

# The Zone Ten Primer on Dividing Gingers and Heliconias

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## A STEP-BY-STEP METHOD FOR PROPAGATION OF RHIZOMATOUS PLANTS

Let's say you have a potted ginger or heliconia or you have them growing in a border or bed and you want to make some more plants to place elsewhere or to give as gifts or perhaps, to sell. How do you go about doing that? The following is the method we use at Zone Ten Nursery to propagate these plants by division.



First, of course, you are going to have to either remove the pot or dig up a clump of the plant. If your specimen is bulging out of the pot and enthusiastically trying to escape its confinement, the best approach is to carefully cut away the pot with a knife. Try to avoid damaging any of the larger underground stems. These are called the rhizomes. They usually look something like the commercial so-called "ginger root" you find in the grocery for cooking. Attached to the rhizomes are the roots, which will be elongated, white or brown, and similar in appearance to the roots of other plants you may have seen.

If you are digging out of the ground, you are almost flying blind, as it were, but you can increase your chances of avoiding rhizome injury if you follow these steps: Start digging six to eight inches or so away from the visible stems, forming a border ditch around the plant. If your ditch is too shallow, you will cut into the rhizomes in the next step, so be careful and poke around in the soil to try to determine how deep the rhizomes are growing. Larger rhizomes warrant greater distance from the stem and greater

depth of the trench. (If you are dividing a larger clump, place the shovel over the spot where you want to cut and force the blade straight down as far as you can go to try to make a clean cut.) The idea here is to force the shovel blade underneath the rhizomes and pry them out of the ground in one piece, if possible. Next you will pry, then alternately step on the shovel back and pry, working your way all around the clump to be removed until the clump breaks loose. This will minimize the damage to underground stems and roots.

You can, of course, just hack these rhizome and root balls apart with a machete and plant them up, but you risk losing a lot of material from fungal infection of the cut rhizomes and you will not get nearly as many starts that way. The value and scarcity of the plant will determine which method you use. The method illustrated here maximizes the number of plants you can get from dividing a parent plant. (It is also a lot more work.)

Because this is asexual reproduction, all the progeny will be genetically identical to the parent plant. Many gingers and most (or perhaps all) heliconias do not have pollinators in south Florida, so this is the only way (other than laboratory tissue culture or mist bench cuttings in the case of some of the gingers) that you can make new plants.



Now we have a mass of roots and rhizomes covered with soil or potting media. The plant in these photographs is a *Hedychium* ginger. They go dormant in the fall and usually lose all their leaves, so, as this division is being done in the early winter, we want to remove leaf stalks that are dying out. In the spring or summer, you may just want to cut the stalks back a bit if necessary to prevent them from falling over when potted up. If you are dealing with really tall plants such as Torch Ginger, Green Shell Ginger, or some of the big heliconias, you will have no choice but to cut off the taller stems. Cut them above the area where they change color. Rhizomes generally have sheaths that protrude from the ground a bit and are of a different color than the vertical stem.

The best time to divide is spring and summer, when the plant is actively growing. That is when you will have your greatest proportion of successful divisions.



The next step is to get rid of the potting medium or soil. This can be a fairly laborious task. We use a flat-topped plastic garbage can which stands about three feet high as a convenient water-proof bench to work on. A garden hose with an adjustable nozzle is the easiest way to wash away the soil. You can use a fairly intense stream of water without damaging the roots.

Yep, you are going to have to get your fingers in there, too. The idea is to preserve the rhizomes and all the healthy roots attached to them while getting rid of any dead, decaying or damaged roots and rhizomes along with (preferably) all of the soil.



You will have to alternate washing and cutting steps because a lot of the soil will be trapped within the root structure. When planting up divisions, you want to start out with fresh, "clean" medium if at all possible. Any organic material that looks dark brown and rotten will foster decay in your new division.



Most of the soil has been removed in the photo to the left. What we are doing here is a sort of micro-surgery to remove those nasty brown or damaged roots and any pieces of rhizome that

are mushy and brown or have been injured in the digging or de-potting process. Healthy roots are white or light brown. Dark brown roots and damaged portions of roots must be cut away. A clean cut is always preferable to torn or ragged plant tissue, as that minimizes the surface area for fungal infection. So, if you break apart a rhizome (sometimes it is the only way to get them apart), go back and cut the broken area cleanly with a sharp instrument.



In this picture, most of the soil and decayed plant material has been removed. Rhizomes have been cut apart where constrictions are seen, that is, at points where the rhizomes are relatively narrow. Some pieces will be fairly large and some will be quite small. These will be planted in pots of corresponding sizes or may be laid out in a bed with spaces of 6 to 18 inches in between. (But not quite yet!) A final rinse and the rhizomes bearing healthy roots are ready to be treated

with a fungicide.



We like to treat our divided rhizomes in a fungicide bath before replanting. We recommend Captan, Cleary's 3336 WP, or Fungo 50 WSB. These fungicides come in powder form. How much do you use? Well, the strange thing is... it doesn't really matter! This is because these fungicides don't go into solution, but rather, make what is called a slurry or a suspension, which means you have suspended particles floating around - but not actually dissolved in - the water. So it is really impossible to get the concentration wrong. We use

roughly a quarter cup in a five gallon bucket of water. If the mixture is nice and cloudy, you have enough fungicide to do the trick. Notice the rubber glove in the picture. Fungicides are toxic and you don't want to get them on you as they can be absorbed through your skin. If you do, though, wash it off right away with soap and water.



Stir up this witch's brew to suspend as much fungicide as possible, then drop in your chunks of rhizome. The important thing is to submerge all the root and rhizome material. Don't worry about the green leaves, but do try to submerge any stumps of stems that were cut. It feels rather like you are making a big pot of vegetable stew. Naturally, since this stew is toxic, you will want to place your bucket in a location where pets and children can't get at it.



Now you wash up and go away for a while and do something else. Minimum recommended soak time is 30 minutes. We like to soak over night if possible, but no longer than that. When you are ready, pour off the liquid. Remember, this is suspension of fungicide, so pour it somewhere that people and pets won't get into it. You should wear rubber gloves again at this point because there is fungicide all over the plants. There will also be fungicide residue in the bottom of the bucket that will

need to be rinsed out, since you are working with a suspension and not a solution.

Your rhizomes should not be rinsed off. The residual surface fungicide helps to protect them after they are planted. And contrary to common belief, drying off the rhizomes accomplishes nothing other than to desiccate (dry out) the plant material. This is not desirable, so plant them right away, or, if you have to wait a bit, put them in a shady area. You can also surround them with slightly moist (not soaking wet) sphagnum moss if you can't get to them for a while. We have even dusted the cut portions of rhizomes with fungicide powder in situations when we didn't have time to go through this procedure.

All you do now is plant them in pots or in a bed in a way that resembles as closely as possible the orientation they had in the soil when they were removed - generally within a an inch or two from the soil surface. Stems (obviously) and the tops of cut stubs of stems should protrude above the planting media surface. Proceed to our rhizome planting and care page for further information (see link below).

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