



The Hedgehog Welfare Society

TO PROTECT THE WELL-BEING OF PET HEDGEHOGS THROUGH RESCUE, RESEARCH AND EDUCATION OF THE PEOPLE WHO CARE FOR THEM. NEWSLETTER #38. Sept/Oct 2007

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You Are What You Eat: A General Guide to Hedgehog Feeder Insects

By Gioia Kerlin



Emmy

As we all know, hedgehogs are insectivores and insectivores need feeder insects. But which insects do you choose? Should you keep your own mealworm farm, should you buy them from a pet store or should you feed your hedgehog other types of bugs? Here you will find a brief guide to the types of insects that are commonly used as hedgehog food, their nutritional analysis and what it takes to keep them. This is not a

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complete list by any means—you may feed your hedgehogs other insects. This is a list of the most well-known insects that may be purchased easily either online or in pet stores. The advantages and disadvantages of keeping and feeding each type of insect are included.

Mealworms:

The mealworm (*tenebrio molitor*) is the larval stage of a type of darkling beetle. According to Wikipedia:

Darkling beetles are a family of beetles found worldwide, estimated at more than 20,000 species. Many of the beetles have black elytra [the hardened, outer wing of the beetle] ...The larval stages of several species are cultured as feeder insects for captive insectivores and include the very commonly known mealworms and superworms, and the lesser-known mini-mealworms.



Photo courtesy of www.wormman.com

http://en.wikipedia.org/wiki/Darkling_beetle

Mealworms may be purchased from many commercial farms online, as well as from your local pet store. They vary in size from half an inch or less to giants measuring approximately 1 ½ inches. Note that the giant-sized mealworms are likely to have been treated with a growth hormone that may not be good for our hedgehogs. Internet prices range from approximately \$6 to \$10 for 1,000 worms plus shipping costs. You may choose the size you want to feed your hedgehogs according to their particular preferences. Mine prefer larger worms—the larger the better!

The advantages of feeding your hedgehogs mealworms include:

- 1) They're inexpensive and easy to keep
- 2) They may be stored in the refrigerator for up

to a week at a time to slow their life cycle.

- 3) You can start your own farm and save money (see "Starting Your Own Mealworm Farm" in this issue of the HWS Newsletter)
- 4) Nearly all hedgehogs like them.

The disadvantages are few: if you do start a farm, you will need to replace bedding and clean out dead and decaying worms and beetles periodically. You will have to watch out for too much humidity or else the worms will die. The crude protein content of a mealworm is approximately 20.77%, crude fat content is approximately 12.7%.

Superworms:

Superworms (*zophoba morio* or sometimes *zoophoba morio*) are the larval stage of a type of a different species of darkling beetle than the one that produces mealworms. They are large worms, usually measuring approximately 1-1 ½ inches in length and are plumper than mealworms. Unlike their more passive cousin the mealworm, these worms can deliver a painful bite. Always be careful when handling and feeding them to your pets. If an animal does



Photo courtesy of www.wormman.com

not chew food thoroughly, it is possible to be bitten inside the mouth as the insect is ingested. Internet stories exist about how someone's reptile was killed by a zophoba that chewed through its stomach! Veterinary confirmation of this happening frequently, or to other animals such as hedgehogs has not been found. To err on the side of safety, you can always damage or cut the head off the worm before feeding it to your hedgehog. Most hedgehogs chew their food rather than just swallowing it as reptiles do so the risks are minimized. The advantages of superworms are:

They're large and juicy, therefore pretty tempting treats for hedgehogs

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They are kept at room temperature and don't have to be refrigerated.

You don't have to buy as many because they're so large that one worm goes a long way.

The disadvantages include:

- 1) They bite
- 2) They are more difficult to raise than mealworms
- 3) They are twice as expensive as the largest mealworm available online (about \$10 for 500 worms).

The crude protein content of the superworm is 17.4-20%. Crude fat is 16-17.0%. They are fatter than mealworms but their chitin (insoluble fiber) is more easily digested than that of mealworms. If you want to raise your own superworms, you must keep them at 70-80 degrees F all the time, provide an adequate substrate (organic wheat bran works well) and a source of moisture (water dish with cotton, fruits and veggies, or a gel like *Fluker Farm's Cricket Quencher*), and separate them from each other after they pupate. Many people place pupae in old film canisters (one pupa per canister). The pupae morph into beetles, which are then removed from the film canisters to breed and lay eggs that will hatch into beetles.

Waxworms:

Waxworms are the larval stage of the wax moth. There are two species: The greater wax moth (*Galleria mellonella*), and the lesser wax moth (*Achoria grisella*). Both moths deposit their larvae in bee honeycombs so are considered pests by apiculturists (beekeepers). Most people purchase waxworms as needed from their local pet store or from an online source. Breeding them isn't as straight forward as breeding mealworms. Waxworms (and their moths) should always be kept at room temperature if you want them to reproduce. But if you just want to feed the worms keep them refrigerated and free of moisture. Prices average from \$11-\$13 for 250 worms. You can buy 1,000 from <http://www.wormman.com> for \$28.87 delivered.

The advantages of waxworms are:

They are soft-bodied. This is beneficial if your hedgehog is dentally challenged or has other oral problems.

They pack a lot of calories into one worm (good for sick hedges).

They don't require food if they are kept refrigerated.

They're inoffensive and don't bite.

The disadvantages include price, fat content (if your hedgehog is overweight), and the fact that they can climb out of a smooth-sided container if you leave them out at room temperature.

Wax worms have a crude protein content of approximately 15.7% and a crude fat level of approximately 12.7-22%.

If you want to try raising wax worms, here is a brief over-



Photo courtesy of www.wormman.com

view of the process (full information is available at http://www.wormman.com/cat_wax.cfm):

Buy a cup of wax worms. 2) Prepare an escape-proof container such as 3-5 gallon sterilite (cut a hole in the lid and install a mesh screen) or a fish tank with a screened lid (tape it on later—you don't want any leaks). 3) For substrate mix bran and honey together, if possible grate some beeswax into the mixture. Crumble the mixture into the tank. 4) Put the wax worms in the container with the bedding. 5) Add a few crumpled balls of wax paper 6) Keep the wax worms at room temperature.

The wax worms will eventually begin to spin cocoons. They remain in their cocoons for approximately two weeks before the moths emerge. The moths live for about a week, mate and lay their eggs in the wax paper. A couple of weeks after the moths have died you will see tiny worms. Remember that these worms grow quickly so put them in the refrigerator once they reach desired size and before the cycle begins again. You can store them in the fridge in a ventilated plastic container with bedding like tiny wood shavings. The bedding helps control moisture. They will not eat while cooled down

Silkworms:

Ah, the soft-bodied, placid silkworm! Silkworms are the larval stage of the silk moth (*Bombyx mori*). Sadly, it is no longer found in the wild, although its cousin

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the *bombyx mandarina* lives in the range between northern India and northern China, Korea and Japan. The domesticated silkworm was probably native to northern China thousands of years ago. Its preferred food is white mulberry leaves. In fact, the only thing t silkworms will eat is mulberry leaves, or a mash made from the leaves. At least you don't have to decide what to feed your silkworms!

Silk production has been a major economic endeavor in China for over 5,000 years. *Bombyx mori* is probably the most selectively bred, heavily domesticated animal in existence apart from domestic hybrids such as the mule (<http://en.wikipedia.org/wiki/Silkworm>).

Silkworms are wonderful feeder insects. They don't climb out of the container so they can sit on your countertop without being covered and with no risk of escape. They are highly nutritious for insectivores, and are virtually odorless and parasite free. They don't require bedding but, like every other living thing, they poop. Silkworm poos may be cleaned up just like you would clean hedgehog poos (although they're not as large or smelly). They are amazing creatures. One cocoon can yield between 1,000 to 3,000 feet of silk strand and the worms can grow up to three inches in length. Silkworms should never be refrigerated; they should always be handled carefully with clean hands. Always wash your hands before handling or feeding your silkworms. You can generally get 20-50 silkworms of varying sizes online for approximately \$10 plus shipping.

When you purchase your silkworms, they will be packed in a protective container. You will need to gently remove them from the container (don't pull too hard!) and place them in the storage container you prepare for them at home. You can use a plastic cat litter pan with a screen stretched across a wood frame. I have used fiberglass mesh stapled onto a thin wood frame which sits about three inches down inside the cat litter pan. Place the worms on top of the screen. The screen functions to give the worms somewhere clean to hang out and as a place for you to put their food.. They poop through the holes. so you just have to wipe out the bottom of the cat pan once in a while,

You can feed silkworms fresh mulberry leaves (which they really prefer) or a mulberry-leaf mash which you can purchase online from a variety of feeder insect farms. You can buy pre-cooked mash or cook it yourself. Always remember, though, that your utensils, hands, and the container you cook in must be clean! If you cook the mash yourself, put a layer of plastic wrap on top of the mash then cover the container with a lid and keep it refrigerated. This helps control the growth of bacteria. To feed your worms, cut off a small chunk of the mash and grate it onto

the screen for the worms to eat. Only feed as much as the worms will eat within about four hours because you don't want bacteria to grow on their food or the mash to dry out.

Silkworms are nutritious for hedgehogs because they are high in crude protein (63.8%) while being low in fat (10.6%). The only drawback to silkworms is that they are sometimes difficult to care for and not all hedgehogs like them. Baby silkworms must be kept in a very warm and somewhat humid but not overly moist environment. They thrive in temperatures between 80-90+ degrees F. Not many of us keep our houses that toasty all year round so you can place them in a warm area such as on top of the stove, in a warm room, etc. Just don't let condensation build up in their container and don't let them be baked by the sun. Adult worms need somewhat lower temperatures (between 70-80 degrees F). The general rule of thumb is that the larger the worm, the less heat is needed. Always be very careful about the chemicals you use in your house when you're keeping silkworms. I once sprayed flea spray on some of my hedgehogs in a room separate from where I kept my silkworms and several hundred silkworms died within two days. These are fragile, beautiful worms.

If you try to keep a silkworm farm, you will notice that somewhere between 30 and 50 days of life, the silkworms will enclose themselves in a cocoon. When ready, the new silk moth will release proteolytic enzymes that make a hole in the cocoon so that it can emerge. The moths are white, soft, and have long, feathery antennae. They do not eat or fly. All they do is mate and die. Many animals like eating the moths as much as the worms.

Crickets:

Feeder crickets (*acheta domesticus*) are easy to keep and feed if you can get past the fact that they jump all over the place! Many people purchase freeze-dried or canned crickets if they only have a few hedgehogs. Others buy large amounts of live crickets, gut-load them for a couple of days, then freeze them. You can buy live crickets from your local pet store or online. Expect to spend approximately \$14-15 (plus shipping) for 1,000 crickets if you buy them online. You will pay up to 10 cents each for them from a pet store. That means that if you were to purchase your crickets at a pet store, you would pay \$100 for 1,000 insects! Even with shipping charges, the cost is still significantly less if you purchase online.

The advantages of crickets include:

- 1) most hedgehogs like them
- 2) they are easily available from a variety of places
- 3) they are easy to keep especially if you freeze them (duh!).

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The disadvantages of crickets only come into play if you keep them alive for feeding:

- 1) they are noisy
- 2) they are messy—they poop everywhere in their habitat
- 3) they are very likely to escape in your house.

If you freeze them, you might want to consider gut-loading them for 48 hours after their arrival at your house. Put them into a Cricket Keeper with an egg crate for them to climb and hide in. Feed slices of apple, carrot, and other fruits and vegetables, as well as *Fluker Farms' Cricket Quencher* (this is calcium-fortified and will not drown your crickets). After two days, put the whole Cricket Keeper in the freezer for several hours. The crickets will die and you can transfer them into plastic containers for easier storage. How you get them into the Cricket Keeper is up to you—it's not always an easy task and you may lose a few in the process. I put a box of 1,000 crickets into a large trash bag and before opening the box. Then I close the bag around my wrist and shake all the crickets from the box and shipping egg crate. I then remove box and crate while keeping the trash bag snug around my hands and tip the bag with its mouth inserted inside the Keeper to transfer the crickets. Then, I give them some egg crate and feed and water them. Crickets contain approximately 11.4-21% crude protein and 6-22.7% crude fat.

You can raise feeder crickets if you want but, as I said, they are messy and require weekly cage cleaning. They are also noisy—their chirping is part of the mating process, they have to sing in order to breed. They will need a large sterilite container with a lid with a meshed-in cut out for air circulation. They'll also need to be kept warm in order to breed—around 75 degrees F or warmer. You'll need to give them a separate place to lay eggs—preferably a plastic container several inches thick, packed with wet bedding like peat moss or bonsai tree soil. When you begin to see eggs hatching, transfer the egg container to an incubating bin (not as large as the adult bin but enclosed) kept on a heating pad. It is a lot of work for the yield you will get, especially since feeder crickets are so readily available. Let someone else raise them unless you just want to experiment!

Malagasy Hissing Cockroaches (Ssssss!):

Hissing cockroaches are easy to keep, reproduce readily when kept warm enough, and are juicy eating. They are some of my favorite insects to raise. However, the hedgehog approval factor is hit or miss. My hedgies who do like them prefer that I keep and feed the roaches then freeze their babies for treats. You DON'T want to feed these guys live unless you have a deep bin to house your hedgehogs and bugs during treat time.

Malagasy hissing cockroaches (*gromphadorhina portentosa*) are a long-lived insect that is native to Madagascar. They eat anything (except cucumber which may be toxic to them) and can be kept in a large Critter Keeper or sterilite bin with a meshed-over hole in the top. They can climb just about anything so do not leave the lid off the container! They can be kept as pets as well as feeders, and are relatively slow-moving and amiable (as insects go). If you buy some as babies, you need to realize that they will not reproduce until they are at least six months old. They can live for approximately two years. If you want feeders right away, it's better to buy adults of each gender. Sexing your roaches is easy—the males have larger bumps on the top of their heads than the females do and their antennae are fuzzier. Females can produce 15-40 eggs from one mating so they are fairly prolific. To house them, use a bran bedding about ½ inch thick inside a large Critter Keeper or equivalent. The males are territorial and need their own space for attracting the females so give them pieces of egg crate for hiding and climbing. They need to stay warm—at least 75 degrees F, if not warmer. Their metabolism slows down when they are cool and reproduction can stop when the temperature is below 75 degrees. They eat fruits and vegetables, as well as pieces of cat or dog food. It's important to have a protein source (cat food or dog food) because otherwise you may find them snacking on each other. I have also used *Cricket Quencher* for my cockroaches in addition to their fruits and vegetables. It offers extra calcium which is good for the cockroach as well as the hedgehog, since it helps the insects' exoskeleton harden after molting. Hissing cockroaches molt five times in their lives before reaching adult size. They are very vulnerable (but tasty!) when they are white and soft. I have not yet been able to verify the crude protein and crude fat content of hissing cockroaches.

Butterworms:

Butter worms (*chilecomadia moorei*) are like silkworms in that they eat only one thing: the leaf of the trevo bush found in Chile. Since it's easier to find mulberry leaves than trevo leaves, I wouldn't recommend trying to keep a butter worm farm. You can order butter worms from many online venues. The best thing about them is that they are very high in calcium (more than twice as much as most other feeders!) and they keep for a long time in the refrigerator (for maximum lifespan keep them in the door, not on a shelf). Butter worms are not overly high in protein—only around 16.2%, less than all other feeders except crickets. However, they are high in fat. I've read that they have about 30% more fat than silkworms but have yet to find a reliable nutritional analysis that corroborates that exact figure. They have an orange color, have a sweet smell that may be attractive to many animals and are soft-bodied like silkworms. This makes them a good choice for dentally challenged hedgehogs. You don't need to remove butter worms from the refrigerator to feed them and they

won't reproduce in your home. This makes them good treat bugs that you don't have to mess with.

Earthworms:

The common earthworm (*lumbricus terrestris*) is our last feeder on the list. I must admit that none of my hedgehogs like them because they are full of dead organic material (although one tried valiantly to eat them just 'cause mom wanted him to),. If you could have something soft and juicy like a butter worm, mealworm, or silkworm, why would you want something that tasted like compost? Nevertheless they are very low in fat and nutritious: Approximately 10.5% crude protein and only 2.0% crude fat. It's possible to raise earthworms but somewhat complicated and time-consuming. You have to build a wooden box, tilt it so that water drains out, fill it with peat moss and keep it wet all the time, feed them a little corn meal daily and mix the leftovers into the peat moss. Unless your hedgehogs really like earthworms (and you have a lot of hedgehogs) you go fishing often or have a large garden, I would recommend buying them from the pet store and keeping them in the refrigerator. If you're interested in raising earthworms, here's a site you may want to reference:

<http://www.thekrib.com/Food/worms.html>

Conclusion:

The benefits of feeding insects to our hedgehogs cannot be underestimated. Some people assert that since animal proteins are different from insect proteins, all the chicken, turkey, salmon, etc. that we feed won't compensate for real insect protein. Not feeding our hedgies at least some bugs would be akin to not feeding your cat a high-quality protein source, or your dog an omnivorous diet. Eating insects is what hedgehogs are supposed to do. It is not only good for them physically but mentally as well. Whether you buy or breed your own feeders, keep in mind the nutritional analysis of each type of insect as well as your particular animal's preferences. Not all hedgehogs will like the same things. Sometimes there may be reasons to feed or not to feed a specific bug. It may be too high in fat or protein for a particular animal's needs or maybe the animal is calcium deficient. Whatever you do, it is always good to keep in mind that just as our hedgies "are what they eat," their feeders depend on proper nutrition and husbandry to be at their healthiest too. And healthy feeders make for healthy hedgehogs!



Time to Meet a Hedgie

An Autobiography
By Chance Jackson-Dempsey

I don't think no pogs out there in pogland knows me. I never wrote about me before, I will try.

My new name is Chance. I say new 'cause nobody knows my old name or if I use to have one. One of my new mommies says Chance is a special name. I keeps hearing them talking 'bout a second chance. Does that means there's two of me?

I reckon Chance is a good name since I was very sick when I got here. Someone left me out in the rain and cold. I didn't even have no foods, and I itched everywhere there was to itch. But since I got founded and put in a place with lots of other animals, but there weren't no other pogs. I couldn't stay there 'cause hedgehogs are illegal in that area.

Lucky for me, Miss Julie saw me on Petfinder and sent out a notice and Miss Sheila called right away to say they would help me. I did not know that meant I would have to gets a shot every week, but guess what? I don't itch now and I always got food. And mealies, I like those.

So now I finally got to come out of my room and guess what else? I have a sister and a brother hedgehog! Plus a noisy little dog and a great big cat. There's so much to see. My brother hedgie is Leo and my sister hedgie is Tru and guess what? They said they had to have help, too.

I just want to say a special thank you to my Momma Murfi for changing my bed everyday and spraying me with the nice stuff that Auntie Cyndy sent me for the itchies.

Well that's my story!

It's time for another Hedgie Hero

Donnasue Graesser

Hugh Warwick



In April of 2004, my family traveled to Germany for the *European Hedgehog Research Group Conference*. There we were introduced to Hugh Warwick, a charming gentleman from Oxford, who gave a seminar on the Uist Island hedgehog cull. Here in the USA, the hedgehog community has followed the situation of the culling of the Uist hedgehogs. It was enlightening to meet someone who was so deeply involved in that cause. Hugh and I became friends, conversed via e-mail, and eventually he wrote some articles for the HWS newsletter on his various hedgehog adventures in Europe. We kept in touch via e-mails, exchanged photos of our kids, and hoped that one day Hugh could visit the USA.

The chance for Hugh to travel to the USA will finally arrive this autumn! Hugh will be a guest speaker at the *Rocky Mountain Hedgehog Show* in Denver Colorado this October (<http://rockymountainhedgehogshow.com/>). Attendees of the show will have the privilege of listening and learning from this incredibly dynamic speaker. Hugh will give a seminar on the history and recent developments of the Uist hedgehogs. You will all be pleased to hear of the recent progress, especially within the past year. For a preview, see the two press releases published in this newsletter!

Ultimately, Hugh would like to use his experience at the *Rocky Mountain Hedgehog Show* to produce a radio show in the UK on the subject of the hedgehog community in the USA. I'm sure he will also gain insights for his upcoming book.

Hugh is a fascinating and charismatic person. Arguably, Hugh's two greatest accomplishments are his children, Matilda and Tristan (Pip). I must say that they are two of the most gorgeous children on the planet. Outside of fatherhood, Hugh is a freelance journalist/consultant/photographer specializing in environmental, social justice, and wildlife stories. For a real treat, you can view some of Hugh's spectacular photographs (including photos of Matilda and Pip) at his online gallery: www.urchin.info/gallery. But perhaps the credential that is most impressive to us here in the USA is the fact that Hugh is a trustee of the *British Hedgehog Preservation Society*.

Hugh has a multi-faceted professional history including in-depth work with European hedgehogs in their natural settings. Here he describes his history with hedgehogs:

My first hedgehog work was the third year project of my degree – I spent two months of my summer holidays of 1986 on the island of North Ronaldsay, Orkney (the archipelago just north of Scotland). The bird warden had noted a decrease in the breeding success of ground-nesting birds, in particular the Arctic Tern, at the same time as a rise in the number of hedgehogs. Hedgehogs were only introduced (by the postman, John Tulloch) in 1972 in an attempt to control slugs in his greenhouse. The hogs escaped. The main aim of the work was to see if there were as many hedgehogs as people thought (newspapers reported 10,000!). I estimated about 500 hedgehogs were present on the small island. The bird obs organized an airlift and around 200 hogs were removed in the next five years.

I returned to the island in 1991 to see how things had changed. Over three months, I discovered that the population had plummeted to around 100. I am in regular contact with the bird obs and now they think there are no hedgehogs left on the island.

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Radio tracking hedgehogs

In 1992 I went to the bird observatory in Dungeness, Kent - to see if there was any evidence of hedgehogs on the shingle spit. A paper had been written 20 years previously that suggested hedgehogs were taking black-headed gulls eggs. Two weeks of searching and I found no evidence of any hedgehogs! 1993 I was employed to radio-track hedgehogs around farmland in Devon. The animals were all juveniles, being released after a winter in care, in unfamiliar surroundings. We were trying to see if they survived. They did - apart from the ones that were eaten and run over! [Note: You can read Hugh's article about radio-tracking in Devon in the HWS Newsletter, issue #11, July/August 2004.] Then in 2003 I entered the fray of the Uist debate - including the radio-tracking in 2005 - and was invited to be a trustee of the British Hedgehog Preservation Society in 2003 as well. And now - well, I talk to groups regularly about hedgehogs, I am on national and international media whenever the subject comes up (recently CBS breakfast news!) and am generally pretty involved. I have a book treatment with an agent and a radio programme idea with the BBC - just need one of them to say yes!"

Hugh's environmental and activist endeavors extend far beyond hedgehogs. He received his BSc with honors in Science & the Environment from Leicester Polytechnic, and MSc in Wildlife Management & Control from Reading University. He has been the editor of *Splice*, the magazine of The Genetics Forum. He was an environmental consultant and co-organizer of a lecture program for engineers from Tanzania's electricity generating company, dealing with the environmental consequences of large-scale hydro-projects. He worked for BBC Natural History Radio where he was responsible for finding and researching stories for the weekly broadcast as well as researching special programs. The list goes on and on.

Hugh has published extensively on a multitude of environmental and social issues. Just a small sample of his recent publications includes:

- UK Field Producer for the film *Walmart: the high cost of low price* (US release 2005, Europe 2006 - www.walmartmovie.com)
- Author of *Climate Change: Catastrophe for the world's poor?* booklet for Practical Action (2005).

- Editor of *Dirty aid, dirty water* report for World Development Movement (2005). <http://www.wdm.org.uk/resources/briefings/aid/dadwshort.pdf>
- Author of Greenpeace's *Annual Review 2004*
- *Smoke - the killer in the kitchen. Indoor Air Pollution in Developing Countries*. Published by ITDG in 2003. Available from www.itdg.org/smoke
- *Seeds of Doubt - North American farmers' experiences of GM crops*. Published by the Soil Association in 2002. Available from www.soilassociation.org/seedsofdoubt

At the *Rocky Mountain Hedgehog Show* you will have the chance to learn from Hugh's professional experience, as well as to spend time getting to know him on a personal level. Here is a brief introduction to Hugh (I think he will fit right in with the USA hedgegie crowd!):

My perfect work-free day would probably start, after an organic and vegetarian breakfast, with a session in the garden splitting the logs a tree surgeon friend dropped round for me. I have just been given an amazing splitting axe and am getting a little obsessive. Then coffee with friends at the nearby vegetarian café followed by mid-morning session catching up on the piles of books I just have to read. Obviously this day will have to involve faster than light travel to accommodate all that is needed, as I need to get to the best beach in the UK, if not the world, on the Gower peninsula in South Wales, where the waves are just perfect for beginner surfers like me. Then a walk up the fabulous hill over-looking the beach to enjoy skylarks singing their hearts out. Back home to Oxford for an evening game of ultimate Frisbee followed by a swim in the Thames and a drink in a riverside pub with a spontaneous session of folk music.



Hugh & Tristan (Pip)



Hugh & Mati

This, of course, is all impossible, apart from the eight hours of driving I have included, I have a family! My wife, Zoe, an investigative film-maker who has a habit of getting herself into quite remarkable situations, is an amazing woman, but a lousy cook, so I have my work cut out in the kitchen. Actually, that is one of my hobbies - cooking. And then there are two startlingly gorgeous children - Matilda (4) and Tristan (1). I was late to the idea that having kids was a good idea - I now wish I had cottoned on about ten years earlier when I had more energy.

I hope this article gives you all a glimpse into the world of Hugh Warwick, so that you will know what a treat is in store for you at the show in Denver this October. You will all enjoy the company of a true international Hedgegie Hero and all around great guy!



If you have suggestions or ideas for items you would like to see in the newsletter, e-mail the editor at newsletter@hedgehogwelfare.org

~~ advertisement ~~

Red Hat Society

On Thursday, June 8, 2006, the idea for the Hedgehog Red Hat Society began formulating in the minds of three breeders, two rescuers, and three hedgegie slaves at the base of Pikes Peak in Manitou Springs, Colorado. These nine hedgehog enthusiasts decided to recognize special hedgehog ladies who have reached the grand age of four years old or older. After several meetings and hours of crafting, the Hedgehog Red Hat Society was officially launched on October 10, 2006.

By joining this elite club, your hedgehog will receive:



- Decorated Red Hat
- Decorated TP Tube
- Red Hat Poem
- Welcome Card

- Beautiful Thick Red Hat Lap Pad
- Laminated Membership ID Card
- Membership Certificate
- Photo Page in *The Red Hat Album*

Each member will receive a special gift and card on her succeeding birthdays. The committee will also be sending out a monthly newsletter. Once a hedgegie girl joins and receives her packet, take a picture of the grand lady in her Red Hat finery and submit it to the committee. That picture along with all the stats will then be placed in a *The Red Hat Photo Album*. The album will be taken and displayed at all hedgehog functions that a committee member attends.

Come check out the Red Quill Shop. There you will find other nice items to purchase that follow the red hat theme. Candles, pencil holders, bags and photo frames are just some of the things you will find there.

Every month, Maisey travels the world to find the latest and greatest in fashions for hedgegies and is showcasing her finds here in Maisey's Costume Corner.

Send your pictures to hedgiemom@comcast.net



Katiya Storm



Katiya Storm

Want to see your Hedgegie in the newsletter?

Send your photos in now so that they can be used in future issues.



Bucky Woodring



Mackinnon Kirksey Marrch

Thoughts from the Chief Volunteer Officer

Linda Woodring

I've been asked to write a bi-monthly column for the newsletter about whatever comes to mine. I thought this month I would address the question of pet health care insurance for your hedgehogs since there's been some talk about it on some of the lists lately.

We have health insurance on all of our hedgies through VPI Pet Insurance. I believe that's the biggest in the country, but I know there are others, including one that I think is brand new through the ASPCA.

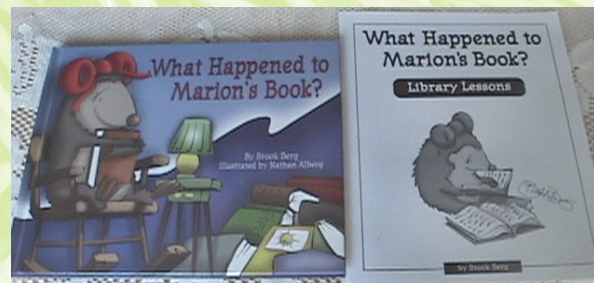
Our last hedgehog, Payton, was quite sick for the last year or so of his life. First he was diagnosed with Dilate Cardiomyopathy. Once we got that under control, he developed Fatty Liver Disease, presumably from not eating. He had gone from 700 plus grams down to about 350 when he died if I'm remembering correctly. I never really sat down and added up all the vet bills, but they were somewhat over \$1000 total...probably closer to \$2000. At that point we decided to start thinking about health insurance for our other two (now three) even though it was too late to take out insurance on Payton.

I found VPI (Veterinary Pet Insurance) on the Internet which is also the insurance that our vet now recommends. I contacted a couple HWS members that had insurance and asked some questions. It came highly recommended. I e-mailed the company to find out some information about what is and isn't covered. They don't cover routine health exams (at least not on exotics) but do cover pretty much all illnesses. I believe there's a

rider available for dogs that will also pay for routine exams and shots. It's a \$50 deductible per illness or accident, and then they pay according to their schedule of covered amounts. When you get your insurance packet there's a very detailed list of illnesses and what amounts they will cover. They do have a separate "exotic" policy. The paperwork is very easy to fill out. With the new forms that just came out, the vet doesn't even have to sign them. You can just fill in the date of the visit, the name of the veterinary clinic and the probable diagnosis. If you get additional bills later for the same illness (follow-up exams, meds, etc.), you just fill out another form and reference the first. If you do have a question, the support staff that mans their phones is very helpful and knowledgeable.

So far we've sent in two claims for Bucky. The first was when he had problems with his foot and had a toe amputated after he chewed it up. The claim was for \$219.60. After the \$50 deductible it left 169.60, and they paid 108.61. They paid within 2 weeks. Right now we're going through probable cancer with him. I just turned in a claim for \$858.01 and another for \$524.11, but we haven't yet received payment on them. I think it's well worth the \$8.65 we pay monthly for each of them. You do get a slight discount for multiple animals, and they don't insure pre-existing conditions, so you have to plan ahead and not wait until an illness becomes apparent. If you'd like to check out the website, it's www.petinsurance.com. There's a section for exotic animals and a place where you can enter your information and receive a quote from them.

Take a look at our past auctions.



Watch for up-coming auctions to benefit Wobbly Hedgehog Syndrome research!

The more you bid, the more we find out about the cause and treatment of this dreaded disease.

The Literary Hedgehog

Margaret Myhre



Hedgehog Haven: A Story of a British Hedgerow Community

by Deborah Dennard. Illustrated by Robert Hynes. Norwalk, Connecticut: Soundprints, 2001.

This children's book presents a day in the life of a six-month-old hedgehog living at the base of a hedgerow in southwestern England. The hedgehog curls into a tight ball when a noisy tractor mows the field near her hedgerow, feasts on spiders, beetles and grasshoppers in the freshly mown grass and freezes as a fox pursues an unlucky rabbit.

Other animals common to British hedgerows are introduced as they interact with the little hedgehog. A song thrush plucks snails from the underside of the hedgerow, cracking the shells on the rocks. The hedgehog eagerly feasts on the remains. The naïve young hedgehog wanders too near a draft horse who is grazing peacefully in the field. The edge of one of the startled horse's hoofs catches the hedgehog and sends her flying across the field, frightened but unhurt.

Beautifully drawn, colorful double-page illustrations capture the beauty of the English countryside and its inhabitants. The hedgehog is shown in all the usual poses hedgehog fanciers know and love. But she is also shown in some unusual situations—somersaulting through the air after her encounter with the horse and even swimming in a stream after sliding off slippery rocks. The latter picture is a side view which manages to show the hedgehog both above and beneath the water.

This lovely book is published by *Soundprints*, a small division of the *Trudy Corporation* which produces high-quality wildlife, natural science and social science books for children. Prior to publication the book was reviewed by Louis A. Walsh of the Department of Herpetology at the Smithsonian Institution's National Zoological Park. The book is available in paperback, hard cover, and in a three-piece set consisting of the book, a reading of the text on audio-cassette, and a nine-inch, plush hedgehog.



For more information about this book as well as other excellent children's books, please visit the *Soundprints* web site <http://www.soundprints.com/>.



HWS Committee and Officer Reports 2007, Quarter 2 (April-May-June)

Advocacy Committee - Jennifer Plombon, co-chair

The Committee assisted concerned HWS members in contacting the USDA to report poor conditions seen in pet stores. The Committee assisted others in determining the licensing status of pet stores and breeders. The Advocacy Committee, recognizing that some USDA requirements for hedgehog breeders have changed, is revising its stated Committee goals as listed in the bylaws.

Care Package Committee - Jennifer Plombon, chair

Between April, 2007, and June 30, 2007, the HWS Rescue Care Packages Committee shipped or delivered 12 Care Packages, hats, and/or food samples, to hedgehog rescuers throughout the U. S. and Canada.

Fundraising and Ruby's Rescue Shop - Donnasue Graesser, manager

We are preparing for WHS awareness month, fundraising activities, and the annual Ruby Tuesday sale at Ruby's Rescue Shop.

Health and Education Committee - Gioia Kerlin, co-chair

The committee has funded \$200 in veterinary care for rescued hedgehogs this quarter. Committee Co-Chair Gioia Kerlin has written two Hedgegie How-To articles: "Raising Your Own Mealworm Farm" and "You Are What You Eat: General Information about Hedgehog-Safe Insects", and is planning a third one with information to help caregivers socialize non-social hedgehogs. The committee has also corresponded with HWS members and non-members concerning hedgehog health and rescue issues, and Co-Chair Gioia Kerlin gave an educational presentation to The University of Tulsa's University Elementary School titled "Hedgehogs and Tenrecs: Who they are and where they come from."

Membership Committee - Jennifer Sobon, acting chair

In the last three months we have had 39 people join our group. Welcome letters and membership cards have been sent.

Newsletter Committee - Jennifer Sobon, editor

We have successfully produced two newsletters this quarter.

Petfinder - Stephanie Hyne

The HWS Petfinder page listed two hedgehogs in two different states this quarter. Both were successfully placed in wonderful forever homes. Our Petfinder page averaged about 900 views per week.

Public Relations Committee - Tonya Thomas & Cindy DeLa-Rosa, co-chairs

No Report

Rescue Committee - Sheila Dempsey and Cyndy Bennet, co-chairs

The new adoption application was initiated and is now being sent out to all who inquire about adopting a hedgegie. It is giving us more information about potential hedgegie guardians, so the change was worthwhile. Cyndy has been very busy taking in rescues and re-homes. She assisted in four rehoming, and two rescues which she kept at her home for a considerable time before finding them a forever home. Sheila assisted with two rehoming and one rescue has joined her household as a forever home. We have had two new rescue stations open - Andrea Kennedy in Ohio and Jennifer Muckenfuss in Indiana.

Chief Volunteer Officer - Linda Wooding

The following were accomplished during the second quarter:

- Continued updated website vet's list
- Compiled list and held Healing Candle ceremonies
- Wrote several articles for the newsletter

Continued working on CD of Phil's travels

Acting Chief Information Officer - Donnasue Graesser

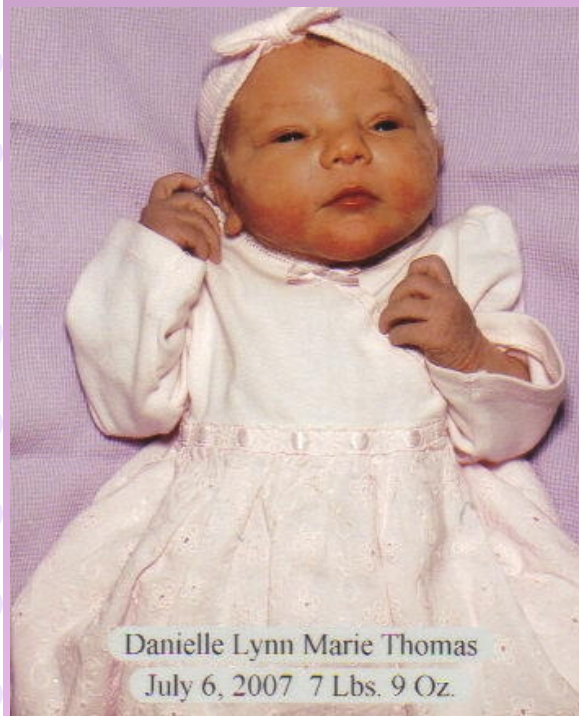
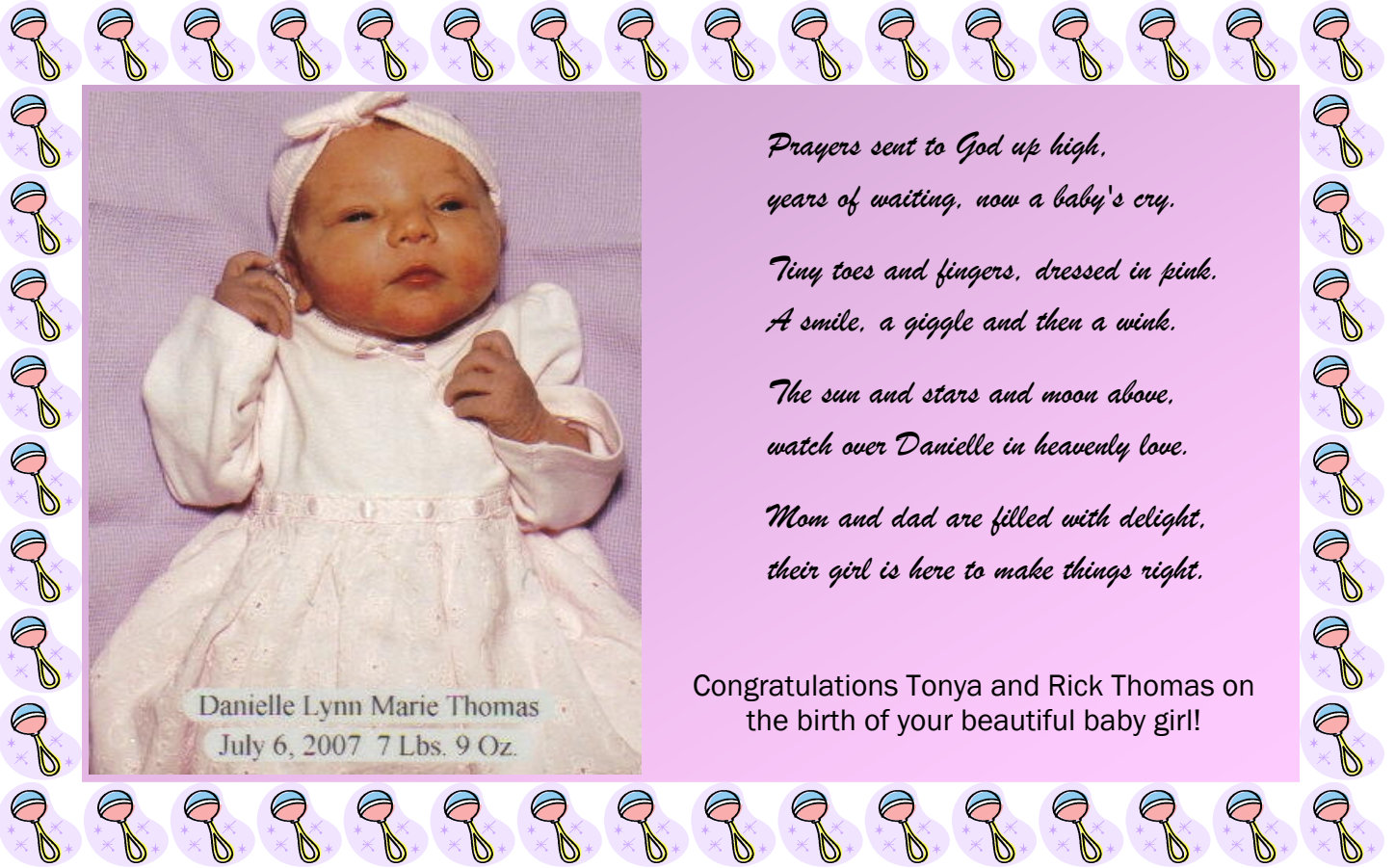
The membership e-mail list has been maintained and utilized to distribute information on HWS programs.

Chief Organizing Officer - Vicki McLean

No Report

Chief Financial Officer - Donnasue Graesser

The HWS has been granted permanent 501(c)3 status by the Internal Revenue Service. Our yearly financial report has been filed with the Oregon State Department of Justice. Detailed monthly financial reports are available to any HWS member or other interested party, by sending a request to donnasue.graesser@aya.yale.edu. HWS yearly financial reports are submitted to the Oregon State Department of Justice, Charitable Activities Division, and are available for public viewing on the ODJ website (Registration # 31631) <http://www.doj.state.or.us/charigroup/index.shtml>



Danielle Lynn Marie Thomas
July 6, 2007 7 Lbs. 9 Oz.

*Prayers sent to God up high,
years of waiting, now a baby's cry.
Tiny toes and fingers, dressed in pink.
A smile, a giggle and then a wink.
The sun and stars and moon above,
watch over Danielle in heavenly love.
Mom and dad are filled with delight,
their girl is here to make things right.*

Congratulations Tonya and Rick Thomas on the birth of your beautiful baby girl!



My hedgie friends and I like to have lots of treats. Can you find these treats in the grid to the right? Once you find them, feed them to your hedgie.

- butter worms
- chickie sticks
- crickets
- earthworms
- meal worms
- phoenix worms
- silk worms
- spike worms
- super worms
- wax worms
- yogurt drops

Lucy Laughs

S	F	P	H	S	A	X	O	S	U	Q	Q	S	E	S
T	V	S	C	M	F	R	K	M	K	O	H	A	P	J
E	X	M	H	R	X	M	W	R	H	Y	S	Y	G	N
K	S	R	I	O	G	E	S	O	J	N	S	O	Z	K
C	A	O	C	W	X	A	M	W	K	L	M	G	B	X
I	F	W	K	X	U	L	R	K	N	P	R	U	L	N
R	W	R	I	I	S	W	O	L	I	S	O	R	K	X
C	D	E	E	N	E	O	W	I	S	Y	W	T	W	K
O	V	P	S	E	R	R	R	S	M	H	H	D	A	F
H	G	U	T	O	Q	M	E	D	F	G	T	R	X	P
I	O	S	I	H	Z	S	T	A	L	J	R	O	W	J
G	Z	O	C	P	R	D	T	L	R	F	A	P	O	M
Q	J	N	K	Y	V	L	U	W	W	J	E	S	R	X
V	X	T	S	P	X	Q	B	H	B	L	M	V	M	U
K	G	G	M	S	M	R	O	W	E	K	I	P	S	S



**British Hedgehog
Preservation Society**

NEWS RELEASE

(January 2007)

Hedgehog cull can now cease as the final obstacle to hedgehog rescue is removed - rescuing hedgehogs from the Uists is not detrimental to their welfare.

A scientific paper published in the journal *Lutra* reveals that translocating hedgehogs from the Uists in the Outer Hebrides is not harmful to their welfare.¹ This has been the principal objection to their non-lethal control by Scottish Natural Heritage.

The research was necessary as Scottish Natural Heritage have been killing hedgehogs for the last four years in an attempt to eradicate them from the islands. The hedgehogs were imported to the Uists in the mid 1970s and have since spread over the islands, and are implicated in the poor breeding success of internationally important populations of birds, such as dunlin and ringed plover.

The decision to kill hedgehogs was taken because SNH, a conservation body, believed that translocating them would cause them to suffer a "slow and lingering death." This study proves their assertion to be without foundation. It removes the principal obstacle to non-lethal control of the Uist hedgehogs.²

The British Hedgehog Preservation Society funded the translocation project through donations from thousands of concerned animal supporters. Chief Executive Fay Vass said, "*The publication of this study gives SNH the opportunity to rethink its policy of eradication and instead to work with hedgehog experts to solve the problem in a way that is humane and more cost-effective.*"³

The study was carried out in Scotland by ecologist Hugh Warwick.⁴ He said, "*I radio-tracked 20 hedgehogs in their new environment and, discounting predation and accidental death, 80% either maintained or increased their body weight. This indicates that they were able to adapt to their new environment.*"

BHPS believes this unnecessary slaughter of hedgehogs should be halted immediately.

Background information:

1: Warwick, H., P. Morris & D. Walker 2006. Survival and weight changes of hedgehogs (*Erinaceus europaeus*) translocated from the Hebrides to Mainland Scotland. *Lutra* 49 (2): 89-102. The full paper will be emailed on request.

2: Since 2003 SNH have killed 658 hedgehogs while Uist Hedgehog Rescue, a coalition of volunteer groups made up of BHPS, Advocates for Animals, Hessilhead Wildlife Rescue Centre and International Animal Rescue, have rescued 756

3: A breakdown of the costs by Hugh Warwick shows that each hedgehog killed costs taxpayers around £950 whereas the costs of rescue and release are around £50 per animal. In the first year the Uist Wader Project had a budget of £90,000 of taxpayers' money. It spent it all and killed just 66 hedgehogs. That equates to £1,363 per hedgehog. SNH has since agreed a budget of nearly £190,000 per year for the eradication of Uist hedgehogs. And they are getting better at catching and killing them - averaging 200 per year. But that still equates to £950 per hedgehog killed. UHR estimates that it costs just £50 to rescue, transport and release each hedgehog. In fact UHR is putting money back into this rural community through its reward scheme. As the hedgehog population exceeds 4,000, with fewer than 500 animals being removed each year in total, there is no realistic prospect of eradication in less than ten years unless major changes are made in the way the animals are found and killed. The present policy of complete eradication remains unlikely to succeed despite the high level of expenditure. Money for bird protection might be better spent by instigating more effective predation control measures such as fencing, combined with local translocation of individual problem hedgehogs.

4: Hugh Warwick is available for interview and comment. Call 01865 716498 or 07815 042 452. He also has available hi resolution photographs of hedgehogs from the study.

Press Release February 2007

UIST HEDGEHOG RESCUE DELIGHTED AS END OF CULL ANNOUNCED

SCOTTISH NATURAL HERITAGE CALLS OFF CULL IN FAVOUR OF TRANSLOCATION

Note to readers outside the UK: The Uists are two remote islands, North Uist and South Uist, located in the Outer Hebrides of Scotland.

The Uist Hedgehog Rescue coalition (UHR)¹ is delighted at Scottish Natural Heritage's (SNH) announcement today that the cull of hedgehogs on the Uists has ended. SNH's Board has agreed to end the killing policy in favour of a translocation trial.²

UHR has opposed the killing of hedgehogs on the Uists since Scottish Natural Heritage (SNH) announced its lethal policy in 2002. In order to save as many healthy wild animals as possible, UHR has rescued and relocated 756 hedgehogs from the Uists over the last four years. The coalition of hedgehog experts, animal welfare and wildlife rescue and rehabilitation organisations has offered to help SNH with translocating hedgehogs in light of the expertise and experience it has gained from undertaking this process.

The end of the cull follows last week's announcement from the Scottish SPCA that it had changed its policy in support of UHR's call for the killing to end. The policy change was attributed to new scientific research confirming that the relocation of hedgehogs from the Uists to mainland Scotland is humane.

The Uist Wader Project (UWP), consisting of SNH, the Scottish Executive and RSPB Scotland, has been killing hedgehogs on the islands since 2003 in an attempt to improve the breeding success of ground-nesting birds. Translocation of hedgehogs was considered as an option by the UWP but rejected due to concerns that translocated animals would starve. The Scottish SPCA has previously supported this position. UWP has killed 658 hedgehogs on the islands.

Spokesperson for UHR, Ross Minett, said: "At long last the totally unnecessary killing of these healthy hedgehogs has ended. Whilst the policy change is of course welcome it is disgraceful that it has come too late for the hundreds of hedgehogs already killed by SNH. As we have said all along, we believe that scientific research and decades of practical experience have shown that translocation is the humane and ethical solution to this problem.

We have offered SNH the benefit of our expertise and experience of translocating hedgehogs from the Uists.

We sincerely hope that lessons will be learned from this experience and that conservation organisations will incorporate a respect for animals and their welfare into future policies."

UHR's call for an end to the cull was supported by a number of high-profile people including Joanna Lumley, Brain May, Dame Jane Goodall, Virginia McKenna, Carla Lane and Jenny Seagrove.

¹ UHR is a coalition of hedgehog experts, animal welfare and wildlife rescue organisations consisting of Advocates for Animals, the British Hedgehog Preservation Society, Hessilhead Wildlife Rescue Trust and International Animal Rescue.

For more information see www.uhr.org.uk

² The paper from SNH officers to SNH's Board proposing an end to the hedgehog cull can be found at: <http://www.snh.org.uk/board/detail.asp?id=268>.



~~ advertisement ~~

October 12-14, 2007 Doubletree Stapleton Hotel, Denver, Colorado

Highlights:

- International Hedgehog Gym-bar-ee
- 2 Conformation Shows
- Judges Training
- Hospitality Room
- Vet Panel
- International Speaker, Hugh Warwick
- Dr. Terry Spraker will lecture on WHS.
- Vicki McLean will share techniques for WHS relief.
- Tour of the Flash and Thelma Rescue or Denver Zoo
- Lots of vendor tables
- Silent Auction
- Live Auction

<http://www.rockymountainhedgehogshow.com/>

Lord Punky Platinum

*Little one
 My dear one
 Always keep
 You near one.
 One day you came
 You stole my heart
 I knew right then
 We'd never part.
 You talked
 You mumbled
 One day
 You stumbled.
 I did not know
 The reason why
 That stumble I saw
 Would make you die.
 Slow at first
 The back legs went*

*Soon the front
 Crooked and bent.
 You looked at me
 With soulful eyes
 They said to me
 Must I die?
 To see you struggle
 And try to be
 It was so hard
 For me to see.
 I never stopped loving you
 And even though you are gone
 I hold you close in my heart
 And honor you in poem.
 Lord Punky, Lord Punky
 We are not apart
 You see dear one
 You stayed in my heart.*

*with great devotion and undying love, my Lord Punky,
 Your Mom, Bonnie*



October

September

Sep 5 Fionn Aurelius Fitzpatrick
 Sep 15 Cotton Storm

Oct 5 Tulahbelle Kocunik
 Oct 6 McKenzie Lamb
 Oct 13 Kamiah Lamb
 Oct 19 Socrates Lamb
 Oct 24 Sparky Niffler Shore
 Oct 28 Shaman Storm

Welcome to Pog-Chit-Chat...

Where hedgies tell it like it is.

This time, we get to read about MiniMee and Sir Maxx (chomp chomp) and their trip to the beach. If your hedgies would like to tell everyone about their adventures, you can send your stories directly to the editor at newsletter@hedgehogwelfare.org



Its the wee hours of Tuesday morning, (July 3, 2007), and MiniMee and Sir Maxx (chomp chomp) are in their carriers on the way to their first beach twip. We is xcited!! But we is a wittle bit skeered too, we never been to dah beach afore, by the way, we was wondrin, whats a beach? Well along the way, we is bout to finds out.

We start out wiff my mommy, Tammy, and her family from West Virginny, we gots the family wiff us too, there is my human sister, Nicci, my human brover J.C., and wots and wots of cousins, Polwy, Mewissa, Tre', Devon, Kathy, Jamie, Tamika, and Jayden. We gots three behicles. We starts out and keep going and going. We gets into Birginia, just cwossed dah West Virginny wine. We stopped there to take a bwake. Me and Maxx gets to stwetch our wittle wegs.

We gets going again and stops a few more times cause one of dah human kids gets sicky. Ewwwww. Me and Maxx is starting to think, we dont wike this stoppin all dah times. Humans sure to goes to dah baffroom awot. Why dont they gets Care Fresh and witter pans wike we do's? So we starts out again. We gets into North Carowina, and its daywight outside. Evwybody decides they wants to stop to gets some bwakfast, me and maxx could use sumptin too, but mommy says we can only have wittle sips of water till we gets to dah beach. Me is beginnin to fink me dont wike this twip to dah beach. We stops at McDonalds for some bwakfast. Mommy goes in wiff some of dah others. Evwybody gots to go potty again. Mommy goes to dah potty and when her comes out, the whole westaurant people starts to laff at her. Mommy didnt know why they was laffin at her till some wady says, "Psst maam, Psst maam!", mommy wooks at her and dis wady points to mommys dwess tail. Mommy sayed her got soo mbarassed, her had gone to dah baffroom and her dwess gots stuck in her underwear. Mommy sayed dat the whole back of her dwess was stuck in her panties and to top it off, der was a wittle hole in her undies. Wots and Wots of people see'd my mommys unmentionables. Mommy sayed that people waffing at her maked her feel speshul cause her had made people waff that might not have waffed dah whole day. And mommy says, "one thing for sure, they wont forget seeing my mommy in all her Glory just one day before Independence Day". Mommy laffs and laffs about it now.

We finalwy gets to Moitle Beach about 11 hours after we weft West Virginny. Then me smells sumptin stwange, me twies to see outside but me is in my carrier. Me guessed it must be the smell of dah ocean water, dats what mommy sayed her was smellin anyway. We goes

Continues on page 19...

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 feltd 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,

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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!



HEDGEHOG EMERGENCY FOOD KIT

Laura C. Dunklee

The autumnal time adjustment is fast approaching (fall back, spring ahead) and in addition to the pleas from your local emergency services to check the batteries in your smoke alarms, I'd like to ask you to consider your hedgehog's first aid kit: Specifically, does your first aid kit contain a good selection of foodstuffs and, if it does, have any of them expired? Is it time for a shopping trip to gather the requisite items? As always, please talk with your hedgehog's veterinarian about this topic – they'll be glad to advise you on the most up-to-date information and may suggest additions to the kit.

Emergency Food Kits. Why?

Many of us have put together a decent first aid kit for our hedgies. I'd like to take that precaution one step further and encourage all hedgehog caretakers to also put together an emergency food kit. Emergency food kits are wonderful to have on hand in case you're forced to evacuate due to an emergency situation – you can grab the bag, your other stuff, and go. But emergency food kits are also excellent to have on hand in case your hedgegie falls ill or has trouble eating. If either of these things happen, of course, you need to seek treatment from a knowledgeable veterinarian.

I frequently see posts on various hedgehog-related discussion groups about a hedgehog needing special foods and the owner trying to figure out where to go to get the necessities. This can be a particular problem in the middle of the night.. How much better it is to have everything ready and on hand should it be needed. I keep my emergency food kit in a bag next to my first aid kit so it's always available and easy to locate.

Stocking Your Emergency Food Kit

Your should be able to fully stock your hedgehog's emergency food kit with just a couple of stops – one at your vet's office, one at a decent-sized supermarket, and a bit of on-line shopping, preferably at *Ruby's Rescue Shop* at the *HWS* website (<http://www.hedgehogwelfare.org> – click on the link to *Ruby's Rescue Shop* and then the link to Food and Treats).

Vet's Office

Before you pay a visit to your vet's office, talk with your vet – explain that you're stocking an emergency food kit to have on hand for your hedgehog. Some veterinarians will be willing to sell you these items, others won't. Here's what you'll need to request:

Syringes without needles attached – 1 cc, 3 cc, and 10 cc sizes are excellent. If your vet also has some curved-tip feeding syringes, ask for a couple of those, too.

ReBound – *ReBound* (it may also be called *Feline ReBound*) is the brand name of a liquid supplement for



cats and dogs but it's also helpful with, and appealing to, hedgehogs. I believe that *ReBound* may be available in several flavors. I've always purchased the chicken variety.

Nutri-Cal – *Nutri-Cal* is a high-calorie paste that comes packaged in a tube and is palatable to hedgehogs.

Canned Prescription Cat Food – talk with your vet about which varieties they recommend.. I usually keep *Hill's A/D* and *Hill's I/D* on hand. You want food that's easy to digest if your hedgehog has an upset stomach and you also want a food that's tasty for a hedgehog who's not interested in eating.

Carnivore Care – *Carnivore Care* is a powdered high-protein, high-calorie food supplement that you mix with liquid to form a paste or looser mixture. Be sure

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.

