia; algae looking for an opening	30-50% water change every day or two; 6-hour photoperiod; expect melt, trim the mush, don't pull plants; replant floaters; no fish yet
3-4	Brown diatoms appear (normal); tank finding balance; roots taking hold	Keep frequent water changes; leave the diatoms alone; ease the light up toward 7 hours
5-8	Plants rooting and starting new submerged growth; cycle maturing	Settle into the weekly routine; start dosing; test that the cycle is done before adding livestock
8+	Steady growth, carpet knitting in, tank maturing	Livestock added slowly and last; trim before things get out of hand; enjoy it

Be patient through the ugly grow-in weeks - the melt, the diatom dusting, the cloudy day. Every mature tank went through them. Hold the routine steady and the pile of bare hardscape slowly becomes a living underwater garden.

That's the pack. Your first move, before you buy a single plant: pick your lane - low-tech with easy plants and low light, or high-tech with pressurized CO₂ - and match everything to it. Plant heavily from day one, keep the light in balance with the carbon, and give the tank the patient few weeks it's asking for. Do that and algae becomes a rare visitor instead of a roommate. When your bare hardscape has grown into a scape you're proud of, I'd love to hear about it - and in a couple of emails I'll tell you how a quick word from you helps this book reach the next beginner staring at a murky tank wondering where they went wrong.

Now go grow something beautiful,
Elliot Marsh