

into

dah hotel, but we had to be sneaked in cause dah wesort people sayed, "No animals awoud". Mommy sneaks us in and we got our pwaces set up dat me and maxx will be staying in. We was told by mommy that dis was our own wittle condos. Mommy puts me and maxx in our containers, (sterilite containers). Mommy gives us some food, fwesh water, and a couple of mealwies for being so good while we was twaveling mmmm mmmm GOOD!

Well after we gets into our sterilwite condos, mommy goes out onto the balcony to see dah ocean. Her comes in and gets me first and holds me up by the big gwass swiding door so me could see dah ocean, MY GOODNESS!! there was more water den when we has to take baffs. Me thought, mommy bringed us all dis way just to give us baffs in dis big baff tub. But me sayed no way, me not going to take a baff in all dat water. Mommy goes and gets Maxx, here is what him thought of all dat water.....

Hi Evwybody, Sir Maxx here. when we was coming down da road to come on bacation, me had poeed in my carrier, mommy was fraid dat me would just weave all da poo on dah floor of my sterilite den twy to walk fru it, cause me dont wikes it when mommy frows my poo poo away, it takes me a wong time to make duh perfect poo poo. But her sayed "pee eww maxx, we cant travel with that smell," so her taked my poo and wolled down da window on dah van and fwipped my poo out dah window, evwybody in dah van waffed and waffed, they sayed that my poopy might ended up on somebodys windshield. That maked me mad, somebody else was going to ended up wiff my poo. But me just snuggled back down and went to sleep. When we gets to dah hotel, and gets some fwesh mealies and water, mommy takded me over to dah big windows to see dah big baff water. Me gots huffy and sayed, NO WAY! me not gonna baff in der. Mommy says that this water isnt for baffing in cause der was big swimmy thingys in there. Me just wanted to go back to my own condo and go sleepy sleepy. We was sleeping and I felted sumptin moving my blankies awound, me got a wittle skeered, but in just a huff, me found it MiniMee twying to get under my bwankie, me sayed "Mini!! you gots to go back, but her was skeered so me wet her stay wiff me." Mommy sayed that her couldnt stay wiff me cause her didnt want no serpwises. Me didnt know what her meant, but again, duh next night, here comes MiniMee, mommy says her dont know how her was sneaking out of her condo, but MiniMee says her didnt want to be awone. Me didnt minded her snuggling wiff me, but her wanted to take all my bwankie, me just snuggled down and in a wittle bit, MiniMee went sleepy sleepy too. By the 3rd day mommy letted her just stay in my condo, we wiked being togever by then. Mommy putted her food and water dish in my condo and me and MiniMee stayed togever duh west of duh bacation.

When we went home, mommy sayed her was worried dat der might be more wittle Mini-Mees and Maxxs coming. Dat neber did happen, guess they cided not to come. But that is ok, MiniMee and I wikes it just being us and mommy. But mommy dont let me and minimee stay togever no more, we do gets to bisit each other evewy day.

Me and MiniMee hopes you all enjoyed our twip to Moitle Beach. Specially when mommy gotted her dwess stucked in her panties. This is a twu story, just as it happened.

We didnt gets no pictures cause mommy was busy going pwaces wiff duh family.



Starting Your Own Mealworm Farm

By Gioia Kerlin

Every now and again, people in the *Hedgehog Welfare Society Yahoo* group will ask about starting their own mealworm farms. Farming mealies at home has significant benefits for you and your hedgehog: You can control your worms' diet, thereby making them more nutritious for your hedgegie than store-bought worms; you always know the hygienic conditions in which your worms have been raised; you save more money than you would if you purchased your worms from your local pet store on a regular basis; and (most importantly!) you always have wholesome treats available for your hedgehogs to enjoy!

Starting your own mealworm farm is not a difficult task and requires very little in the way of equipment. The only items you will need are

- 1) Worms to start with
- 2) Two plastic or other non-chewable containers to house the worms and beetles
- 3) Substrate for worms and beetles,
- 4) Fruits and vegetables
- 5) Some sort of container to house the mealworm pupae.

First, you need worms. Mealworms are the larval stage of the beetle *tenebrio molitor*. They can be purchased in various sizes: Small, regular, large, and giant. Note: Giant mealworms are NOT superworms, they are very large mealworms and may have received growth hormones to reach their large size.. For this reason, I prefer to use large mealies exclusively.

I have found that pet store mealworms do not always survive long enough to morph into pupae so I prefer to order mine via the Internet. You can purchase worms from many places online including *Fluker Farms*, *Rainbow Mealworms* and *Worm Man's Worm Farm*. Expect to pay around \$7.00--\$8.00 for 1,000 mealies, plus shipping costs.

Next let's talk about containers. You will need two of these. One container will be for the worms you start with, and the other will be for the beetles that you will begin to see within a few weeks. If you plan on keeping approximately 1,000 mealies on hand, you can use shoebox-sized sterilite containers or disposable aluminum foil roasting pans that you can find at the grocery store. For approximately 500 mealworms, you can use plastic bowls. Make sure the containers are clean and dry before adding your worms.



Now, you will need a substrate for the worms. There are several possibilities for suitable substrates: Oat bran, wheat bran, corn meal, rolled oats, or a combination of these. You will need enough substrate to keep your worms from touching each other in the bin. This is especially important in the warmer months as the worms can overheat and die from their movement against one another if your home temperature is above 76 degrees F,. As a rule of thumb, I use approximately 2 inches of substrate for 1,000 large mealworms. The type of substrate you chose can effect the rate of growth of your worms and, later, of the beetles. I have found that while oat bran works well for large worms, it is too coarse and hard to be easily consumed by the tiny worms that will hatch in the beetle bin. So I have chosen to use wheat bran supplemented with a variety of fresh fruits and vegetables.

Like all other living things, mealworms need food and water. Your mealworms will eat the bedding you place them in but they also need some form of moisture. You can give them thinly sliced pieces of apple, baby carrots, potato, squash,

Continues on page 21...

(...Continued from page 19)

zucchini, dark leafy greens, pears, citrus, eggplant, and just about any other fruit and/or vegetable you can think of. Some people swear that cucumbers will kill mealworms so I have never tried them and therefore cannot vouch for the cucumber's suitability as a mealworm food. But I have successfully used all the other fruits and vegetables listed above. The tricks to feeding your worms well are to offer a variety of foods including calcium-rich greens occasionally and to prevent too much humidity from building up in their bin. From personal experience, I have found that during Oklahoma summers I cannot feed my worms fruit more than twice a week. If I offer too much fruit when the humidity is high, the worms turn black and squishy and die.



Soon after the worms have settled in the substrate, you will start noticing tiny, squiggly apostrophe-shaped things in the mealworm bin. These squiggly things are the pupa stage of the *tenebrio molitor*. These little guys don't eat, don't walk, and can't survive with the worms because the worms will eat them just as they would eat carrots or apples. You will need to remove these little squiggles when you see them and place them in a bowl by themselves. They will eventually morph into beetles which should then be placed into their own bin. There they can reproduce and lay the eggs that will soon become your second generation of mealworms.

After the pupae morph into beetles, their care is identical to that of mealworms. They should be put into a bin with substrate and fruit or vegetables. Then just sit back and let nature take its course!

Notice the beetles eating the slices of apple. They will mate, lay eggs and die but soon, you will notice tiny worms growing in the bin alongside the beetles. This is good! Let the baby worms grow until they are large enough to be easily removed from the beetle bin. Then place them in your other bin with the worms.



Mealworms and their beetles will eventually consume their substrate. Periodically you will need to sift out the old, sandy remains of their meal and replace it with fresh. You will also have to remove dead worms and beetles from the bins once in a while. Transfer small worms from the beetle bin over into the worm bin. This can all be done with a small sieve or very fine-meshed colander.



It takes a little bit of effort to raise mealworms but the rewards are great. Your hedgies will have abundant, healthy treats and you will save money. If you end up with too many worms, never fear! You can slow their life cycle down by placing their container in the refrigerator. Just take them out to warm up and eat once a week or so. Your hedgies will love having wormies handy at all times. Some hedgies even like the beetles and the pupae so you can have three treats for the price of one!



you get *Carnivore Care* and not *Critical Care* (they're both made by *OxBow*). *Critical Care* is actually for herbivores and doesn't meet our hedgehogs' dietary needs.

Supermarket

At the supermarket you'll be doing most of your shopping in the baby-food aisle so that's a good place to start. Although I'm going to mention brand names that I use, you can, of course, purchase what you wish and make your decisions based on what's available. However, please read the ingredients labels and try to purchase foods that are plain without lots of preservatives and flavorings.

Baby Food

Jarred meats – I usually purchase the *Gerber Stage 2* brand chicken and turkey offerings but I've had a couple of hedgehogs who really liked the veal/beef versions.

Meat sticks – Many hedgehogs love the *Gerber* chicken sticks that are available. They look like Vienna sausages in a jar.

Jarred vegetables – For vegetables I usually purchase either *Gerber Stage 2* or *Earth's Best* brands and try to purchase sweet potatoes and then some sort of green veggies, such as peas or green beans.

Jarred fruits – I usually purchase bananas, apples, and/or peaches.

Baby cereal – There are several types of powdered baby cereal available. You just add milk or water to make a gruel. I usually purchase the *Earth's Best* brand which comes in rice, oatmeal, and multi-grain versions – these are available in boxes and in packets (usually six packets to a box).

Liquids

Electrolyte mixtures – These may be found with the baby food or in the pharmacy area of the market. Look for something like *Pedialyte* or the store brand. These tend to be fruit-flavored and are usually available in pre-mixed bottles. You might want to look for the powdered mix since it's easier to store and easy to mix just the amount you want. If you purchase the freezer-pop variety, don't freeze them as they are shelf-stable.

Dietary/Caloric supplement drinks – There are a couple of options here. In the children's section, you can look for something like *Pediasure* (my hedgehogs have liked the vanilla, strawberry, and banana cream flavors). In the adult section (likely in the pharmacy area) you can find *Boost* or *Ensure* – again, the flavors popular here are vanilla and strawberry. Be sure NOT to buy the chocolate-flavored drinks – we don't know if chocolate is toxic to hedgehogs (it *is* toxic to some other animals) and it's not worth risking your

hedgehog's health.

Bottled water – Choose smaller bottles, when possible, because hedgehogs don't drink that much water.

Miscellaneous

Canned pumpkin – Be sure you purchase plain canned pumpkin, not pumpkin pie filling which has added spices, etc. This is great to offer a hedgehog who's constipated or who has diarrhea, as it's loaded with fiber.

Storage cups – If you don't already have them, you might want to purchase some small disposable/reusable tubs to keep with the emergency foods, so that you have containers to hold opened/mixed baby foods.

Zippered storage bags – Grab the small sized bags (pint is fine), they're great for storing baby cereals and other opened packages.

Ruby's Rescue Shop

Ruby's has some wonderful items for both hedgehogs and their caretakers. But in this situation, I'd recommend purchasing a few of the following items for your emergency food kit:

Freeze Dried Crickets

Dry Roasted Mealworms

Dry Roasted Waxworms

Peanut Bugger

Luv-Bugs with Berries-n-Fruit

Putting Your Emergency Food Kit Together

Once you've purchased all of the desired items, you have just a few more things to do. First, grab a zippered bag and fill it with your hedgehog's preferred kibble mixture. Be sure to note the date the mix was made, so you know when it needs to be tossed and replaced with fresh mix. Next, grab a couple of light-weight food dishes (preferably plastic so you don't have to worry about breakage). You'll want one for the dry food, one for the wet, and one for liquids. Now find a good-sized bag or box and pack your emergency food kit. On a piece of paper, note the date that the items were added and add this piece of paper to the kit for future reference.

Twice a year (I do it when day light saving time changes), unpack your emergency food kit and check items for expiration. Discard and replace these items as appropriate.

I hope that you never have cause to need your emergency food kit but it is a very helpful thing to have on hand.

