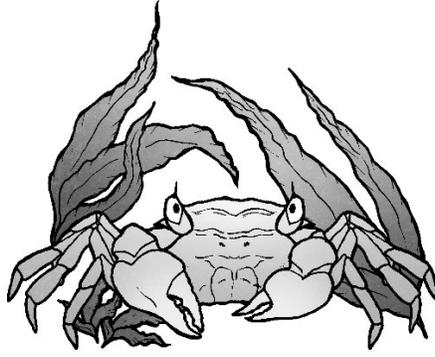


BUILDING A BASIC CRABITAT FOR VAMPIRE CRABS

by Hana Russell



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Introduction

Vampire crabs are stunning terrestrial freshwater crabs in the Genus *Geosesarma*, with 50+ species ranging in color from a dark purple to a bright, tomato red. They are tiny, averaging only two and a half inches wide. Their bright colors, small size, and social nature means they have a big impact in a terrarium and can be kept in a smaller set up.

Thinking about getting some for yourself? This guide will give you step by step instructions on how to set up a naturalistic, bio-active enclosure for your vampire crabs that will encourage them to make lots of tiny, adorable baby vampire crabs.

Why is breeding vampire crabs so important? These cuties only live for 2-3 years, and their wild populations are declining.¹ Captive bred pets also are generally healthier, usually live longer, and are often less shy around people than wild caught animals.² Since vampire crab species are native to Southeast Asia, you can save a lot of money and hassle by having a local source of crabs rather than relying on international shipments.

Ready to give some of these stunning crabs a loving forever home? Keep reading for step-by-step instructions on how to make a great bioactive “crabitat” for your new pet.

¹ <https://lkcnhm.nus.edu.sg/wp-content/uploads/sites/10/app/uploads/2017/06/63rbz003-013.pdf>

² <https://reptifiles.com/wild-caught-vs-captive-bred-reptiles/>

Supplies Needed:

Building supplies:

- Aquarium:
 - A 10-gallon tank will comfortably house 3-6 crabs
 - A 20-gallon tank can house 10-12 crabs
- Tank lid
- Copper home water test kit (optional)
- Aquarium filter foam
- A bucket for rinsing and rehydrating
- Expanded clay pellets
- Fiberglass window screen or terrarium mesh
- Horticultural charcoal
- Reptisoil or a similar animal safe terrarium soil
- Cork bark or rocks
- Sanitized leaf litter
 - Recommendation: oak, maple, or magnolia leaves and seed pods
- Hygrometer (humidity gauge)
- Spray bottle
- Grow light
- Water dechlorinator or chlorine-free water
- Aquarium filter
- Aquarium siphon
- Aquarium sand
- Water quality test kit
- Beneficial aquarium bacteria

Plants

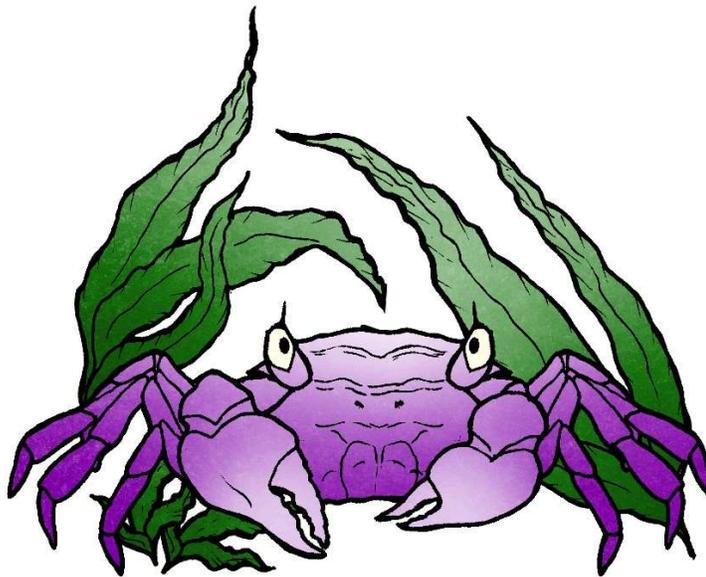
- Pothos vines: 1 to 3 cuttings, 5”to 12” long
- Java moss: 1 cup or 2-3 pieces
- 1-4 boxes of live terrestrial moss:
 - Pet stores will sell it as Frog or Pillow Moss.
 - Get enough to cover the dirt section

Animals

- Vampire crabs
 - Make sure not to mix species!
 - Keep crabs at a ratio of 1 male to 2 females
- Springtails: 50+ springtails
- Isopods: 10 to 50 *Armadillidium vulgare* or similar species

Before you start:

1. Purchase all the materials and the springtails and isopods. Some materials may be hard to find and may take some time to arrive after ordering.
2. Wait to order your crabs until you've set up your crabitat. It is beneficial to give the bioactive cleanup crew time to settle in.
3. Recommended but optional: use an at home water testing kit to see if your water has high levels of copper, which is deadly for crabs. If your water has high levels of copper, look into getting a filtration or reverse osmosis system.
4. Have five or more gallons of dechlorinated water on hand. Springtails, terrestrial moss, and vampire crabs can all be sensitive to chlorine or even die if exposed to it. To dechlorinate water:
 - Let the water sit in an open container to off-gas the chlorine for at least 24 hours (five or more days is better)
 - Use an aquarium dechlorinator, following the instruction on the bottle
 - Use reverse osmosis filtered water
5. Before you start building, place your aquarium tank in or near its final destination. Once you finish setting up the tank, it is going to weigh more than 50 pounds.
6. Give these instructions a quick read through before starting, have your materials prepped, and prepare to get messy!



Putting Together Your Crabitat

Part 1: Installing a False Bottom



Figure 1

- 1.1 Mark the water fill line:
 - 1.1.1 Temporarily place the filter in the tank
 - 1.1.2 Determine how deep the water needs to be to cover the filter and add an inch to that
 - 1.1.3 Mark the water fill line on the outside of the tank with dry erase markers or masking tape
 - 1.1.4 Remove the filter for the next steps
- 1.2 Cut a piece of aquarium filter foam to be an inch higher than the water fill line and slightly longer than the tank is wide. Wedge the foam onto the bottom of the tank one-third of the way across the length.
- 1.3 Rinse off the expanded clay pellets and add them to two-thirds of the tank bottom until they are one-half inch below the top of the filter foam and one-half inch above the water fill line.

- 1.4 Lay the screen on top of the pellets
- 1.5 Make sure to leave the screen one-half inch to one inch wider than the clay pellets on all sides to prevent dirt from falling down the sides.
- 1.6 Cut diagonally into the tips of the corners of the screen to allow the screen to overlap easily
(see *Figure 2*)

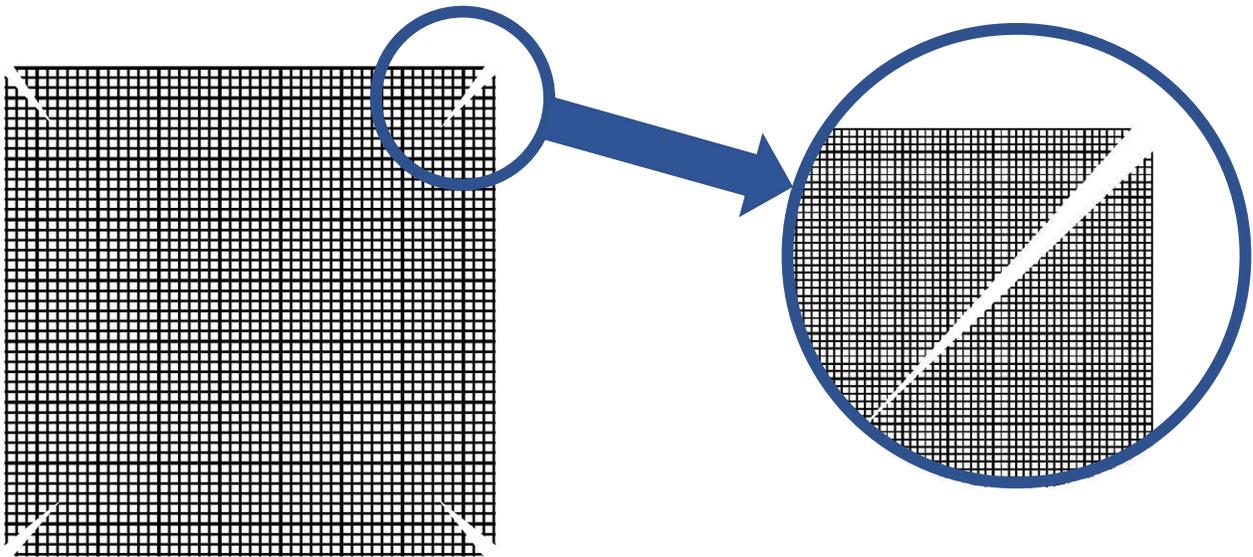


Figure 2

Part 2: Putting in the Soil, Rocks, Plants, and Sand

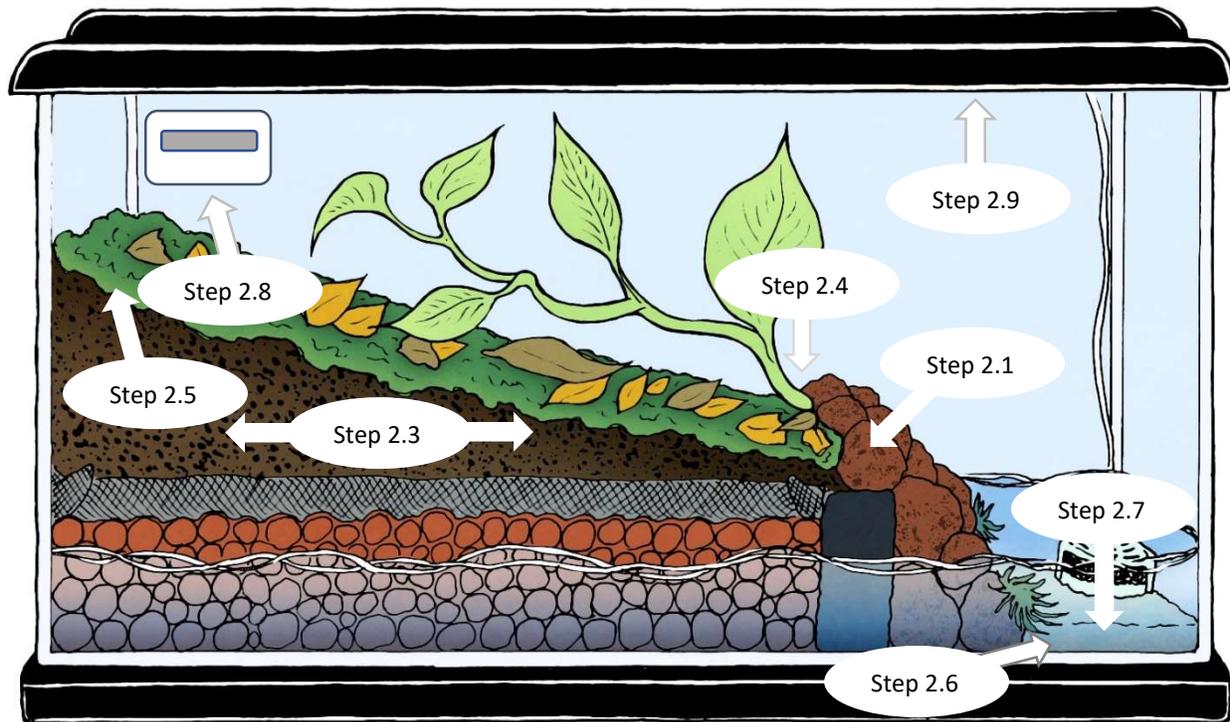


Figure 3

2.1 Place cork bark or rocks in front of and on top of the foam to disguise it.

Recommendation: Lava rocks are lightweight and easy to super glue together or to the foam if needed. Make sure to wash them before installing.

2.2 Scatter some washed horticultural charcoal on top of the screen in a thin layer.

2.3 Add one to two inches of soil on top of the charcoal, sloping the dirt up towards the back of the tank, away from the foam. This will give the crabs more area to use.

2.4 Wash the pothos cuttings and plant the cut end in the dirt.

2.5 Planting the moss:

2.5.1 Rehydrate the moss by soaking it in dechlorinated water

2.5.2 Spray down the dirt with the spray bottle

2.5.3 Place the moss on top of the dirt and press it gently into the soil.

2.5.4 Give the moss a good misting when you finish. Make sure to use dechlorinated water!

2.6 Wipe up any dirt that's gotten onto the remaining third of the bottom of the tank.

- 2.7 Rinse the sand and pour the sand onto the remaining third of the tank in a thin layer, about one fourth to one half of an inch thick.
- 2.8 Install the hygrometer (humidity gauge) on the soil section of the tank. Ideal humidity for vampire crabs is 75% or higher.
- 2.9 Put on the lid and set the plant lights on a 12-hour timer

Part 3: Putting in the water, a filter, and aquatic plants

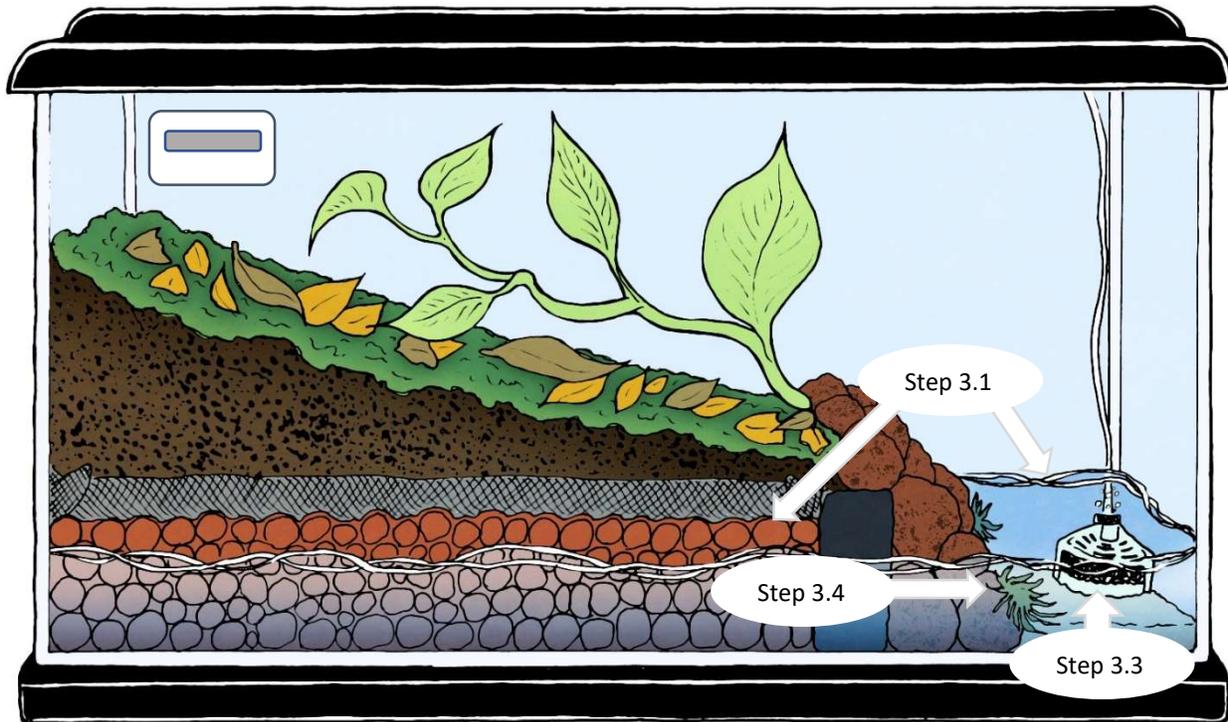


Figure 4

3.1 Add dechlorinated water to the water fill line. Make sure to keep the waterline well below the soil line. Flooding the soil can create a stinky, unhealthy tank.

Note: Always make sure the water is dechlorinated.

Chlorine isn't good for crabs, aquatic plants, or beneficial bacteria.

3.2 Remove the tape or erase the water line marker.

3.3 Place the water filter in the water and turn it on.

3.4 Plant the java moss in the water. It can either float freely or be superglued to a rock or aquarium safe piece of wood, such as cork bark.

3.5 Add beneficial bacteria to the water to help jumpstart the nitrogen cycle. If you have a healthy aquarium, you can add water from that instead.

Part 4: Adding the crabs and bioactive cleanup crew

4.1 If you used chlorinated water to wash or water the substrate, wait 24 hours to a week before adding springtails to allow the chlorine to off gas. Springtails are very sensitive to chlorine.

4.2 Add a thin layer of leaf and seed pod litter to the land section of the enclosure and thoroughly mist it with dechlorinated water.

4.3 Sprinkle a little nutritional yeast or isopod food on top of the leaf litter every few days for the first two weeks.

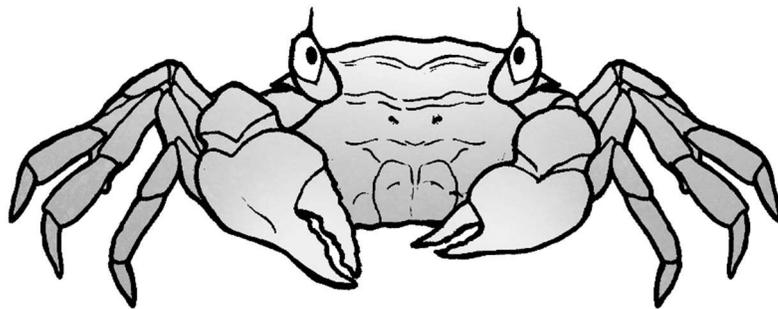
4.4 Add 50 or more springtails on top of the leaf litter

Recommendation: let the springtails get established for a few days to a week before adding isopods or crabs. This will let the springtails take care of any initial mold and mildew outbreaks without the mold endangering their tank mates.

4.5 Add 10 to 50 isopods to the land section of the enclosure

Recommendation: Give the isopods a few hours to a week to get settled. This will allow the isopods to hide before the crabs come hunting.

4.6 At this point, your water parameters should be good (see Part 4 for Recommend Tank Parameters) and your substrate should be mold-free and full of isopods and springtails. Your enclosure is now ready to introduce the stars of the show: vampire crabs!



Part 5: Care and Upkeep

Recommended Tank Parameters^{3,4}

Air Temperature	Water Temperature	Size	Humidity
75° - 82° F (24° - 28° C)	75° - 82° F (24° - 28° C)	10 gallons: 1-2 males, 2-4 females 20 gallons: 3-4 males, 7-8 females	75+%
Water Hardness	Ammonia	Nitrates	Water pH
4 - 10 dKH	0-0.4 ppm	Below 50 ppm Ideal: Below 10 ppm	7.5 - 8.0

- 5.1 Mist the enclosure daily to maintain humidity. Be sure to only use dechlorinated water when misting the enclosure. Springtails are very sensitive to chlorine.
- 5.2 If the tank isn't staying humid enough, cover two thirds of the screened lid with cling wrap, acrylic, or glass.
- 5.3 Using an aquarium water test kit, test the water parameters every day for the first week and then test the water once a week for 4 weeks. Do a partial water change if the water parameters are becoming dangerous for the crabs.
- 5.4 Feeding:³
 - 5.4.1 Vampire crabs need a high protein diet to thrive. Feed a varied diet of high-quality fish food and freeze-dried or frozen meaty foods every day.
 - 5.4.2 Reptile calcium powder, finely ground eggshell, or cuttlebone should be provided to help their exoskeletons stay healthy.
 - 5.4.3 If the crabs and cleanup crew aren't eating all the food, remove excess food or feed less.

³ <https://aquaticarts.com/collections/freshwater-crabs/products/orange-disco-vampire-crab>

⁴ <https://www.fdacs.gov/Consumer-Resources/Recreation-and-Leisure/Aquarium-Fish/Aquarium-Water-Quality-Nitrogen-Cycle>

5.5 Baby crabs:

- 5.5.1 Unlike most crabs, Mandarin vampire crabs *G. notophorum* and other popular vampire crab species carry their young internally. The baby crabs are born fully formed, though small and less brightly colored. Live-bearing vampire crabs only have 8-12 offspring at a time.⁵
- 5.5.2 Adults may eat younger crabs. Either move the adult crabs to a new crabitat or make sure that you feed all the crabs well and that the baby crabs have plenty of hiding spaces.

Conclusion

So now that you know how to make a great enclosure for vampire crabs, are you ready to get your own? Currently there are no online retailers in the US selling captive bred vampire crabs, but efforts are underway to change that. If you can, support captive breeding, and make sure to not get these crabs on a whim. With a declining wild population, it is our responsibility as pet owners to provide these crabs with the best care possible and to breed them if we're able. Hopefully, with this guide to a naturalistic, bioactive enclosure, you'll be able to care for and breed vampire crabs yourself, leading to a more stable population both in the wild and in captivity. Thank you for taking the time to read this guide, and make sure to check out the resources below for videos and articles about these amazing creatures.

⁵ https://www.google.com/books/edition/_/TS_xAQAAQBAJ?hl=en&gbpv=1&pg=PA179

Resources

- Videos
 - <https://www.youtube.com/watch?v=SO6H3AMgd8E>
 - <https://www.youtube.com/watch?v=Ve1pYNoDxG0>
 - <https://www.youtube.com/watch?v=XSGC2o7e-1Q>
- Articles and books with more info about vampire crabs
 - <https://lkcnhm.nus.edu.sg/wp-content/uploads/sites/10/app/uploads/2017/06/63rbz003-013.pdf>
 - <https://aquaticarts.com/collections/freshwater-crabs/products/orange-disco-vampire-crab>
 - https://www.google.com/books/edition/_/TS_xAQAAQBAJ?hl=en&gbpv=1&pg=PA179